Aromatic Medicinal Plants: Guidance for the visually impaired

Hazreena Hussein
Sreetheran Maruthaveeran
AROMATIC MEDICINAL PLANTS: GUIDANCE FOR THE VISUALLY IMPAIRED

Hazreena, H.¹ & Sreetheran, M.²

Hazreena Hussein
Faculty of Built Environment
Department of Architecture
University of Malaya
50603 Kuala Lumpur
Fax: 603-7967.5713
E-mail: reenalambina@um.edu.my

&

Sreetheran, M.
Forest Research Institute Malaysia (FRIM)
Kepong, 52109
Selangor Darul Ehsan
Fax: 603-6279 7615
E-mail: sreetheran@frim.gov.my

Abstract
Green spaces such as public parks and intimate gardens have been associated for more than a century with pleasures, providing a green oasis in the city. Making green spaces accessible to as many people as possible is now mainstream thinking in design and management. Efforts are now often channeled more into providing green spaces, which are accessible to everyone who wishes to use them. The basic idea of green spaces must be accessible, user friendly, safe, offer both comfort and maximum enjoyment. This research is dedicated specially for the visually impaired people. The purpose of this paper is to investigate and identify the characteristics in creating intimate green spaces for the disabled to enjoy. The end product of this research is intended to provide information on different type of aromatic plants, highlighting their medicinal value and use in designs for the visually impaired people.

Key words: Aromatic plants, medicinal plants, design, visually impaired people.

Introduction
The purpose of this paper is to investigate and identify the criteria for designing successful parks that everyone can enjoy. If anyone were to ask whether there is a thing called ‘parks for the disabled persons’ right now, the answer would be ‘no, there is not’. Here and there, there are campaigns towards a garden nation by 2005¹. It is definitely a good effort of sustainability and conservation; however, there is still lack of public awareness concerning this matter. Hence, disabled people are unable to participate equally in enjoying parks.

¹ New Straits Times, October 22, 2000, p25
The principle of Barrier-Free
Barrier-free design is achievable when these factors are considered: Safety, Accessibility and Usability. A more encompassing concept is ‘universal design’, where the factors of affordability and aesthetics are even considered. Safety is defined as ‘Freedom from danger and risks’. Accessible is; ‘That can be readily reached or entered’. Usability is; ‘That can be used’. Affordability is defined as ‘Having means to’. These are basic definitions that can be found in the Oxford Dictionary.

Aim and Objectives
Public parks should be accessible to all disabled people to be an equal user in all activities that the park has to offer. The following are basic objectives that should be met:

1. To promote a barrier-free environment in the park, focusing on planting materials;
2. To produce a proper research with findings that will illustrate the users’ needs and problems;
3. To suggest recommendations of practical ideas in planting design.

To ensure the success of a park, the identification of practical ideas is essential in the design process. With this consideration, the aim of this paper is:

TO ACHIEVE THE AGENDA OF PROMOTING ALL PARKS TO HAVE A BARRIER-FREE ENVIRONMENT

Methodology
Several methods are being employed in meeting these objectives. First, by obtaining reliable information from literature found from recommended books, journals and Internet Web pages. Secondly, a more detailed appraisal of findings from previous local and regional studies. This is to provide the authors with the knowledge of existing works on the subject and formulate a personal understanding on the issues and constraints in relation to design.

A series of questionnaire was structured based from the five barrier-free principles, i.e. Safety, Accessibility, Usability, Affordability and Aesthetics. The first questionnaire was sent to Puan Noraishah, a project manager in KLCC, working with the Putrajaya Holdings. According to her, ‘For a park setting around an urban area, the species chosen must be pedestrian friendly’. Among characters are to provide shade, no dangerous thorns or spike like leaves that are near to the footpath or accessible areas. In favour of the Accessible principle, it is important to ensure that plants are planted near ramps and walkways. In providing texture for the sense of touch and smell, fragrant plants can be introduced at a scale of shrubs height and even creepers as well as climbers. Along with the public awareness, Puan Noraishah also noted that now people are more sensitive to providing the due respect and consideration for the disabled. The awareness is enhanced by offering amenities only meant to this group such as having ramps, railings and toilet facilities.

The second questionnaire was an interview with Dr. Jacqueline Emmanuel. She is partially sighted since 1997 and working as a counsellor at the Malaysian Association for the Blind (MAB). A series of questionnaire had been asked to investigate constraints and potential plant features in a park. She could appreciate plants by touching and smelling. She also prefers to walk underneath shady trees while hearing the breeze blows though the foliage. Jackie would use plants as guidance to walk if they were planted near the pathway or in a waist height planter box. However, there were some issues that need consideration. First,
branches and tree roots, which were jointing out could cause hazardous. Second, the tree grates that do not flush with the pavement, where she could slip. On top of that, Jackie also mentioned that pointed leaves and unpleasant sap that cause allergic reaction could be dangerous to the visually impaired people. It would be educational to all if all appropriate plants were labeled with Braille and other safety measures included. Finally, Jackie thought that there are still lacking of public awareness where people are still not aware of their needs and how to interact with them. Added to that, she believes more awareness must be given through the media.

**Planting Recommendations**

The appropriate and imaginative selection of plants is critical to the success of any landscape design. However, it is especially important in creating an intimate garden for the disabled to enjoy. Sadly it is often the poor selection and combination of plant material that lets down the design of landscapes for the disabled people.

‘A more imaginative selection of plants should be encouraged, including the use of floral displays, scents and textural interest’.  

