

## University of Pretoria etd - Brand, A (2003)

FUNCTION	USAGE	DESCRIPTION	SPACE REQ.	ARCHITECTURE
Administration	Reception, info. boards	Striking, bold entr.	100m2	Designer furniture and décor.
Info boards must be cle	ar and people must have easy access to building/spaces. Entrance must welcome people.			
Security	Offices - security cameras	Highest level of sec.	25m2	Sec. check up points.
Security throughout th	e building must be very strict because of valuable/expensive objects. Accesses areas - fully secure.			
Sitting area	Gathering/relaxing/waiting	Individual/groups	60m2	Designer sofas/coffee tables etc.
Provide informal sitting	space for the public - self service coffe	e machine and magazii	nes etc. to read	from.
Offices	Main offices + diff.companies	Offices for staff	365m2	Modern, open plan offices.
1 manager, 4 floor man	agers, 6 sub-managers, 18 offices - op	pen plan 8m2 p.p = tota	al of 29 offices	(see user profile).
Showrooms	Showcase facilities	Showcase designs	500m2	Ceilings, floors, lights etc.
Should be designed for	general purposes and not around a particular show. Large spaces (flexible layouts/temporary partition).			
Shops	Available to public - designs	Ikea, Sevens, etc.	850m2	Open layouts, glass, shopfronts.
Most economical way o	f gaining volume for storage is to use h	neight. Flexible - accom	nmodate change	e. > useable spaces.
Restaurants	For public + people in building	Exclusive/variety	750m2	Feature - Gehry's restaurant.
Furnished with designe	r chairs and tables. Views are importa	nt - towards the interio	or of building an	d to outside as well.
Gallery	Temporary exhibitions etc.	More private display	500m2	Display, freestanding walls.
Random circulation -	more private space. Suitable design for satisfactory viewing, distance and lighting.			
Skills learning area	Entrepreneurs/learn skills	Workshops/classes	280m2	Noise control, thermal comfort.
Workshops and short 1	week training courses in furniture and décor design - to public (all ages) - given by well-known designers.			
Library/Internet	Gather info. on designs/designers	s/history etc.	250m2	More private space.
Provide internet faciliti	es, reading material, buyers' guides, bi	rochures, future exhibit	ion and worksh	op planners.
Circulation area	Passages etc.		250m2	Excluding open spaces - atrium.
Adequate space should	be provided for people to view the obj	ects, exhibits etc. and a	also to pass bet	ween viewers.
Services	2 Lifts, piping, ducts, staircase	Loadbearing lifts	45m2	Lifts/staircase - feature.
Lifts must carry the loa	d of the furniture and objects. Provide sufficient ramps and staircases - open - view towards designs.			
Gallery/atrium	Moveable partitions	Focus on designs	450m2	An impressive interplay of light.
Ensure maximum vision	for attendants. Showcase, freestandin	ng, on walls/cables (ten	nporary/flexible	).
Sanitation	Wcs, urinals, basins etc.	Sufficient layouts	250m2	Privacy are important.
Proper calculations of	numbers required for building. Correct	t appliance, activity spa	ace. Simplifies	circulation/reduces walked.

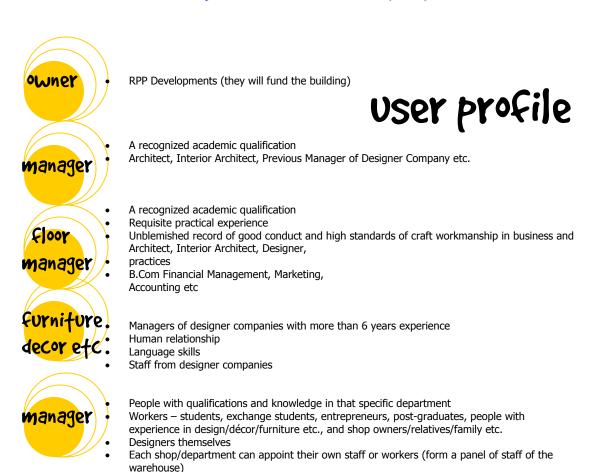
## University of Pretoria etd - Brand, A (2003)

