



CHANGE OF PLANS

HOW TO PLAN A GARDEN RENOVATION THAT WORKS WITH THE SITE AND ITS ECOLOGY

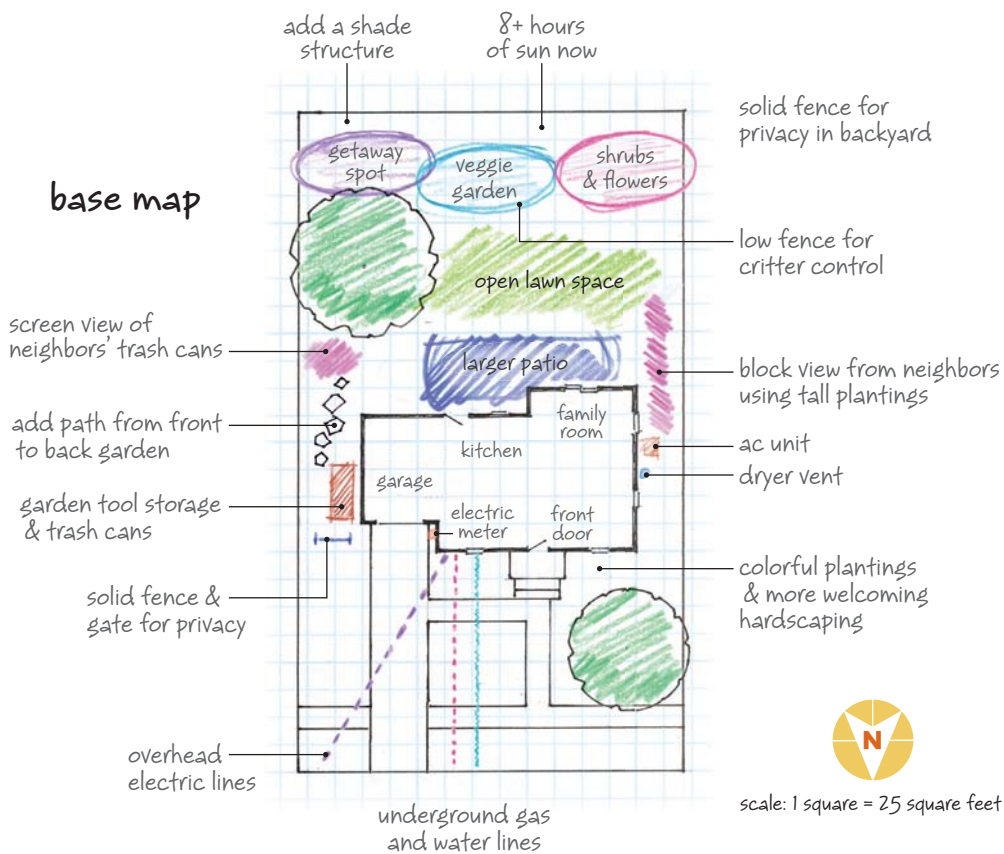
BY **PHYLLIS GRICUS**

Gazing outside your home, have you ever thought, *My garden could be so much more?* Whether you're facing overgrown plants, unsightly problem areas or a lack of entertainment space to enjoy, that thought means it's time to renovate.

But then you think, *I don't know where or how to begin!*

Before completely gutting your yard out of frustration, consider what a professional landscape designer would do. A professional's first step is to assess and evaluate the conditions, performing what is called a site analysis. It should be your first step, too.

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Experienced gardeners know how the amount of sun or shade a plant receives, soil type and pH and soil compaction influence the successful growth of plants. A site analysis with ecology in mind will address those factors and guide you in understanding other environmental conditions of your garden, no matter the size. This will allow you to create an earth-friendly landscape that benefits you and the greater ecology.

Because, my dear fellow gardeners, what happens in our gardens doesn't just stay in our gardens. Gardening practices, along with plant selection and placement, can negatively or positively impact the garden, the neighborhood and all the living organisms that inhabit these spaces—including you.

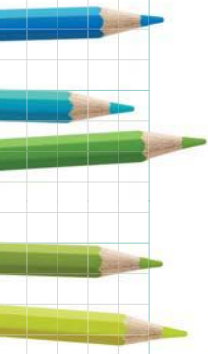
FIRST STEP: THE BASE MAP

A garden renovation starts on paper. A simple base map can be hand drawn. It will be the basis on which you make your analysis notes, followed by your landscape plan. The finished landscape or planting plan will illustrate your proposed new plantings and features.

