

# 16

## LANDSCAPE DESIGN FOR DOMESTIC AND COMMERCIAL SPACES

**Dr. PREETI HATIBARUA**

Department of Horticulture, Assam Agricultural University, Jorhat, Assam.

**Ms. JUGABRATA DAS**

College of Horticulture and Farming System Research,  
Assam Agricultural University, Nalbari, Assam.

DOI: <https://doi.org/10.52458/9788196897444.nsp2024.eb.ch-16>

Ch.Id:-NSP/EB/HHABITS/2024/Ch-16

**About the Author:** *Dr. Preeti Hatibarua* is a Professor at the Department of Horticulture, Assam Agricultural University (AAU), Assam. She completed a B.Sc. (Agri) and M.Sc (Agri) from AAU and Ph.D. from IARI, New Delhi with a specialization in Floriculture and Landscaping. She started her career as a Principal Scientist at the Horticultural Research Station, Kahikuchi, Assam from 2009 to 2017. Dr. Hatibarua specializes in the production and post-harvest technologies including the 'Package of Practices' of multiple flower crops and ornamentals such as gladiolus, tuberose, marigold, Asiatic liliium, gerbera, orchids, ferns, dracaena, etc. Several scholarly publications, and master's and doctoral students attest to her merits.

**Ms. Jugabrata Das** is an Assistant Professor at the College of Horticulture and Farming System Research, Assam Agricultural University (AAU), Nalbari, Assam. She completed her M.Sc (Agri) from AAU in 2015 and has enrolled in the university's Doctoral Programme. As an early-career researcher, Mrs. Das is curious about how the microbial diversity linked to native flower crops can be investigated to safeguard and promote commercial crop cultivation in Assam. She has multiple research articles and book chapters published in many esteemed books and journals.

### 16.1 INTRODUCTION

Landscaping is the process of designing, creating, and managing outdoor spaces, whether they are public or private, to create an aesthetically pleasing environment that complements the surrounding environment and satisfies the preferences and needs of the individual or entity responsible for the space. This process entails making changes to a land's visible features, including fences, patios, decks, and other decorative additions, as well as vegetation, flowers, and grass. A good landscaper should have in-depth knowledge about the elements and principles of landscaping as well as the nature of softscape (plant materials) and hardscape (non-living structural materials) elements and features to

blend them with the garden design. Proper planning and designing are key requisites, before executing the design on the ground. Every landscape garden should have a theme, which should guide the selection of the hardscape and softscape elements.

A healthy living environment and endless enjoyment are provided by landscape gardening. Rejuvenating urban spaces can also be achieved in large part through landscape design. This can be accomplished by adding vegetation, making use of urban furniture, artwork, a body of water, or even small-scale structures like vending kiosks, pergolas, or gazebos that will contribute to the creation of sustainable and healthy urban environments for the populace. Hence, landscape architecture is becoming a multimillion-dollar industry with several opportunities for beautifying projects in public and private buildings/offices, parks and gardens, roads and avenues, city and town planning, real estate, hotels and restaurants, educational institutes, industrial belts, airport, railway stations, historical monuments, etc. In our region, landscaping plays a bigger role in new development plans and initiatives aimed at boosting tourism programs. Additionally, plants in the landscape remove some pollutants and dust from the air and the landscape helps by offering a home for a variety of wildlife.

## **16.2 LANDSCAPING FOR RESIDENTIAL BUILDING**

Home landscaping, also known as residential landscaping, is the art and practice of enhancing the surrounding area's aesthetic appeal and appearance to better represent the residents who live there. It serves as a guest's initial impression of the house and its occupants. The area in the yard or compound surrounding the residential building may be divided into three sections based on its intended use: Public area or Frontyard, Private or Recreational area, and Service or Utility area

