

Universal Design as a Tool for an Inclusive Society

'All Slopes are Not Ramps'
Sukriti Foundation Workshop
for Anna University Students of Architecture

Universal Design and Architects

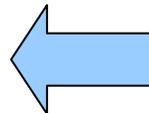
Universal Design is a tool for inclusion. Creating of inclusive societies is the responsibility of architects as well as governance as the keepers of human rights.



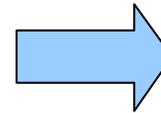
Adapts to changing requirements over a period of time, making it user friendly no matter what the age, sex or specific ergonomic needs that the user might have.



Does not discriminate against people with different abilities or special needs.



**Healthy Society/
Built or Urban
environment**



A healthy built or urban space also by its design facilitates the ***Inclusion*** of people from a diverse background of sensibilities, abilities and culture.

Inclusion signifies human beings should freely, openly and happily accommodate any other human being that happens to have a disability [[disability without question or qualification of any kind. Inclusion goes beyond mainstreaming, the process of trying to ensure that a person with physical and/or mental divergences from the mainstream is put alongside those without such differences, in hopes that each will adapt to and learn about the other.

Non – Universal design And the society it perpetrates

Usual Street and pavement conditions in India which make accessibility a nightmare.

Congested Buildings with maximum ground coverage provide little space for children and adults for recreation. TV and a sedentary lifestyle lead to obesity and ill health.



Impossible non-negotiable streets, crowded with vehicles with very little emphasis towards pedestrian traffic

Effects of this calousness:

- Barriers for physical movement discourages people with physical difficulties to actively take part in public life.
- It discourages the old from living independent healthy lives.
- It discourages the Physically challenged to live a life of equality with everyone else.
- Children's movements are hugely restricted, being confined to supervised or motorised ones.

Design for the Elderly:

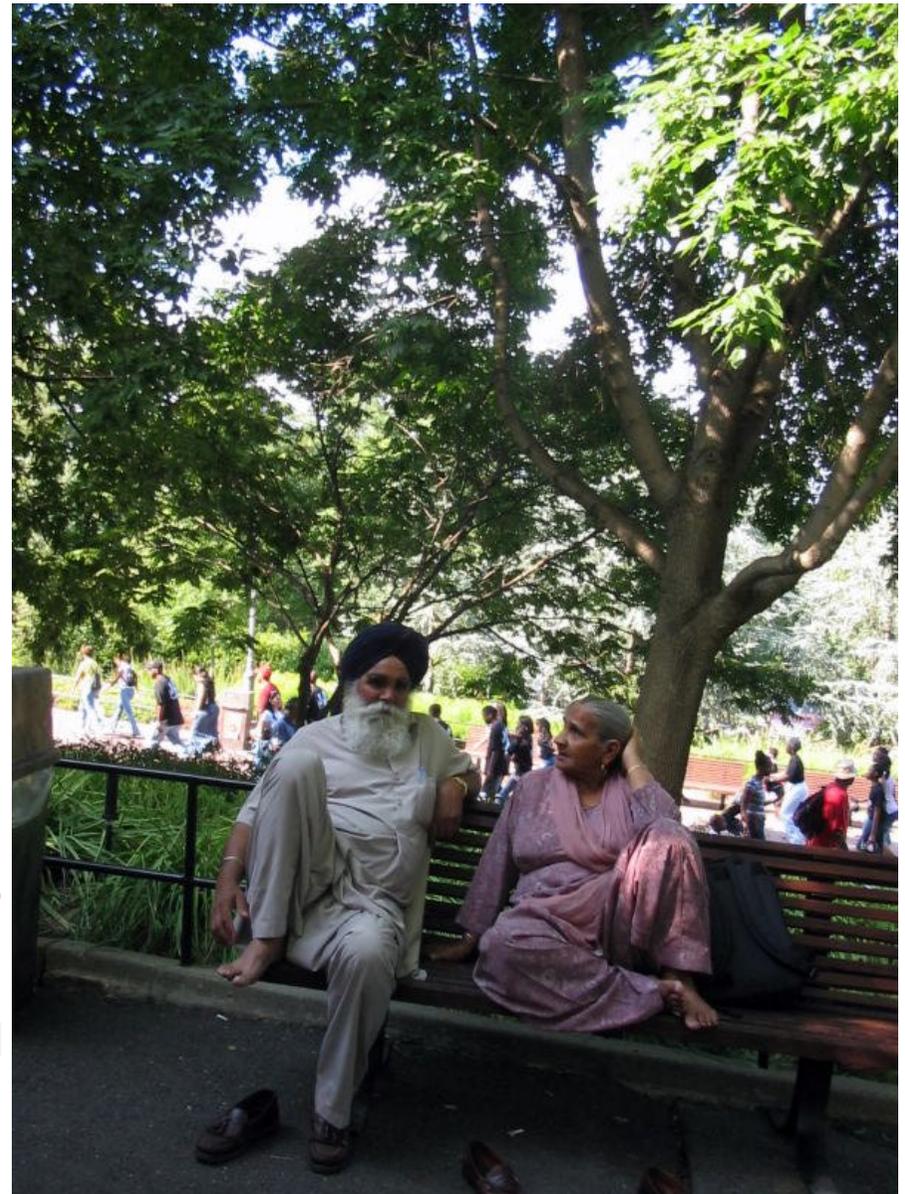
Changing scenario in India regarding the Elderly:

- Larger number of the elderly due to better healthcare and longevity.
- Living alone or independently – either by choice or compulsion.
- Traditional structure of joint families or community living eroded especially in Urban India – traditional support structure missing.
- State does not take the responsibility of providing that support structure beyond nominal pension.

Importance of the Elderly in our society

- Repositories of our history/ culture/ traditions.
- Children interacting with their grandparents regularly are known to be more secure.
- A society which accepts and embraces its old has a greater sense of cohesion, understanding, tolerance levels.

It is Vital for a Healthy Society to allow its aged to engage actively with the community at large and take their rightful places as the wise and the experienced.



How to Include the Elderly?

Keep them Healthy and Active



Regular physical activity contributes to better health among old and very old individuals

A growing literature suggests that the physical environment is an important contributor to physical activity by older people

The extent to which older people are active depends on:

- Their health and physical abilities
- Lifestyle
- Opportunities afforded to them in their homes, communities and places of work.



Areas of Concern:

- Outdoors – streets, transport, daily activities.
- Residential neighbourhoods.
- Homes and Houses.

Outdoors

Accessibility issues



- Greater reliance on public transport which are accessible to the aged
- Barrierfree outdoors – streets, kerbs designed for easy mobility



Outdoors

Spaces Encouraging Physical Activity



Interaction with nature and people have a therapeutic value:

- may be largely passive, e.g. looking at plants, - seating for the elderly in public spaces.

- more active pursuits such as walking the dog, gardening, swimming etc. - accessible pedestrian avenues, health club facilities near residential areas.



Residential neighbourhoods

Spaces Encouraging Interaction and Engaging with Community



Courtyard Garden

Open and covered activity areas to promote healthy interaction at all levels and amongst all age groups.

Easily approachable, accessible daily amenities like shops, post offices, banks, health care.

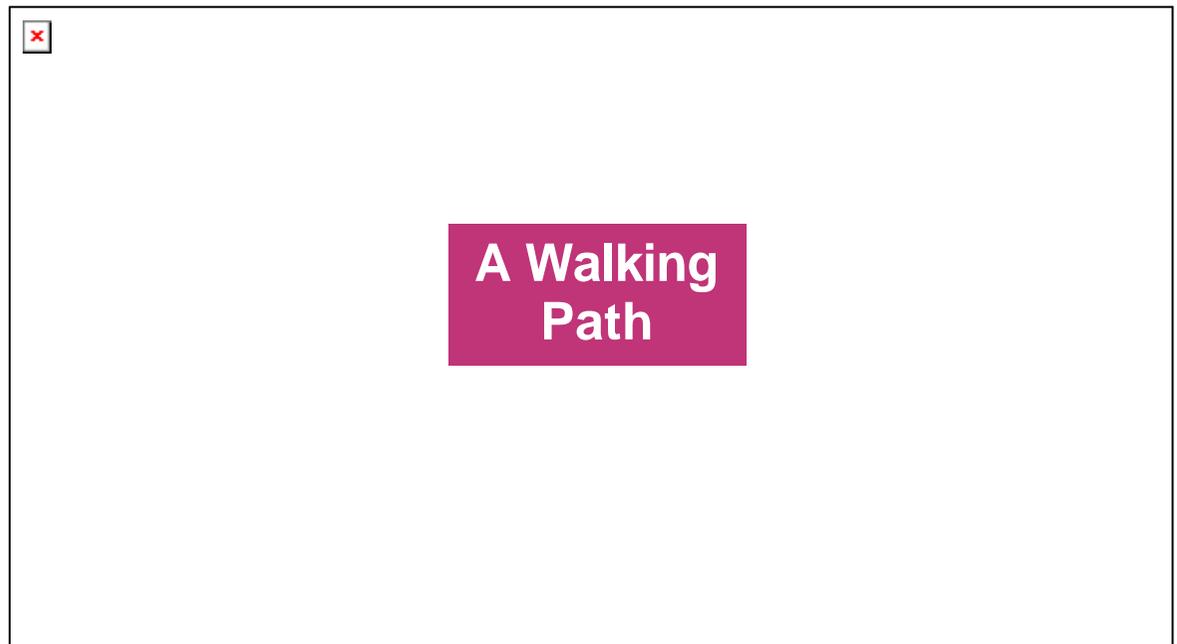
Access to assisted living when required.