Base maps of landscapes are drawn as if viewed from above—the bird's-eye view—and they're called plans. They are drawn to scale, reflecting the accurate dimensions and location of the home, garage and other structures. (If creating a base map isn't your idea of fun, hire someone for this part. Save your creative energies for the analysis and landscape plan.)

You may have received a legal survey when you purchased your property. If it includes dimensions, then you are ready to start. If not, you can physically measure your property lines, or digitally measure them using Google Maps. An online search will lead you to videos that outline the easy steps for that process. Taking digital measurements comes in especially handy for large properties.

With your property measured, choose a paper size that will fit your entire landscape when drawn in a scale of 1 inch equaling 10 feet. (I prefer working in 10 scale because it can easily be measured with a standard ruler.) If you have a larger property, draw your site on quarter-inch scale graph paper. It will be best to use a scaled drawing for accuracy on the final design.



The base map should include the following elements:

- The outline or footprint of your home and other structures as they relate to the property boundary. Mark the locations of doors and windows, because you will want to consider views and approaches to the home.
- Hardscape features, such as driveways, sidewalks, decks, pools and patios.
- The locations of utilities, such as heating and cooling units, spigots, meters, utility boxes, poles and overhead wires. Any time you will be digging or excavating, you must call 811, the national (US) phone number for free locating and marking of public utilities.
- An inventory of existing plants. Locate and note the size of trees and shrubs in scale. You will want to save as many mature plantings as possible.
- Determine which directions are north, south, east and west, then mark them on the plan. Knowing the cardinal directions in relation to your home and garden will allow you to determine your site's sunniest and shadiest spots and the prevailing direction in which the wind blows.
- Every site offers features that can be incorporated into the design. Walk around your landscape and explore different viewpoints. Do you have exposed rocks or slopes that you perceived as a detriment in the past but could be re-envisioned into a natural asset? Are there areas of your outdoor spaces where you cook or relax that need to be linked with pathways? Is there a soggy spot in the yard that could be converted into a water feature that supports wildlife? Mark spots such as these on the map.

Once it is complete, make several copies of your base map to use for your site analysis and planning your landscape designs.

SITE ANALYSIS: SOIL

Now that you've completed your base map, let's begin the site analysis. Remember that your yard's specific conditions vary throughout the seasons. Before you make significant changes, take the time to observe the seasons and keep a log of your insights in a garden journal.



This page: Should a site analysis reveal drainage issues, the modern gardener might choose to respond with an eco-friendly solution — a rain garden of moisture-loving plants (above) or a dry stream (below) that can collect and direct water in heavy storms. **Opposite page:** Wind direction and slopes are important items to note as they can challenge plants. This garden addresses these issues with an evergreen windbreak and with terraced beds.





A site analysis focusing on the influence of natural features provides a framework for creating resilient landscapes that are better adapted to local weather conditions.

Your site-analysis work will help identify problems in your landscape and guide you to earth-friendly solutions that benefit the human residents and the surrounding ecosystem. The process will also help you learn to be mindful of soil conditions, wind patterns, sun orientation and topography, which will aid you in choosing and placing plants that withstand or help ameliorate weather factors.

Resilient gardens begin in the soil. You must know the pH and fertility level to select the plants that will thrive in your soil. This can be achieved through a soil test, for which your local extension service is the best resource.

You should also know your soil's texture, the percentages of sand, silt or clay. Soil texture affects drainage and oxygen availability for roots. Soil-texture testing can be done professionally or at home with the "jar test" described on most extension service websites.

Observe your site during a downpour and note areas where water ponds or drains rapidly. If puddles remain for more than 24 hours after a rainfall, the drainage issue should be remedied before planting—or you can work with nature and choose plants that tolerate "wet feet." Better still, consider creating a rain garden to correct pooling and runoff problems.

SITE ANALYSIS: WIND

Creating comfortable outdoor spaces can be challenging when wind is a factor. Persistent wind can damage plants, erode soil and cause your home's heating and cooling systems to work harder than necessary.

"Prevailing winds" refers to the direction the wind blows from most often in your geographic area. Wind usually comes from the same direction but will vary with the seasons. In the US, the wind generally blows from west to east. Winter winds tend to blow from the northwest to the southeast, while summer winds generally blow in a southwest-to-northeast direction, but these are generalizations. Take seasonal notes of how the wind moves through your locale. You can see a real-time wind-flow map at <http://accuweather.com/en/us/national/wind-flow>.