### **16.2.1 Public Area or Front Yard**

The public area or Front yard is the area in front of the house that is visible from the roadside. The entrance serves as the focal point, making the house attractive. This area consists of front gardens, driveways, pathways, and entrances. The front yard should be visually appealing and inviting to visitors and the neighbourhood. The specimen plant, a few vibrant flowering shrubs, and a few seasonal flower beds can all help to beautify the area. The landscaping of the front yard should harmoniously blend in with the house. The permanent framework and structure of the garden can be formed by planting trees along the periphery of the compound. Masses of shrubs, low-growing edging plants, and flower beds should draw the visitor's eye to the entrance, which serves as the centre of attention for the public space. Larger plants should be planted at the corners and progressively smaller plants toward the entrance. A theme that complements the house's architecture and the rest of the garden should be chosen.

### **16.2.2 Private or Recreational Area**

Private or Recreational area extends the living area from the house into the landscape. The family's private area is meant to be the place where they spend most of their time and have the most fun. To provide privacy from outsiders, it should be enclosed by wood, bamboo, or iron fencing, as well as shrubbery or hedges. It should also be aesthetically pleasing and functional. A small lawn or paved area made of brick, concrete, or stone, shrub borders, flower beds, a few carefully chosen trees, or an overhead shaded structure like a patio, terrace, deck, or gazebo with

comfortable garden furniture for resting and relaxing are some typical and significant features of the private area. It is also possible to incorporate water features such as a fountain, swimming pool, or garden pool. A small kids' play area, leisure area, and sports area might be present.

### **16.2.3 Service or Utility Area**

The service or utility areas usually found in the rear or side of the house, close to the kitchen or garage, and needs to be screened to prevent views from both public and private areas. This area of the yard is used for many everyday home tasks; it has a kitchen garden, firewood pile, compost pile, trash cans, tool shed, storage shed, and cloth lines, among other things. The needs of the family typically determine the size of the service area.

These three home landscaping spaces should be easily accessible via cozy pathways or connected by a continuous lawn.

## **16.3 LANDSCAPING OF COMMERCIAL SPACES**

Commercial landscaping is a wide range of landscaping services that include landscape planning, designing, installing, and maintaining outdoor spaces for businesses, multi-family housing buildings or apartment complexes, office buildings, medical centers or hospitals, hotels or restaurants, shopping malls, retail stores, movie halls, fitness clubs, amusement parks, etc. A commercial landscape design should serve a utility purpose besides enhancing the appearance of the building or enterprise. Commercial buildings with expansive hallways, tall glass ceilings, and natural vegetation have better employee engagement and increased customer traffic. Repeating specific plant and planter shapes and textures can give the area a sense of completion or unity. As a focal point, one can employ unusual plant species or even architectural elements. The scale of landscape design for commercial spaces should be based on the size of the enterprise and the nature of the activities planned. Larger features and elements in commercial landscape design may result in high investment and maintenance costs.

### **16.3.1 Landscaping of Apartment Buildings/Complexes**

An apartment complex located in the middle of a city can be transformed into a serene haven by incorporating natural elements and landscaping. Here are a few points to enhance the beauty of apartment buildings:

- Everyone's front door is the entrance to an apartment building. To entice present and potential tenants to stay, the apartment's entrance should provide a sense of familiarity and home. The best elements of the entrance should be highlighted, and it should be safe and secure.
- The area can be made more secure and aesthetically pleasing by well-planned, well-lit walkways to apartment buildings.
- The variety of plants enhances the property's general aesthetic appeal. Trees and shrubs provide shade, screen unsightly views, and lessen the imposing appearance of multi-story buildings. In noisy neighbourhoods, they also aid in sound absorption. It appears natural and intriguing to combine flowering and deciduous shrubs with a few evergreens and a collection of perennial grasses with varying heights, hues, and textures. At the door, large

containers filled with vibrant annuals create a welcoming impression. Charming flower planters can also be placed on a broad base made of bricks or stones that complement the patio areas' paving.

