



Professional Landscape Design Software





Table of Contents

Part 1

What is landscape design software?	1
---	----------

Part 2

Who uses landscape design software?	2
--	----------

Part 3

Benefits of Landscape Design Software	3
--	----------

Part 4

Why BIM and 3D Visualization are Essential for Professionals	3
---	----------

Part 5

Uses for Landscape Design Software	6
---	----------

Part 6

Usability and Landscape Software Plugins	8
---	----------

What is landscape design software?

Landscape design software helps landscape architects, landscape designers, and urban planners draft and execute landscape projects. There are several different **software platforms** being used by both professionals and non-professionals, with **AutoCAD** based applications being the most popular.

These types of software can range in capability from laying out simple garden plans up to orchestrating complex proposals, which include specifications and schedules that are essential for landscape & groundwork contractors to efficiently implement the designs. Some of the more advanced design features might include three-dimensional terrain models and topography, as well as a library of plants, textures and materials.

Who uses landscape design software?

Professionals with varying levels of skill and experience, and who work across many different industries and company sizes can find value in landscape design software.

Landscape architecture firms depend on efficient design software to help them propose, design, deliver, and execute projects. Smaller, local firms that may be understaffed can benefit from the compatibility and scalability, while larger landscape design and construction firms use software to increase efficiency by streamlining existing design processes.

Large multi-disciplinary architectural and engineering firms rely on a wide range of design software in order to efficiently integrate multiple aspects of their projects. For example, firms involved in municipality projects, such as redesigning a rotary, can logically improve aesthetics while taking proper considerations to minimize potential hazards. Additionally, commercial and large residential projects that require huge earth work considerations benefit from using landscape design software because it can optimize the construction process and help control costs.

Benefits of Landscape Design Software

It goes without saying that modern-day, professional-grade landscape design is difficult, if not impossible, without the use of tailored software. Powerful landscape design software gives architects and engineers the tools to not only portray an accurate depiction of what a project's final result will look like, but also a proposal on how the site will actually be built. It can also help with project collaboration and make it easier to ensure that issued drawings comply with your office and projects standards.

Why BIM and 3D Visualization are Essential for Professionals

If you are considering purchasing landscape software, your first consideration should be your typical scope of work. There are many landscape design software options on the market, each with different features, capabilities, price points and usability. Finding the right solution for your needs depends on your experience with computer aided design (CAD), the level of detail and accuracy that your projects demand, and the specific types of work you are trying to conduct.



For professional landscape architects working on proposed designs for a major construction project, the scope of work goes beyond mere lines, arcs, and symbols. Professional landscape design on a computer usually requires inputting quantity take-off calculations, cost estimates, material schedules, irrigation layouts, paving plans, and the ability to visualize the design in 3D.

In the last few years, professional architects and engineers have more frequently set a standard of using Building Information Modeling (BIM) data in their projects' CAD files to reveal more information about the object, beyond its geometry. For example, the supplier, product specification, or required maintenance. **BIM is an “Intelligent 3D model-based process that gives** architecture, engineering, and construction professionals the insight and tools to more efficiently plan, design, construct, and manage buildings and infrastructure.”

This level of detail in a design requires advanced software capable of storing the data, visualizing and analyzing 3D, incorporating materials calculations,

contour, slope or run-off data, and much more. This extended (BIM) data helps with project collaboration and coordination as you reduce any uncertainty that can arise when interpreting geometry alone. For firms looking to differentiate themselves in the market and stand out amongst the competition, having some 3D drafting capability is a must. Not only will your team be able to verify that they are capable of meeting compliance requirements for a wider array of clientele, but adhering to BIM standards sets the bar higher for competing firms. 3D renderings are frequently used to show the client or general public what the end result will look like. This is often done for marketing and positioning reasons, and gives your firm the ability to present well against other firms.

If your design work in the past has typically been limited to drafting traditional geometry, it may make sense to start incorporating more advanced detail and data into your designs to gain a competitive edge. 3D rendering, materials, schedules, and automated calculations are all good places to start.

Uses for Landscape Design Software

Landscape design software has a variety of different uses among firms and architects, such as ground modeling, paving design, planting design, irrigation design, or generating quantity take-offs and materials schedules. Let's take a closer look at a few of these.

Ground Modeling and Site Data

During the early phases of a project, many designers will incorporate site survey data or spot elevations into their CAD file to render an accurate depiction of the site's topography. This data is then used to further generate calculations for accurate ground modeling, cut and fill volumes, and slope and run-off analysis.