Seating along walking path



Walking Path with Activity Areas



Homes and Houses

Comfort of living and maintaining an active lifestyle

Minimum Barrier environment with minimum levels and wheelchair accessibility

Toilets and kitchen designed for assisted or wheelchair use, or for people with mobility, visual impairment.

Electrical controls/appliances with appropriate colour coding etc, for failing eyesights.

Visual aid for levels – audio announcements in lifts.



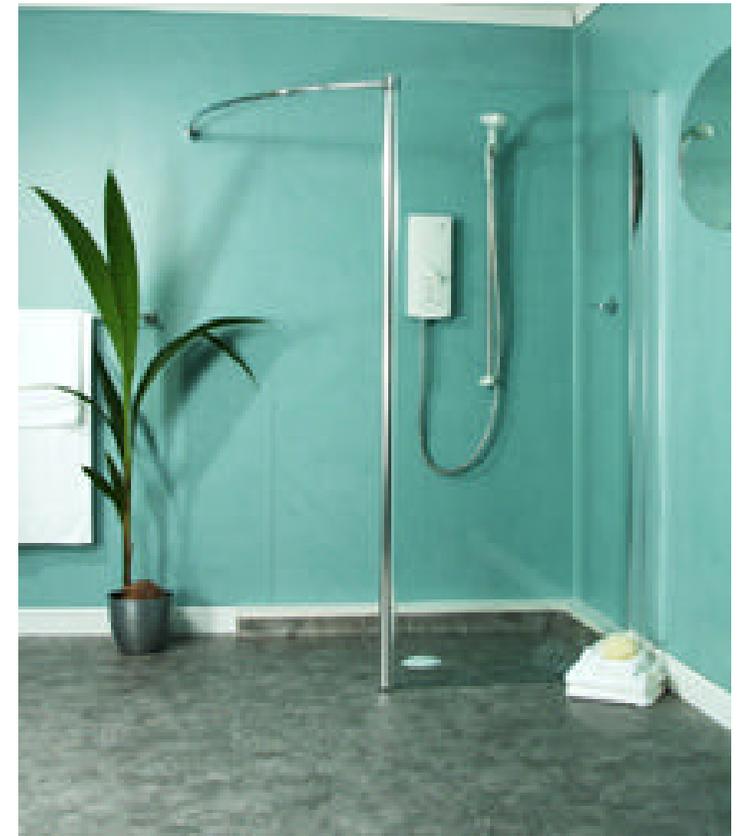
Homes and Houses

Toilets for the Elderly

Slightly larger spaces for assisted use or wheelchairs.

Easy accessibility, grab bars for support, colours for orientation

Joint free floors, no drops for shower areas, no shower trays, proper slopes for drainage.



Easy maintenance, wheelchair accessibility.

Liftable toilet seats for ease of sitting down and getting up.