- The inclusion of a common area in an apartment complex's outdoor landscape provides a space for social gatherings. This space could be a large lawn for soccer ball kicks, a paved courtyard with seating for lounging, a basketball and tennis court, or it could just be a fire pit or grill. The addition of furniture such as dining sets, chairs, umbrellas, and shaded areas will improve the area and entice people to hang out and enjoy themselves.
- An outdoor water body with bubbling jets or a calming fountain would be an excellent addition to the outdoor landscape of the apartment complex.
- Building playgrounds for kids in apartment complexes encourages an active lifestyle by giving them the opportunity for physical exercise and assisting them in developing social skills such as sharing, cooperation, and communication.

### **16.3.2 Landscaping for Commercial Enterprises**

The buildings of commercial enterprises are often large and concrete structures with big glass windows, contemporary or conventional furniture, standard desks and chairs, curved screens, etc. The structure and landscaping design of a business serve as its outward "face," regardless of whether it is frequented by consumers, clients, or just staff members. The landscape design is just as important as the building's architecture in creating a good first impression because it acts as a "stage" for the building.

### **16.3.3 Benefits of Commercial Landscaping and Incorporating Greenery into the Workspace**

- i. Healthy atmosphere: lowered temperature and less air pollution
- ii. Reduce the levels of stress
- iii. A rise in worker productivity
- iv. Good communication with the clients
- v. Positive perception of the business
- vi. Boost revenue for businesses
- vii. Raise the value of the property
- viii. Comfort and contentment

### **16.3.4 Standard Components of Commercial Landscape Design**

**Commercial landscape design usually consists of the following standard components:**

- The entrance should be brought to light by framing the entry point and lining the paths with a variety of options, such as pavers, tiles, or elaborate bricks, from the parking lot or sidewalk to the main entrance.
- Walkways and building sides can be decorated with eye-catching, vibrant shrubs and small trees planted in sizable commercial planters. In addition to producing a striking visual impact, this will give the space a bright, inviting, modern appearance. Stone or brick wall features can also be employed as an alternative.
- A sleek, stylish, and comfortable outdoor seating area can be made beneath shade trees, under a covered pavilion, or even a garden umbrella. An area of concrete seating could be constructed around the tree trunk's base as well.
- Potted plants are often used as visual barriers and space delineators. Beautiful flowering and foliage plants grown in large and sturdy containers can be used to designate boundaries between outdoor and indoor spaces, to divide large open spaces, or to direct traffic flow. Additionally, this landscaping element will make the area more welcoming and comfortable for patrons.
- The inclusion of hardscaping features like fountains, stoneways or walkways, statues, and patios in outdoor landscaping design of commercial enterprises can draw in more clients by adding visual interest and improving the overall appearance of the building. Customers can feel at ease and have a focal point in the form of a large fountain that can become a popular destination for tourists if seating areas are added around it to encourage people to stay and enjoy the area. An aesthetically pleasing area that blends in with the surrounding plants and trees can be created by designing a patio or walkway with natural stone pavers. For pedestrians, walkways with vibrant bordering vegetation provide a pleasant experience.
- Adding outdoor lighting to a commercial property is a great way to enhance its aesthetic appeal. Using uplighting or strategically placed spotlights helps to highlight the building's unique architectural features to draw attention to significant exterior building areas and accentuate the other landscape features. This can have a striking effect, particularly in the evening when the lighting is more dramatic. While spotlights or lamps will draw attention to the service signage to create a professional outdoor environment, string lights create a romantic ambiance. Path lights, ceiling, and hanging lights, wall lights, post lights, landscape lights, up/down lights, deck and step lights, garden lights, bollard lights, dusk to dawn lights, and motion lights are some additional lighting options used in commercial spaces.
- A visually appealing water feature, such as a small still or bubbling pond, a single large dancing fountain or several smaller fountains, a fountain in a basin, a rain curtain, an artificial stream near pathways, etc., has the power to drastically alter a commercial space. When complemented by lighting, low-lying planters, statement rocks, statues, and comfortable seating arrangements, the water feature effortlessly becomes the centre of attention in a commercial space. In addition, the sound and motion of water create a serene atmosphere in the middle of a noisy concrete jungle.