NORMS	STANDARDS		
A rough guide, allow 10 - 15% of production floor area or	[Tutt, Adler, 1998:91]		
5m2 per person			
Most thefts are carried out during working hours	[Tutt, Adler, 1998:487]		
Attendants/wardens/electronic detection/max visual coverage			
3,7m2 minim. floor area per person	[Tutt, Adler, 1998:114]		
0,5m2 - 1,4m2 depending on number of seated people			
Absolute minim. area p.p. 3,7m2 - 4,2m2 (incl. aisles, cabinet)			
4,2 - 6,0m2 - reasonable conditions. 11,3m2 room capac.p.p.	[Tutt, Adler, 1998:114]		
Allow 1/3 depth of showcase to light surface of object			
Reading/object - 1100 from viewer, 15 - 20 degree angle	[Tutt, Adler, 1998:114]		
Note especially access, display requirements, position in			
regard to main circulation, delivery of goods and storage	[Tutt, Adler, 1998:286]		
Dining rooms (luxury) 1,7m2 - 1,9m2 p. seat	[Tutt, Adler, 1998:321]		
Coffee shops and restaurants 1,3m2 p. seat	Rectangular tables (4 seating) 1,3 - 1,5 m2 area p.diner		
Normal limit of vision without moving head is a cone of 40 deg.	[Tutt, Adler, 1998:286]		
Provide extra viewing space (not placed too near to another)			
Minim. space between equipment to allow for working/circ.	[Tutt, Adler, 1998:275]		
Work top height 865mm, crafts (machines etc.) 8,40m2/space			
General reader 2,3m2 p.p., research worker 3,25m2 p.p.			
1 reader space - 6 people 0,4m2 p.p./ 3,8m shelving admin.	[Tutt, Adler, 1998:293]		
1200 - 1400 minim. passageway (depends on size of object)	[Tutt, Adler, 1998:286]		
1400 - 1600 viewing distance			
Single staircase serving gross floor area of less than 230m2 -	[SABS 0400, 1990:91]		
765mm wide.	[Tutt, Adler, 1998:481]		
Minim. 1000 away from corners - avoid congestion in corners	[Tutt, Adler, 1998:286]		
1200 - 1400 minim. passageway (depends on size of object)			
1 wc minim. For 1 - 15 women, 1 wc + 1 urinal for 1 - 15 men			
1 wb to be provided for 1 - 15 persons for regularly employed	[Tutt, Adler, 1998:337]		

Function	Norms	Standards
Fire	The dead end of any escape should not exceed 7,6m.	
	Use fire extinguishers, escape routes, fire seperation walls.	[SABS 0400, 1990:157]
	Buildings over 18,3m high - fire staircases with smoke outlets	[SABS 0400, 1990:217]
Noise	Human ear- sensitive for f 1-3kHz. Barrier against traffic	
	noise on western façade of building. Noise - disturbing when	
	sound exceeds ambient level in dBA by 7 dB or more.	[Tutt, Adler, 1998:435]
Acoustic	Acoustical data on materials and products are important.	[Tutt, Adler, 1998:438]
	Thermal insulation material can give a measure of acoustic	
	control, particularly in providing absorption.	
Light	Warehouse - daylight factor 2% (say 10 - 15 % FA) 300 -	[SABS 0400, 1990:101]
	500 lux. Design level should not be below a daylightfactor of	[Tutt, Adler, 1998:428]
	5%. Overhead light fittings are less likely to cause glare.	[Tutt, Adler, 1998:428]
Disabled	Wc compartment - support rails - 35mm diameter with 50mm	[Tutt, Adler, 1998:151]
	clearance between rail and wall. Wc cubicles - 1500 x 2000.	[Tutt, Adler, 1998:341]
	Horizontal rails should carry a static load of 150kg.	[144,144,255,615,12]
Temperature	Refer to Psychrometric chart, New Metric Handbook, p. 394.	[Tutt, Adler, 1998:394]
	Protects exhibits from heat produced by lighting.	[100,100, 1550, 51]
	Trocects exhibits from freue produced by lighting.	
Thermal comfort	Laws of thermodynamics: energy cannot be created or	[Tutt, Adler, 1998:381]
Thermal connoic	destroyed/heat will only flow from a higher temp. to a lower.	[10tt, Adici, 1990.901]
	Minim. Fresh air supply is 4,72l/s/p. Factories/offices - minim.	
	vol. p.p. is 11,5m3 (natural/forced). Art Galleries/museums -	
	20 deg./infiltration rate (1 h-1) vent. Allow 0,33 (W/m2deg.)	
Lifts/staircases	Passanger lift + goods lift. Standard lift car size 1,1 x 1,4 x	[Tutt, Adler, 1998:481]
Lifts/ Stall cases	2,2m, door width of 0,8m - will accommodate a wheelchair	[SABS 0400, 1990:91]
	and most items of furniture except largest.	[3Ab3 0400, 1990.91]
Security	Fence better than wall (can see through). Fence not less	[Tutt, Adler, 1998:487]
Security	than 2,5m high. Window panels less than 0,5m2 cannot be	[1dtt, Adici, 1990.407]
	climbed through. Last door - stout (mortice lock)	
Fig. 2 - Δccommodati	on list for DiD Warehouse	
rig. 2 Accommodati	Wateriouse	
F	sakad sammunih, yasunusa ta an inamaas in the surbisut dib	Mayel
Expe	ected community response to an increase in the ambient dBA	A level
	As a result of intrusive noise	
	In accordance with SABS 0103 criteria	Evported community was sking
	Excess noise (Increase in dBA level)  L ambient - L residual	Expected community reaction
		No observed resettion
	0	No observed reaction
	>0< or equal 5	Sporadic complaints
	>5< or equal 10	Widespread complaints
	>10< or equal 15	Threats of community action
	>15	Vigorous community action

## University of Pretoria etd - Brand, A (2003)

Fig. 3 - Community response to an increase in the ambient dBA level



Job creation will be a main factor when considering/appointing staff for the warehouse. (Opportunities for thousands of local qualified/experienced, entrepreneurs and people in South Africa).



Continue: 02contextStudy-2 pages 11-20



Fig.4 – Customers per square meter for selected groups of listed retailers in South Africa