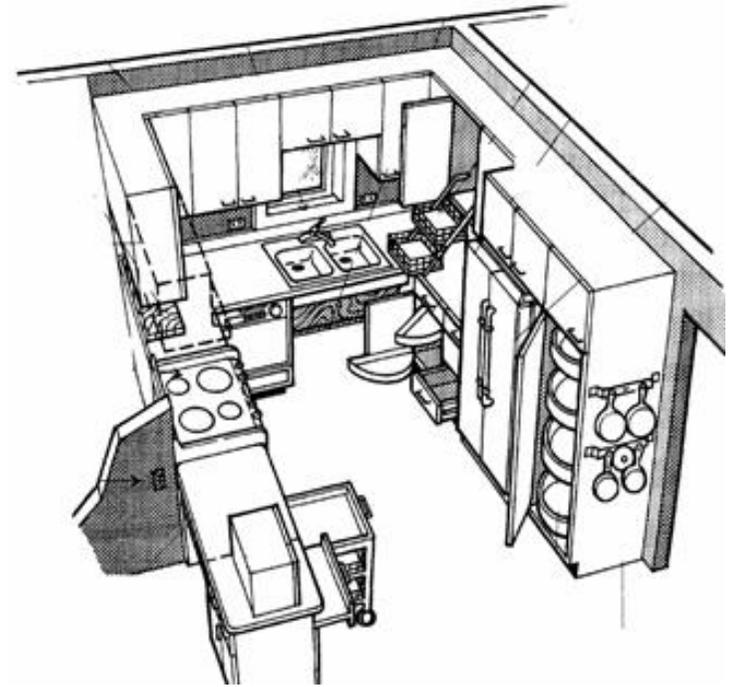
Homes and Houses

Kitchens for the Elderly



Standard Kitchens:

Standing Counters.
Knobs on Cabinets.
Controls difficult to access for people of limited mobility.
Not enough space for mobility aids.

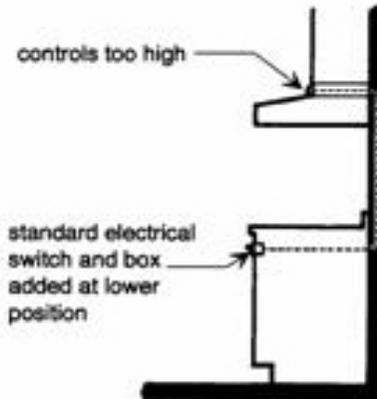
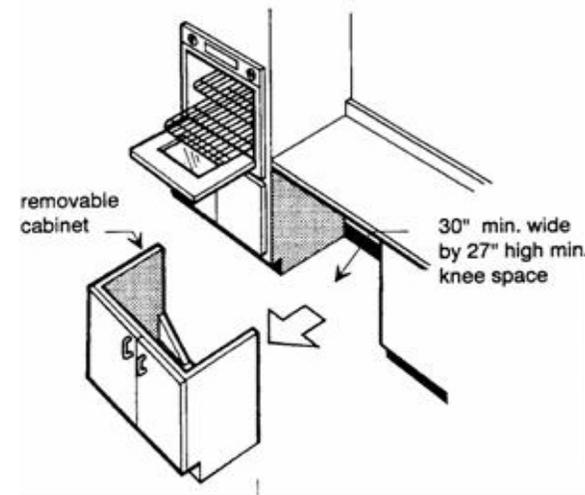


Remodeled for Accessibility

Base units on casters to create leg space for seating position.
Handles placed in accessible locations.
Use of easy to access drawers and pull outs.
Controls at accessible positions.

Homes and Houses

Kitchens for the Elderly



Ovens at counter height, movable base units and self cleaning appliances.

Pull out, easy to access storage.

Cooking Areas:

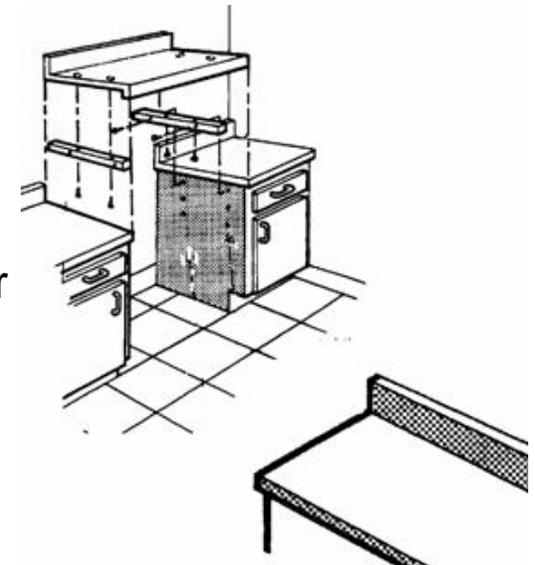
Flush mounted Hobs with easily cleanable surfaces

Space under Counter for Knee space while sitting

Controls in Accessible locations.