- Poolside planting in hotel villas: The areas around swimming pools in opulent hotel villas are artistically landscaped with tropical plants such as palm, philodendron, monstera, strelitzia, heliconia, anthurium, hydrangea, clipped hedges, lawn, and paver blocks. The blue ceramic tiles that border the swimming pools are beautifully complemented by these striking and exotic-looking tropical plants, which help to create the calming and romantic atmosphere of a tropical oasis, island, seashore, or Mediterranean seaside resort. It is also possible to replicate poolside landscapes in other types of residential and apartment buildings.
- Commercial parking lots with greenery: Commercial parking lots are a type of hardscaping that is set up in rectangular shapes with parking spaces on either side of the access aisles. By adding greenery to 10% of the space, parking lots in commercial buildings can be made to look more attractive. Large planters filled with flowering plants can be arranged in rows at a definite interval along the aisles. To provide adequate lighting for commercial parking lots, pathways, and pedestrian walkways, poles holding high-power LED outdoor areas should be erected regularly.
- Installing window boxes and planters on balcony railings is a great way to grow visually striking and vibrant flowering plants like petunias, geraniums, nasturtiums, begonias, and zinnias along with edible herbs. Materials for window boxes include wood, brick, terracotta, metal, fibreglass, vinyl, and cellular PVC, among others.
- Vertical gardens sometimes referred to as green walls, living walls, or biowalls, use any type of construction and support structure that is mounted on a building's exterior or interior wall to grow plants vertically. For downtown properties where green space may be limited, it offers a lush and vibrant green space that is attractive, practical, and efficient. It has an integrated fertigation and hydration delivery system and growth media applied vertically, where plants are rooted. Green walls are becoming a standard sight in business settings like corporate offices, retail centres, airports, universities, auditoriums, hospitals, etc. English ivy, creeping fig, Virginia creeper, pothos, Aeschyanthus, Boston fern, Stephanotis, Orchids, Bromeliads, etc. are more commonly found on green walls.
- A garden on the roof or terrace can also be a fantastic way to improve the property's aesthetic appeal. Featuring a lawn, patio furniture, potted plants, an arbour, lighting, raised beds, gravel pathways, vegetables grown in raised beds or big containers, flowering plants, herbs, succulents, and decorative grasses, among other elements, a rooftop garden can be a tranquil outdoor living area. By acting as natural insulation and lowering the amount of heat that the building absorbs, it can also assist in lowering energy expenses. A rooftop garden is built using a multilayer system that includes a waterproof membrane, drainage layer, geotextile layer, specialized soil medium, soil stabilizer, and the best plant species and varieties chosen to withstand the harsh conditions present in a rooftop garden.

## **16.4 INTERIOR SCAPING**

Interior scaping also called Indoor Landscaping or Interior Gardening is the practice of designing, choosing, arranging, and maintaining greenery and other landscape elements to enhance the appearance and ambiance of indoor environment in residential or public buildings. The quality of indoor air has a significant impact on user health and work performance. Indoor air pollution rises with time and can occasionally reach significantly higher levels than outdoor

ones. Indoor plants could be an invaluable tool in the battle against this effect. They can be used to absorb potentially hazardous gases, purify the air inside contemporary buildings, and provide a natural defense against “sick building syndrome”.

Beautifying a home's or building's interior areas, such as verandahs and balconies, adds vegetation and fresh air. Because of the colour, sculptural elements, focal points, and overall pleasing effect, it also makes interesting spaces in the house. Landscaping can reduce indoor temperature, absorb noise, and remove cancer-causing chemicals like formaldehyde and benzene that are released by home appliances.