A good planting design relies on the designer having a sound understanding of the different roles that plants play. According to Stoneham and Thoday, plant selection particularly for sight-impaired people must have significant criteria, i.e. scent, safety and texture. Together with those criteria, the author will suggest some tropical plants.

**Scent**

‘For people who cannot share the visual enjoyment of a garden, scents are particularly significant’.  
*Landscape Design for the Disabled People*, Garden Art Press, p159

In any garden, it is important to consider plants and garden features, which appeal to all the senses. Scent is what most people think of when designing a garden for visually impaired people and this aspect certainly gives pleasures to sighted people as well. Some distinctive trees with scents are *Cananga odorata* (kenanga), *Fragrea fragrans* (tembusu), *Gardenia carinata* (chempaka hutang), *Michelia alba* (white chempaka), *Michelia champaka* (yellow chempaka), *Mimusops elengi* (tanjung) and *Plumeria obtusa* (white kemboja). Shrubs could also contribute with their scented flowers. The strategic positioning of boundary trees and shrubs can reduce the noise from busy roads and filter the smell from a nearby rubbish area. They are namely, *Brunfelsia calycina* (yesterday-today-tomorrow), *Cestrum nocturnum* (queen of the night), *Gardenia jasminoides* (cape jasmine), *Hedychium coronarium* (ginger lily), *Magnolia coco* (cempaka telur), *Michelia figo* (banana magnolia), *Murraya paniculata* (orange jasmine) and *Wrightia religiosa* (melati).

In addition to scented flowers, plants can be chosen for their aromatic foliage and bark, specifically *Dryobalanops aromatica* (kapur) and *Eucalyptus deglupta* (kayu putih). These

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2 STONEHAM, J. and THODAY, P.; *Landscape Design for the Disabled People*, Garden Art Press, p127
3 STONEHAM, J. and THODAY, P.; *Landscape Design for the Disabled People*, Garden Art Press, p23
4 *Garden Asia*, July – September 2000, p10
5 *Garden Asia*, October – December 2000, p15
6 *Garden Asia*, July – September 2000, p27
can greatly extend the seasons of interest. Some can be used as markers in the landscape, for example to indicate seating or a change of direction.

Climbers rarely receive the credit they deserve and their inclusion in planting schemes is generally quite limited. However, the minimal ground space required makes them especially useful for greening confined areas that could not otherwise be planted. Vines should also be chosen for their flower, fruit and foliage displays, where they can be used to cover trellises. Trained over pergolas, creepers like *Jasminum sambac* (Arabian jasmine) and *Lonicera japonica* (honeysuckle) and *Quisqualis indica* (Rangoon creeper) can help to offer shade and provide seating areas beneath.

**Safety**

‘Safety is an important concern for frail people and there is little sense in including highly poisonous or allergenic plants in a planting scheme’.

*Landscape Design for the Disabled People*, Garden Art Press, p158

Disabled people also require greater attention to safety in the planted landscape. Thorny, spiny, stinging and poisonous plants that produce unpleasant sap or cause allergies can be a considerable nuisance. These characteristics refer to some plants, which include *Caryota mitis* (fishtail palm), *Cerbera odollam* (pong pong) and *Excoecaria bicolour* (buta buta).

However, it is not usually required to avoid the use of plants that are only hazardous under exceptional circumstances. There are far too much poisonous vegetation, including wild species that invade and mature trees that cannot be removed. Even so it is preferable to limit these floras to background positions where they are out of reach.

Plants that drop mucilaginous leaves or fruits can be a problem if they are near paths where slippery surface could be hazardous. These risks can be avoided by setting plants back within ground cover.

More than any other vegetation in the landscape, trees must receive regular inspections and maintenance. It is important to obtain expert advice on the safety and health of specimens. Old and dying trees may need to be felled for safety reason. Tree branches, which are jointing out could cause danger to the visually impaired people where a minimum clearance of 2meters from the base of the tree to the first branch was noted in the guideline. Tree roots could cause unevenness in paths, particularly if the underlying substrate is compacted and the roots are therefore confined to a shallow zone just beneath the path surface.

**Texture**

‘The outdoors is full of different textures, particularly those with visual impairments, rely on these to interpret the environment’.


Plants can be selected with differing textures of leaves, barks and stems but need to be robust enough to withstand examination of touch and should not contain thorns or sap, which may irritate.

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7 *Garden Asia*, October - December 2000, p17
8 *Garden Asia*, July – September 2000, p27
Other Feature
‘Information provided to visitors should be available in appropriate format (at least large
prints but ideally Braille and cassette as well) and sitting of information points such as
notice boards needs careful consideration’.
Landscape Design Periodical, April 1996, p30

Plants can be labelled in Braille where a board may list plant names placed alongside the
plants. This is to educate the sight-impaired persons with the knowledge of plants.

Conclusions
It is not always realistic to design all areas of a park to be accessible to everyone but this
should never justify the segregation of disabled people by the provision of one specific
area, such as the notorious ‘garden for the blind’. It is now widely acknowledged that such
segregation runs contrary to the ideal of integration and that the demand from disabled
people is for facilities that provide interest for a broad range of people, without creating
barriers for those with special needs. The recent fashion for ‘sensory landscapes’ should
be a way of introducing much greater interest and variety into parks for everyone to enjoy
and should not result in ‘gardens for the disabled’ under a different heading. It is hoped
that with careful planning and sensitive approaches, all parks will be more accessible,
friendly and safe to as many people as possible.

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