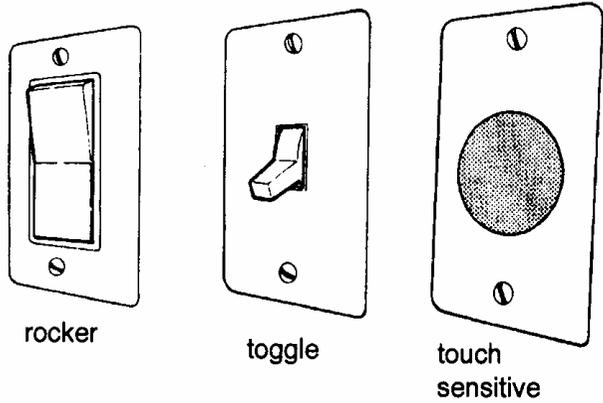
Adjustable Counter Heights

Defining edges of counters with a different colour.



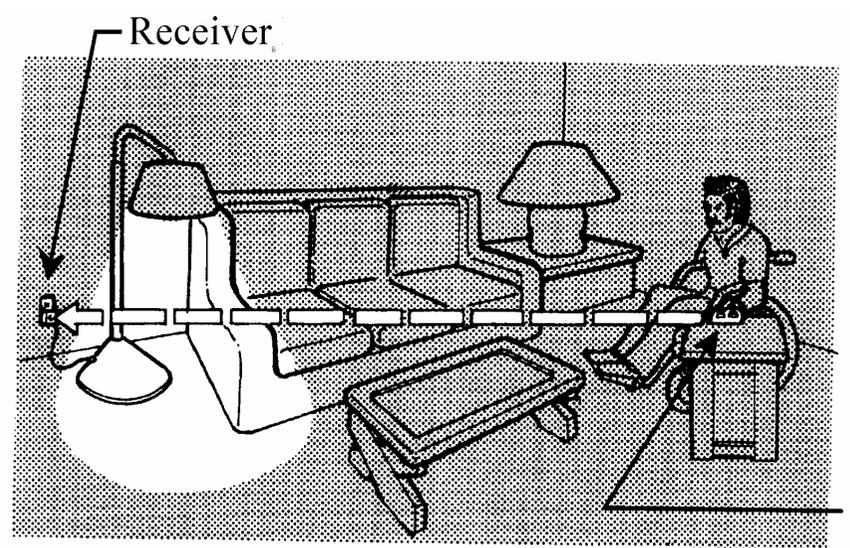
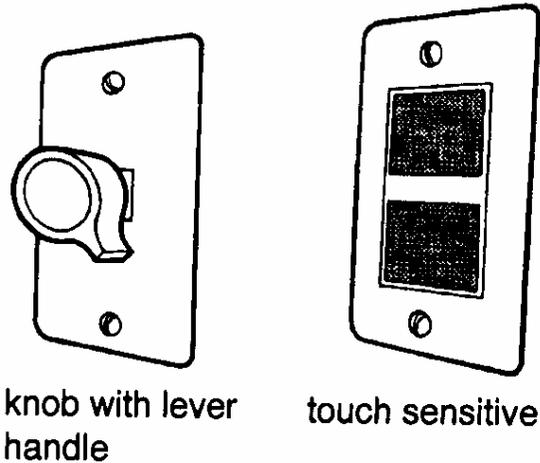
Homes and Houses