**Indoor plants are highly variable, exhibiting a wide range of growth habits, leaf shapes, colours, and striations that can be arranged in the following ways:**

- i. **Small Potted Plants for Shelves, Workplace Desks, and Tabletops:** Small pots can be used to grow compact, dwarf, slow-growing flowering plants viz., mini Ixora, Tabernaemontana, Anthurium, Begonia, and foliage plants such as Sansevieria, Aloe vera, Pilea, Fittonia, etc.
- ii. **Trellis:** Climbing vines, e.g., Hedera, Philodendron, Pothos, Syngonium, Clematis, Bougainvillea, Wisteria, etc., can be woven through a garden trellis to create an accent piece.
- iii. **Hanging Basket:** Plants such as Chlorophytum, Hedera, Philodendron, Scindapsus, Monstera, Zebrina, Rhoec, Schefflera; flowering plants viz., Fuschia, Petunia, Begonia, Verbena; succulents such as Donkey tail Sedum, String of Pearls, Asplenium, etc.
- iv. **Kokedama is:** a ball of moss-covered soil that is home to attractive ornamental plants such as Scindapsus, dwarf Sansevieria, Syngonium, ferns, etc.
- v. **Free-standing Plant Stands:** on the floor and is fixed on wall brackets; e.g., Ficus, Bilbergia, Cryptanthus, Peperomia, Cyperus, Asparagus, Aspidistra, Ferns, Chlorophytum, Pilea, etc.
- vi. **Window Boxes:** Aglaonema, Caladium, Calathea, Dieffenbachia, Peperomia, Cordyline, Euphorbia, etc.
- vii. **Terrarium:** A terrarium is a transparent, closed, or open container used to grow and exhibit small plants such as Peperomia, moss, Fittonia, Asplenium, Saintpaulia, miniature Begonia, Pilea, etc. Terrarium components other than plants include soil, charcoal, stone, and a tiny bit of personality.
- viii. **Bottle Garden:** Transparent bottles are decorated with plants such as Dracaena, Money plant, Scindapsus, Syngonium, etc. to create a landscape or garden inside the bottles.
- ix. **Miniature Tray Garden, Dish Garden, or Ceramic Bowls:** Dwarf indoor plants viz., Fittonia, Peperomia, Hedera, Zebrina, Zephyranthes, Dwarf cacti and succulents are ideal to be grown in tray or disc for creating landscape garden.

As the times change, landscape architecture becomes more and more significant in cutting-edge commercial projects. A landscape design not only influences people's actions but also enhances the square's overall design language. An urban commercial complex's landscape design should consider the interaction between the design and

the urban environment in addition to the space's historical shape. Urban areas facilitate social integration among various stocks of people. However, social interaction spaces have decreased in recent years due to increased urbanization. Therefore, futuristic landscape design should consider the behavioural and spiritual requirements of various social groups to design a high-quality, exquisite, ecologically sound, and pleasurable landscape. We opine that inclusive landscape design is a crucial instrument for promoting social cohesiveness in cities.

### End of Chapter Exercise

1. What are the primary areas for developing a landscape design for residential buildings?
2. Prepare a sketch of the landscape design for an apartment complex.
3. Enlist the design components of interiorscaping.