Carefully placed landscaping can provide wind protection, and the beneficial effects will increase as plants mature. Planting a windbreak to slow the wind can reduce home-energy costs considerably. The best windbreaks block wind close to the ground. A windbreak of evergreen trees and shrubs creates a visual barrier and provides year-round shelter and food for wildlife. Good options can include American arborvitae (*Thuja occidentalis*), Atlantic white cedar (*Chamaecyparis thoides*), balsam fir (*Abies balsamea*), eastern red cedar (*Juniperus virginiana*), Rocky Mountain juniper (*Juniperus scopulorum*), Port Orford cedar (*Chamaecyparis lawsoniana*), white spruce (*Picea glauca*) and white pine (*Pinus strobus*).

For maximum protection, the Department of Energy recommends planting a windbreak at a distance from your home of two to five times the mature height of the trees. However, not all windbreaks need to be vegetative. Walls, fences, earthen berms and nearby buildings work well in urban and suburban spaces. These physical barriers combined with plants will both soften the architecture and help protect less wind-resistant plants.

SITE ANALYSIS: LIGHT

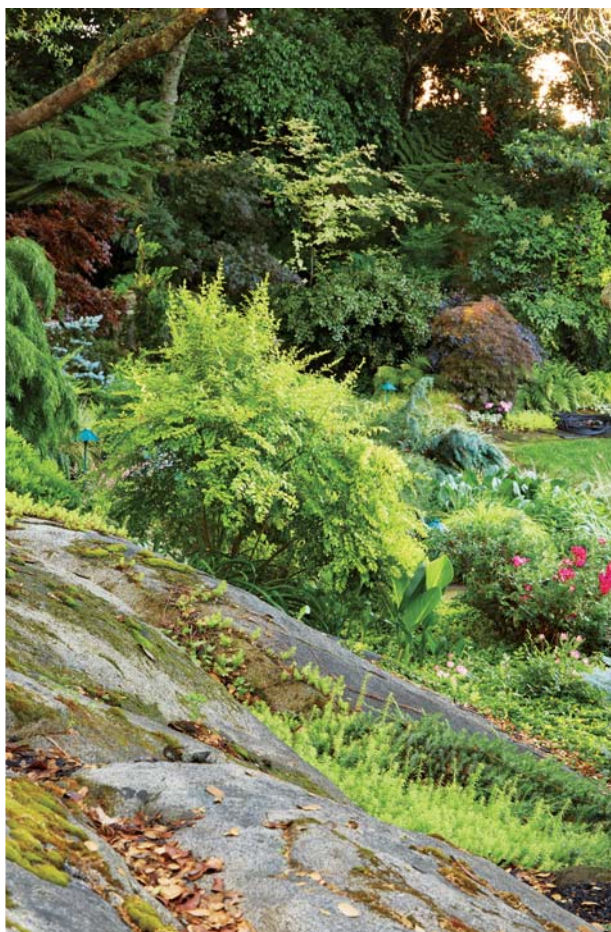
All gardens will have shady pockets and sunny corners. This exercise will help you choose plants that match the conditions. It should also help you determine where to locate new entertainment areas or how to improve existing conditions.

The direction your garden faces affects which areas are exposed to the sun and which areas are shaded. It also determines the intensity of sunlight and what degree of shade you've got. The exposure changes during the day.

To map out your light conditions, take a compass in hand and stand with your back to your home—the reading from here will show your garden's aspect, the direction it faces. If the compass points east, the garden in your sights is east facing. Do this exercise for all of the planting areas that surround your home.

North-facing gardens have full shade in the morning and receive almost no direct sun. They tend to warm up later in the season and have fewer extreme temperatures. In the summer months, they will get late afternoon and evening sun. Select plants that prefer shade or will at least tolerate it. Shade plants require four or fewer hours of sun. Deep shade can be found under evergreen trees and on the north side of structures. Such areas tend to be cold and dry.

South-facing gardens get more direct sunlight throughout the day, tend to be warmer and have drier soil. If there are no other shading factors, plants that will do best here are full sun, heat-loving ones. Full-sun plants require six hours or more of sun. If there is shading from mature trees, part-shade plants would be a good choice.