Electrical Controls

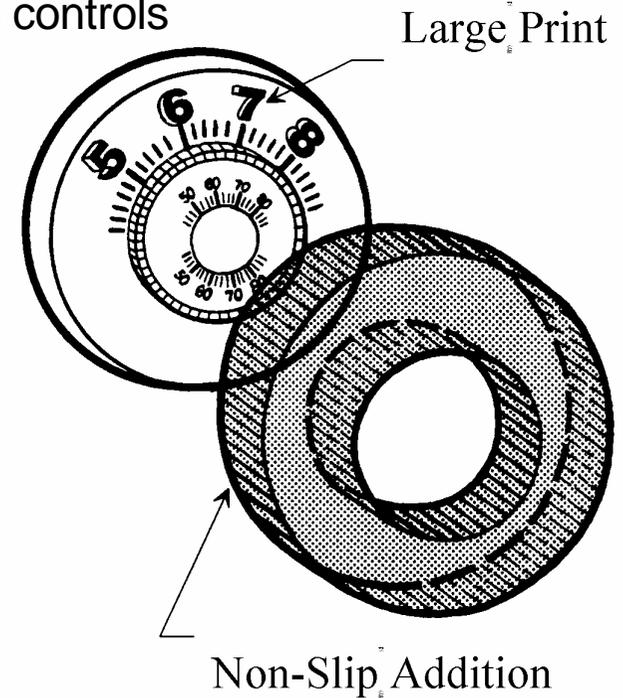


Toggles, touch sensitive pads.

Knobs should have blades and dimmers.



Remote Controls where possible.
Large Prints, Clicking sounds with rotation controls



The Raku Raku Phone – one on Universal Design principles



Design for the Child

Increase in Motorised Traffic has resulted in Children Losing Outdoor Spaces.

Children's environment is fundamental for their healthy development;

U.N. Convention on the Rights of the Child (CRC) recognizes the right of every child to a standard of living adequate for the child's physical, mental, spiritual, moral and social development.

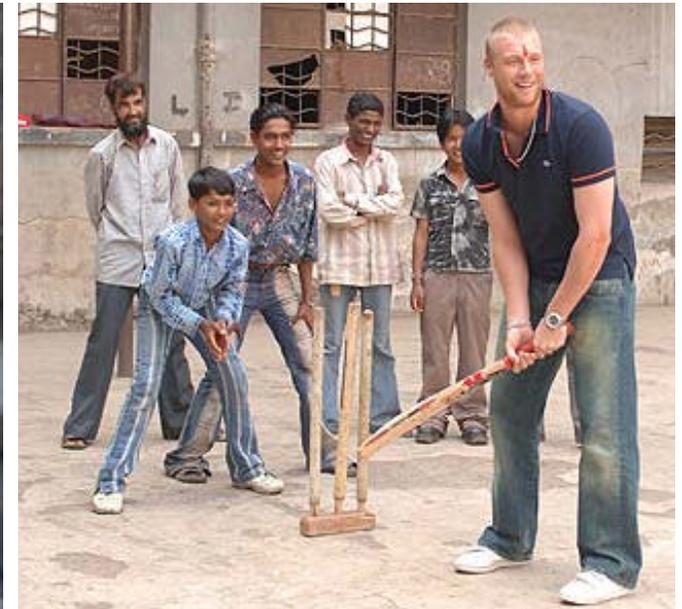
India is one of the signatories of the ratification of the CRC Convention.



Design for the Child

International evidence confirms that the early years of a child's life are critical to his or her future development. It is at this time that a child's brain is rapidly developing and the foundations for learning, behaviour and health over the life course are set.

A child brought up in an environment where he can communicate and engage with the larger community and safely perform his daily activities with minimum interference, grows up to be a secure and more socially responsible adult.



A City Friendly to Children is a City Friendly to All

Communities should be developed in open and sustainable lines so that children are safe with minimum supervision.

They should be able to spend large parts of their days outdoors safely.

They should be able to carry out their daily activities independently, by walking, cycling or public transport.

Their playgrounds and parks should be easy to access.

Active outdoorsy lifestyle keeps children healthy both physically and mentally.



Walk to School campaigns promote lesser use of vehicles and a healthier child.



A City Friendly to Children is a City Friendly to All

Wanted:

Safe and attractive footpaths and cyclepaths that allow minimal conflict with cars.

Shared street zones where pedestrians and cyclists have priority over cars.

Narrower streets in residential areas.

Road layouts that reduce traffic speed in residential areas.

Clear access to public spaces.

Services such as shops, schools, libraries and playgrounds that are easy and convenient to reach.