### REFERENCES

1. Carmona M (2019) *Principles for public space design, planning to do better*. *URBAN Des Int* 24:47–59. <https://doi.org/10.1057/s41289-018-0070-3>
2. Şentürk E, Altınçekiç H (2018) *Elements of Hard Landscape Design and New Approaches on Their Use*. *Kastamonu Üniversitesi Orman Fakültesi Derg* 18:327–340. <https://doi.org/10.17475/kastorman.349918>
3. Lee A, Jordan H, Horsley J (2015) *Value of urban green spaces in promoting healthy living and wellbeing: prospects for planning*. *Risk Manag Health Policy* 131. <https://doi.org/10.2147/RMHP.S61654>
4. Brown RD, Corry RC (2020) *Evidence-Based Landscape Architecture for Human Health and Well-Being*. *Sustainability* 12:1360. <https://doi.org/10.3390/su12041360>
5. Shahli FM, Hussain MRM, Tukiman I, Zaidin N (2014) *The Importance Aspects of Landscape Design on Housing Development in Urban Areas*. *APCBEE Procedia* 10:311–315. <https://doi.org/https://doi.org/10.1016/j.apcbee.2014.10.058>
6. Hansen AS (2021) *Understanding recreational landscapes – a review and discussion*. *Landsc Res* 46:128–141. <https://doi.org/10.1080/01426397.2020.1833320>
7. Mahmoudi Farahani L, Maller C, Phelan K (2018) *Private Gardens as Urban Greenspaces: Can They Compensate for Poor Greenspace Access in Lower Socioeconomic Neighbourhoods?* *Landsc Online* 59:1–18. <https://doi.org/10.3097/LO.201859>
8. Cortesão J, Lenzholzer S (2022) *Research through design in urban and landscape design practice*. *J Urban Des* 27:617–633. <https://doi.org/10.1080/13574809.2022.2062313>
9. Hu L, Yan J, Zhu Y, et al (2022) *Research on the Sustainable Design of Commercial Street Space Based on Importance Performance Analysis*. *Buildings* 12
10. Eijkelenboom A, Verbeek H, Felix E, van Hoof J (2017) *Architectural factors influencing the sense of home in nursing homes: An operationalization for practice*. *Front Archit Res* 6:111–122.

<https://doi.org/https://doi.org/10.1016/j.foar.2017.02.004>

11. Altman A, Shennan S, Odling-Smee J (2022) Ornamental plant domestication by aesthetics-driven human cultural niche construction. *Trends Plant Sci* 27:124–138. <https://doi.org/https://doi.org/10.1016/j.tplants.2021.09.004>
12. Huang S-CL (2006) A study of outdoor interactional spaces in high-rise housing. *Landsc Urban Plan* 78:193–204. <https://doi.org/10.1016/j.landurbplan.2005.07.008>
13. Hussain MRM, Tukiman I, Zen IH (2018) Landscape Design for Residential Area. In: *Proceedings of the Second International Conference on the Future of ASEAN (ICoFA) 2017 – Volume 2*. Springer Singapore, Singapore, pp 1–10
14. Zhou B-B, Wu J, Anderies JM (2019) Sustainable landscapes and landscape sustainability: A tale of two concepts. *Landsc Urban Plan* 189:274–284. <https://doi.org/https://doi.org/10.1016/j.landurbplan.2019.05.005>
15. Turner-Skoff JB, Cavender N (2019) The benefits of trees for livable and sustainable communities. *PLANTS, PEOPLE, PLANET* 1:323–335. <https://doi.org/10.1002/ppp3.39>
16. Baobeid A, Koç M, Al-Ghamdi SG (2021) Walkability and Its Relationships With Health, Sustainability, and Livability: Elements of Physical Environment and Evaluation Frameworks. *Front Built Environ* 7:. <https://doi.org/10.3389/fbuil.2021.721218>
17. Tavares P, Ingi D, Araújo L, et al (2021) Reviewing the Role of Outdoor Lighting in Achieving Sustainable Development Goals. *Sustainability* 13
18. Belkayali N (2017) Effective use of water in the landscape architecture curriculum. *New Trends Issues Proc Humanit Soc Sci* 4:98–104. <https://doi.org/10.18844/prosoc.v4i6.2918>
19. Acampora A, Lucchetti MC, Merli R, Ali F (2022) The theoretical development and research methodology in green hotels research: A systematic literature review. *J Hosp Tour Manag* 51:512–528. <https://doi.org/https://doi.org/10.1016/j.jhtm.2022.05.007>
20. Safitri R, Amelia R, Sujarwanto D (2020) Analysis of parking needs for sustainable parking lots in commercial area of Pangkalpinang City. *IOP Conf Ser Earth Environ Sci* 599:012060. <https://doi.org/10.1088/1755-1315/599/1/012060>