

CHAPTER 1 INTRODUCTION

Psychological and Physical Benefits of Plants

Plants are grown indoors because of the psychological and physical benefits they bring. Indoor plants improve an indoor space aesthetically, making it a more pleasing environment; studies have shown that ‘greening’ an office space gives people a more positive and less stressed outlook. In fact, creating green spaces within a hospital was found to aid healing.

Plants also influence physical conditions including temperature, humidity, light, and air quality. We all know that plants turn carbon dioxide into oxygen, thereby improving air quality. Some plants also have the ability to filter the air by extracting pollutants or emissions such

as those exuded by furnishings, carpets, paint, some cleaning agents and even people. This means indoor plants are an advantage in stuffy offices where there are often no opening windows; indoor plants can help to recirculate stale or polluted air.

Plants can also be used in places in ways that affect the actions of people, changing how people move through a space, where they are likely to stop and linger, or where they are likely to look. In commercial locations, or in fact in public buildings, schools, hospitals etc., people may be attracted to sit on the edges of planters near entrances or within interior courtyards; good design should accommodate this by providing seating beside the plants in such locations. Creating indoor green spaces through the use of interior plants is as much about good design as it is about the plants.



Architectural use of plants provides a privacy screen to this restaurant

Purposes Served by Plants Indoors

(Ref. adapted from 'Interior Landscaping' by Tok Furuta pub. Reston 1983)

USE	FUNCTION
Emotional or Symbolic	Maintaining a connection between people and the natural world Create a psychological feeling of being in a better place
Sensual	Mood delineators Senses stimulated by plant fragrances, touch, sounds, etc.
Architectural	Screening for privacy Hiding undesirable views (eg. rubbish bins) Providing an unfolding view Articulating space/ dividing up spaces/ defining spaces vertically and/or horizontally
Engineering	Controlling traffic – movement of people or anything else -including security (large planters stop cars crashing through pedestrian areas. Reducing glare Sound control (e.g. reducing echo)
Environmental Conditions	Modifying temperature – reduces temperature fluctuations Modifying oxygen/carbon dioxide balance in air Filtering air – dust, toxins
Aesthetic	Providing a backdrop – softening a wall, harsh lines, etc Altering or affecting lines Framing views Providing a feature – as a living sculpture, through colour or texture effects, etc.



Bonsai may create a temporary indoor feature; but most bonsai are not suited or intended to be kept indoors for very long

WHERE INDOOR PLANTS ARE USED

Different situations may warrant different quantities of – and qualities in -- indoor plants.

Indoor plants may be used in:

- Homes
- High-rise apartments
- Offices
- Shopping centres
- Restaurants
- Hotels
- Factories
- Other public places, such as schools, hospitals, rehabilitation centres and so on.

Different individuals will have varying levels of commitment to plants and perhaps varying needs to have plants near to them. Many people find great satisfaction in caring for plants, while some consider plant care a chore to be avoided. Others are somewhere between these extremes. Most people, however, admire plants irrelevant of the amount of input they do or do not want to put into their care. In large public spaces or buildings, indoor plants are usually cared for by a contracted team of interior gardeners. These green spaces are usually designed by knowledgeable designers and are often the most successful. In the small office, the responsibility usually falls to the person with the most interest in plants – if that person leaves, then plants are often neglected. In the home, the plant carer is usually the home owner. It takes commitment to look after plants and have them thriving – not everyone will succeed even with the best intentions. This text will help those with an interest in indoor plant growing and design, and horticulturists branching out into this field.



Considerations When Introducing Indoor Plants

The Why, Where, What and How of Indoor Plants

There are several considerations when you introduce indoor plants into a building, whether it is a home, office, public building or other space. Introducing plants is not usually one dimensional; indeed, it requires careful thought. Where should you position them? The 'best' position may not always be the most practical. What should you choose? And how can you introduce them? You also need to ensure that when introducing plants or suggesting a design, that the needs of the people working or living within that

space are met. Not everyone wants a plant hanging over their head above their office desk, and light should never be compromised. Plants need to be placed so that they do not become a nuisance to users of a given space.

Why?

Why do you want to use indoor plants? Some reasons include aesthetics, to improve air quality, or to improve the well-being of the people using a space. It can also be all of these.

Where?

Where to place indoor plants is a mix of functionality combined with aesthetics – both the people using the space and the plants need to be able to function effectively.

Available space: the space will dictate where and how to place plants. Plants may be kept in suitable containers on the floor (space permitting), hanging from the ceiling (harder to maintain), near windows (without blocking light), or on desks (if the person using that desk is open to that).