Indoors: Safety and Space

Main Criterias:

Storage: Easy to use and ample

Elimination fo potential hazards like unguarded plug points at low level.

Variable heights for counters and tables – low height stools meant for children.

Furniture should be sturdy, safe.

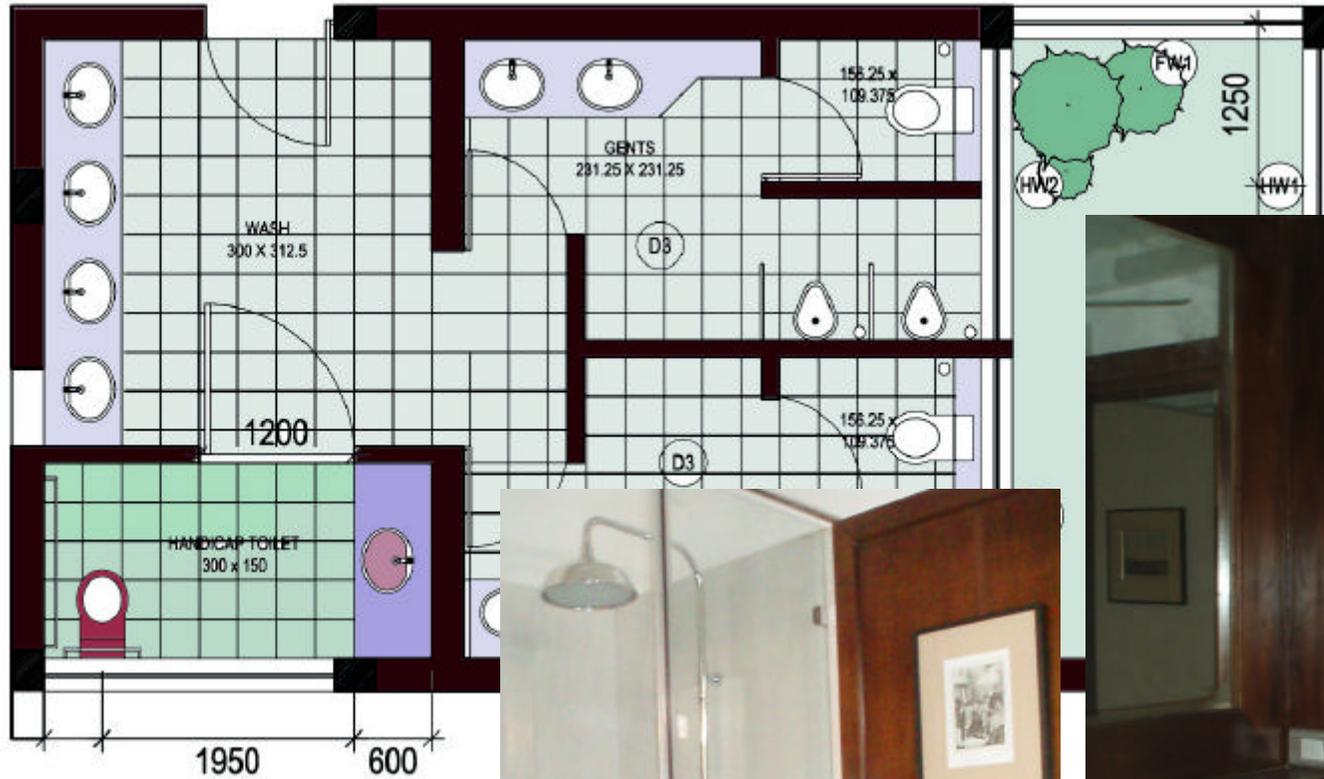
Floor finish should be easy to maintain and keep clean but warm – wooden floors are ideal. Avoid carpets.

Clutter should be avoided and ample free space should be provided.



Some Examples:

Disabled friendly toilets:



Toilets in a luxury hotel – wash basin with leg space and height adjusting mechanism.

Common toilet clusters should have at least one toilet which is disability friendly.

Toilets in a luxury hotel: No bath – Shower area with grab rails.



Some Examples:



Access Ramps and Banks with Disability Access

Ramp access along with staircase.

- Non skid surface for ramp
- Grab Bar at appropriate height.

Bank counters:

- at a lower height for sitting customers.
- Modesty Panel recessed to give leg room.