Let's dive into cut and fill calculations. Once existing elevation data is added to a CAD file, a proposed surface for a proposed use on the same site may require the landscape architect to accurately calculate how much soil will need to be shifted around the site in order to support the intended uses. This process is known as cut and fill estimating, and it answers the question; "where will contractors need to remove material and where will they need to fill on the site?" Ideally, setting the building to an elevation that minimizes and balances the amount of cut and fill required keeps earthworks costs to a minimum. Without having such close estimates of these volumes prior to construction, any revisions that need to be made to an already proposed design can be time

consuming and expensive. Using a software option that automatically calculates accurate estimates of cut and fill volumes allows architects to make changes earlier in the process when revisions are easier to manage and less expensive to implement.

Planting, Paving, Irrigation, and Materials Schedules

Another popular feature of some professional landscape design software is the option to create accurate planting plans from a plant library. There are tens of thousands of different species of plants that are used in landscape design around the U.S., with different species being associated with the various local geographies where they'll thrive. With an advanced planting plan module, designers can place different plant species around the site and associate data, like specifications and cost, to each species. The actual plant objects in the CAD file can be represented by different symbols or images, viewed in 2D, rendered in 3D, and can be updated on a global level as opposed to changing all the individual objects one at a time. Once a planting plan is complete in a CAD file, the ability to quickly generate a materials and cost schedule allows landscape architects to provide price and quantity information for all the plants on the site.

The same process can be emulated for irrigation layouts and paving plans, allowing the designer to quickly summarize the materials (pavement, plants, and irrigation) and their associated costs for all objects across a design.

Usability and Landscape Software Plugins

There are numerous landscape design software options for both professional landscape architects and the sophisticated DIYer, but one common theme shared among them all is that with more flexibility comes rising price tags and steeper learning curves.

When selecting the best software option for your specific needs, the tool's versatility and usability as they relate to your needs should be two primary considerations. These two variables are frequently inversely correlated. For example, the dominant landscape design software for years has been **AutoCAD**. **AutoCAD allows designers to portray many aspects of their design** with great detail. However, jumping into AutoCAD with little to no CAD experience is daunting. Most professional landscape architects spend years learning the ins and outs of AutoCAD's versatile features and functions (through formal schooling or accredited training programs) to even be considered as a candidate for hire at a landscape architecture firm.

If you are traveling the road of deciding between detailed functionality and ease of use, it is important to identify what components of the design process you plan on owning yourself. Say you are part of a small design team at a local landscape company. In this scenario, the amount of detail in your design is important because there are still certain calculations and measurements that are pertinent to the construction process once the design is complete.



However, as a smaller firm with fewer architects, the number of projects and the bandwidth your team has to accurately complete them in a timely fashion can create a point of friction. With a powerful solution like AutoCAD, you can certainly achieve any level of detail required for a competitive RFP, but your firm should be prepared to allocate the time and resources necessary to meet higher expectations of quality and detail. So, with fewer architects at your firm, being able to complete detailed, quality designs in a timely fashion requires significant CAD experience.

This is a scenario where the introduction of plugins to existing landscape design software like AutoCAD becomes a valuable option to allow your team to work faster and smarter.

For example, with a solution like **KeySCAPE** by **Transoft Solutions**, landscape architects and CAD designers have the ability to create designs using their familiar AutoCAD environment, while also having the customizable, enhanced utilities of a program specifically developed to speed up the CAD design process for a landscape architect.

Below is an example of how the KeySCAPE plugin allows its user to input 3D plant objects (and the associated species name and cost estimate) into a design without having to manually draw each tree:



An automated schedule of materials can be easily generated to help calculate an estimated cost for a proposed planting plan and manage design changes.





Deciding what landscape architecture software to buy is not an easy decision. Depending on your scenario or role, the amount of variables to consider can be infinite; everything from 3D ground modeling functionality to the bandwidth of your design team can have an impact on your final results and competitive edge.

To learn more about what options exist for making your CAD design processes easier or more detailed, watch a demo of [Transsoft Solutions' landscape design software KeySCAPE](#) today!

WATCH A DEMO

T: + 44 (0) 3451 30 30 40

W: [TRANSOFTSOLUTIONS.COM/UK](https://transsoftsolutions.com/uk)