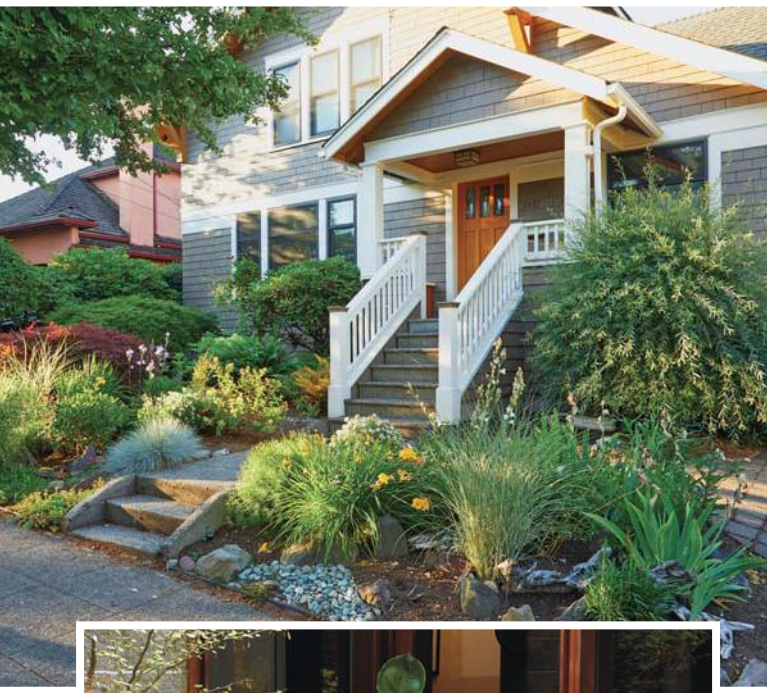


East-facing gardens receive mostly morning sun. Plants that like part sun—four to six hours—will do best here. West-facing planting areas get shade in the morning and sun during the afternoon and evening. Part-sun plants that like the heat are ideal for this garden.

Not all gardens will face strictly in one direction. If your garden faces northeast, for example, consider the attributes and limitations of both points on the compass as described above.

A plant's light (and soil) requirements are often found on the grower's tags. Now that you've explored your garden's light exposure, you can select and place plants more confidently. Of course, sometimes plants don't thrive in a spot no matter what you do. It's okay to move them until they're happy.

Light conditions differ throughout the seasons and with regional influences. Remember, while it is important to ascertain which way your garden faces, other elements, such as trees and structures, will cast shade during the day and at different times of the year.



This spread: The initial base map that you create for your property should include fine details that inform garden decisions. These include natural features like rock outcroppings (far left) plus items like doors, windows and patios (middle top and bottom) and even telephone poles (below).



SITE ANALYSIS: TOPOGRAPHY

After mapping the light conditions of your landscape, it is time to evaluate how your land is shaped. When renovating and redesigning landscapes, it is sometimes necessary to transform the topography to create flat areas for a patio or dig a spot for a rain garden.

In addition, not all land grading was done right the first time. Proper grading should establish a gentle slope leading away from your home. If water infiltrates the soil near your home's base, it can shift the ground and compromise the foundation.

If your ground is uneven and has poor drainage, it will allow rainwater to wash away, taking soil and nutrients with it and potentially polluting natural habitats and bodies of water.

Grading is generally not a do-it-yourself project, but one best left to professionals. If you need to hire an excavator, find one

familiar with landscape work, drainage issues and preserving topsoil in a way that minimizes the environmental impact.

However, contour gardening—utilizing the land's slopes—is a visually appealing way of planting on a slope that homeowners can approach. It involves planting across a slope and building small ridges at right angles, slowing down rainwater and allowing it to sink to the root level. Contour gardening may be worth investigating further if creating your base map pointed out slopes.

THE MINDSET FOR CHANGE

As gardeners, we are increasingly aware of our gardens' impact on the environment.

We are choosing to expand our knowledge of sustainable techniques and adopting practices that minimize adverse environmental effects.

We now know that yes, our plants are food for many insects—if our plants aren't eaten, we're not contributing to the ecosystem. We avoid planting invasive species and selecting native and near-native plants that prove valuable to wildlife and meet their habitat needs.

Most importantly, we've begun to recognize that even incremental changes are steps toward building healthier, resilient gardens that are good for us and the environment. ☞