

## Balcony Garden DIY

A guest blog post by Ecoman ([www.ecoman.ca](http://www.ecoman.ca)).

Balcony gardens provide substantial private and public benefits. A homeowner with a balcony garden should anticipate reduction of noise, improved views, reduction of city pollutants, improved air quality and fresh herbs for cooking. Not much has been written about the public benefits of balcony gardens but one would expect many of the same benefits attributed to rooftop gardens.

A do it yourself balcony project should take a systematic approach that takes into account environmental factors, design processes and practical considerations to arrive at something you really want as part of your living space.

Here are some general guidelines to consider when designing a balcony garden.

### Ecology of Balcony Gardens

A conceptual model of a balcony garden would begin by finding a comparable ecosystem to identify plants that will be successful. One example that comes to mind is a rocky outcrop on a cliff.



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Many examples of this type of vegetation can be seen growing along highways in sections that have been blasted away and plants are growing on small ledges clinging to life. In some cases moisture is seeping from the cliff face itself, or perhaps the tenacious plants have roots that reach deep into crevices in search of moisture and nutrients.

What plants are successful in this stressful environment? What strategies of survival do they employ to eke out a living? By looking at some of the similarities and differences we can build profile of plants characteristics that enable plants to survive well in a balcony garden situation.



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Visually you can see the similarities between the two above photos, both have plants growing on a sheer stone face, both have little soil to grow in and both are exposed to the elements.

Of course a balcony garden has a human being inside willing and able to bring out water as needed, supply soil, install containers and even bring plants inside for the winter should the need arise. Nevertheless thinking about the defining characteristics of life on a cliff can help to shape our ideas about balcony gardens.

### Orientation

The direction a balcony garden faces is important because it provides a basis for assumptions regarding light conditions and informs appropriate plant choices.

The direction the balcony faces is a determining factor in the quantity and quality of light available for plant growth. North facing balconies are unlikely to receive direct sunlight for any significant period of time. South facing balconies should get direct sunlight for a good portion of the day provided there are no other obstructions such as adjacent buildings in the way. East facing buildings will receive morning light that is less intense than a west facing balcony facing the full strength of afternoon sun.



Here you can see that the setting sun impacts the balconies to the left differently from the ones on the right due to the obstruction of the wall even though they have the same orientation towards the sun.

## Exposure

The amount of wind that a plant can tolerate is a function of the species in question and the availability of adequate moisture in the root zone.

Plants require water to survive and need additional water if stressed from heat or high winds. Since many balcony gardens rely on small pots it is important to monitor moisture levels and mitigate wind as required. Typically you will need to pay more attention than in a ground garden as the available moisture in containers depletes, it can only be replenished by you (it is important to note if you are getting any rainwater at all as many balcony gardens are not exposed from the top and are in a significant rain shadow).



The exposure from wind above can be seen by the clothes blowing sideways. Grouping pots together and/or positioning them behind a barrier can help mitigate damage from wind.

## Temperature

Although forecasts are given for the city as a whole vast differences can be found especially on rooftop balconies. Localized differences in temperatures are known as microclimate. In general it safe to assume that balcony gardens will experience colder temperatures the higher they are established. Furthermore, expect temperature fluctuations to be more severe if the sun pops out from behind the adjacent building quickly warming the concrete façade. In addition to these air temperature fluctuations, soil in the containers will not warm up like similar gardens in the ground. They will be at further risk of freezing and thawing quickly adding more stress on plants. One way to mitigate this is to insulate containers prior to installing soil media.



Even with all those plants, this gardener still needs protection from hot afternoon sun.

## Function

Another important consideration after the environmental observations have been made is human use. Consider the amount of space you have and the types of activities that the space should be able to handle. Will the garden be strictly ornamental in nature or will it be used for food production? Will you be entertaining in the space? What about pets and children?

It might be easier to start with a spectrum with high use on one end and purely visual with access only for maintenance on the other. Considering functionality will help determine the size, quantity and layout of containers and furniture. You don't need to be great at drawing to work at the concept level. Think about how many people will typically use the space and the flow of use (if you plan on having tables make sure you have room to pull a chair back to sit down and room for someone to pass behind).



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This balcony garden is so small they decided to use the vertical space and leave the horizontal floor space free for other uses (read seating, eating and entertaining).

### Scale/Size

Small spaces can do one or two things very well. Therefore you must edit your list of things you wish for your space in order to have a space that works well and does not appear cluttered and messy. If your goal is to have good seating for two then do this...



El gran sueño – Asturias / Foter / CC BY

VERSUS THIS...



Charlotte Gilhooly / Foter / CC BY

## Components

The balcony garden is made of floorspace, furniture, containers and plants. In some cases irrigation, lighting and bbq's are additional considerations. Typically balcony gardens are small so purchase what you really like. If you have a larger area you will need to be very careful about your floor covering choices as this will impact the budget significantly.

When making a decision about furniture, consider proportion. I would suggest narrow tables and smaller chairs for really small spaces. Forget about large blocky wicker sofas as it will just look cramped. The exception to this is container size. Containers are expensive and you will pay more for planters that do not need to be emptied out annually. Experienced gardeners can maintain many small pots of interesting plants. If you are just starting out it will be easier to



maintain a few large containers than many small individual pots (small pots dry out more quickly).



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Another important component is soil media. Most bagged container mixes will be adequate to start, however, it is critical to feed the soil as plants remove nutrients from the soil over time. The nutrients will not be replenished through natural processes. It is up to you to replenish with additional bags of compost or fertilizer.

## Plants and Design

Consider the items above prior to plant selection to help create a profile of ideal plant characteristics. This will help to narrow the palette of plants that will do well. Now would be a good time to think about aesthetics. I like to create a collage of the plants I would like to use so I can see how they will look together. This can easily be done directly in the nursery if you take the time. If you really wanted to get fancy you could add samples of the furnishing colours, fabrics and floor to the collage to get a feel for how the plants play off the rest of the balcony furnishings.



My company does not do a lot of design for balconies so here is an example of a collage we did for a very small garden in downtown Toronto. This can be done easily and quickly using Picasa from Google.

## Conclusion

Balcony Gardens provide both private and public benefits. It makes sense to tackle them using a systematic approach that looks at environmental factors, design process and practical considerations to arrive at something you really want as part of your living space. Check back for further articles that take on these topics in more detail going forward.

Ideally plants should be integrated into the structure and function of buildings right from the get go. Ultimately buildings are just bones of a body with no skin. For the most part they are built to protect the activities that occur within but fail to exploit all the activity happening outside. How about capturing some free energy, water, wind and on top of that make it aesthetically pleasing too.



Martin de Witte / Foter / CC BY-NC

at least compared to this...



Christian 胡萝卜男 / Foter / CC BY-NC-SA

Article contributed by Ecoman. Ecoman is a landscaping and gardening practice shaping residential spaces of all sizes. We've got a thing for working with nature. Healthy plants and people are essential elements of a landscape that gives back. For a fresh perspective, get in touch at [www.ecoman.ca](http://www.ecoman.ca).

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