Placement: it is important to avoid blocking access, i.e. the areas people use to negotiate their way through a space, corridors, entrances and exits, blocking light from windows etc. All these aspects need to be taken into consideration when placing plants.

What?

Choosing the right plant is as important as choosing where it should be placed. Plants, like people, need certain environmental conditions to thrive.



Aesthetic use of *Ficus elastica* - dark foliage creates a contrast to the pale coloured wall

Other considerations

- ***Suitable species for the space:*** large plants won't be suited to small spaces and tiny plants can look wrong in a large space. Too many plants in a space can overwhelm and detract from the aesthetic and also the psychological impact.
- ***Suitable species for the environmental conditions:*** air, humidity, light, and water, plus heaters and air conditioners nearby (which can impact on plant health).
- ***Allergens and allergic reactions:*** some people react to certain plant species, some can't tolerate the scent, and others may react if they touch a plant. Care should be taken not to include plants that might cause these reactions – employees change, visitors come and go, and some of these people may not have the same tolerance as others.
- ***Choose the right amount of plants for the space:*** too many can overwhelm, not enough can make plants look 'lost'.
- ***The people using, working or living in the space:*** How involved with or interested in plants are the people in the space? Do they need to be involved or will care be outsourced? A keen home gardener will have a totally different 'ownership' of plants introduced into their home than, say, a person visiting a public space or even an employee. If it is a public site, then what type of people are using that space? Will the plants need protection? Not all public spaces are 'safe' spaces – even for plants. Consider the risk of vandalism or even the over-enthusiastic approach of 'plant lovers' who may be constantly touching plants causing damage. By understanding precisely the type of space allocated for an indoor plant

installation, who will be using it, and where it is situated, you can make appropriate value judgements on where and how to place plants.

How?

How to design, implement, install and maintain indoor plants and the planting design must also be considered during the planning processes of introducing plants into a building. In a home, the process will be quite simple: find the right spot, the right plant for that spot, in a variety the homeowner likes, plant it, place it, and take care of it. A small office may use a similar approach but delegate someone agreeable to care for indoor plants. It is in larger buildings and larger interior plantscaping projects where all the processes of design, budgets, project management, implementation and ongoing maintenance and care become extremely important.



Various Rushes are ideal as hardy indoor plants; very resistant to variable environmental conditions

Consider:

- *Plants are ever-changing and growing:* they can become messy, or they can die (discussed above). In a commercial situation the planting design must maintain its integrity; the client will expect this. Design is discussed in more detail below.
- *Ease of access for installation and maintenance:* in some buildings you will see plants hanging in atriums with very high, almost impossible to reach glass ceilings. These types of spaces are planned for future maintenance and will have a set maintenance plan that will include when and how plants are cared for. In some instances, for example, care may be given overnight if machinery is required to access the plants.



This lush green fine textured foliage works well contrasting with the smooth texture and colour of the pot.



Cacti can tolerate periods indoors, but spines are also dangerous - be careful where they are placed.

- ◆ Image – this is especially important when working with a corporation. All corporations hinge their public persona on image. Interior planting designers need to understand exactly the image the company is trying to project and work with that knowledge. Even small professional offices may have a similar approach, such as medical specialists, lawyers, architects and so on.

Design is discussed in more detail later in this text.

The Life Cycle of Indoor Plants – They Do Not Last Forever

Planting design: it isn't really as simple as just gathering a few plants together and putting them where they may look good. Designs may be simple or complex – and they must be formulated to suit the type of building the indoor planting installation is destined for. The types of things considered by interior plant designers include:

- ◆ The building – is it modern, heritage, somewhere in between?
- ◆ Is it a simple or more complex installation?
- ◆ Texture
- ◆ Colour
- ◆ Containers – types, colours etc to suit the scheme, the building and the situation

Given what they need to thrive, indoor plants can live quite a reasonably long time. Choosing the right species is part of that. Bonsai plants can live a very long life (hundreds of years if treated right), and aspidistras (also known as cast iron plants) are also almost foolproof. Some species are just short-lived plants. Annuals for example, or biennials, even some perennial plants don't live much over 3 years. However interior plants, in the main, are living in an artificial environment and are also reliant on people to care for them. Should either of these fail, then the plant too will fail. As a rule of thumb most plants, given care, will live for 2-3 years indoors. After this you need to consider installing replacements. In a commercial setting, where indoor plant specialists are looking after the plants, this natural attrition is planned for so that there is never a 'gap' in the planting scheme, or ugly dead plants, within the building. In the home setting we are more likely to wait until a plant actually dies before we think of replacing it.