

Designing Environments



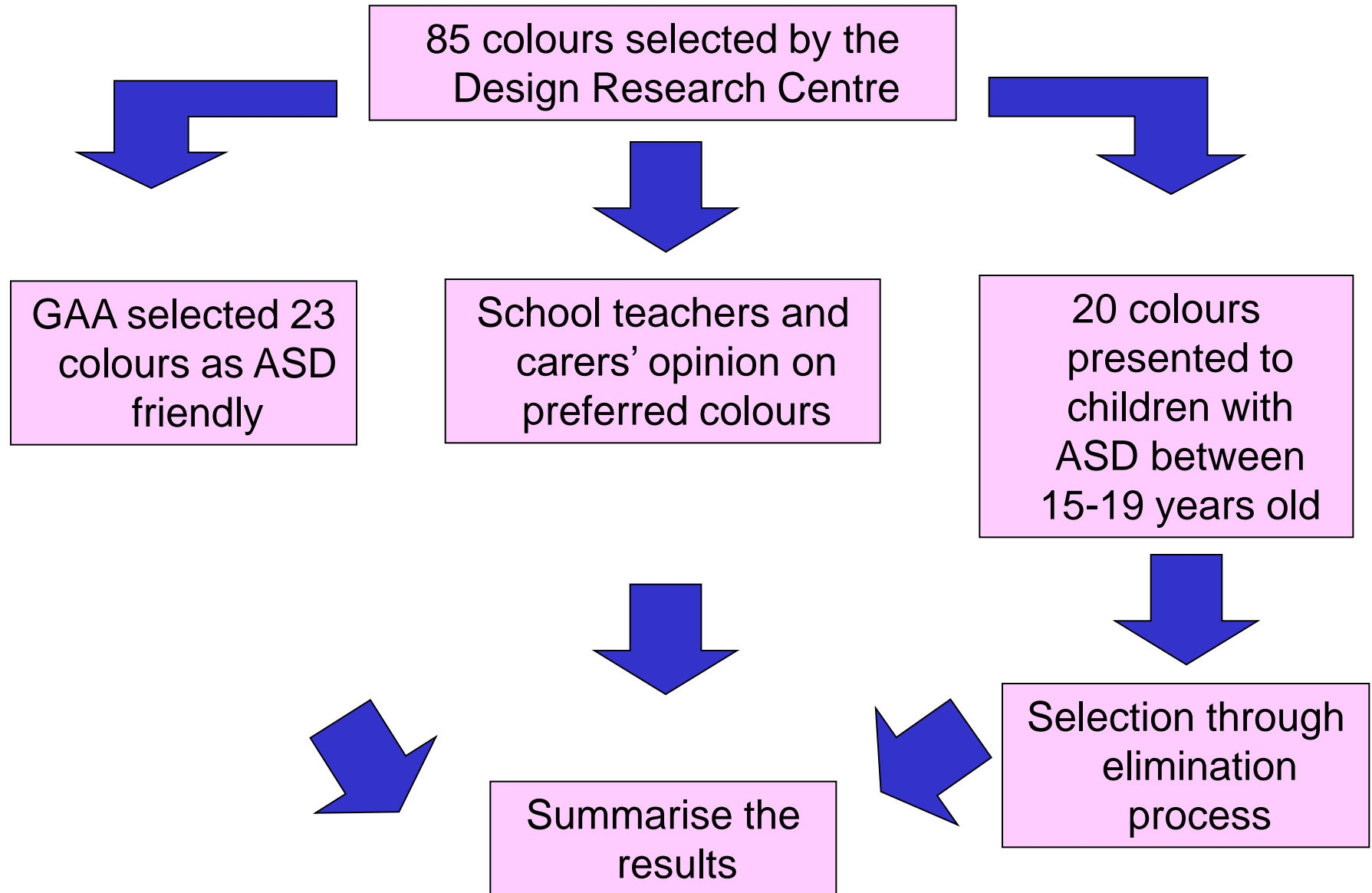
for Children &
Adults with ASD

About GA Architects

- Designers of environments for ASD
- New build and refurbishments
- Residential, educational and respite
- CDA to London Borough of Hackney
- Advisor to school in Svendborg Denmark
- Member of Sensory Star Advisory Board of America
- Member of British Standards Institute Neuro-diversity Working Group
- Collaborator with University of Kingston research project on colour palette for Autism
- Associated with Sapienza University of Rome
- Regular speakers at conferences
- Organisers of twice yearly seminars on ASD



The Method



Basic Principles

- Low arousal colours



- Single colour



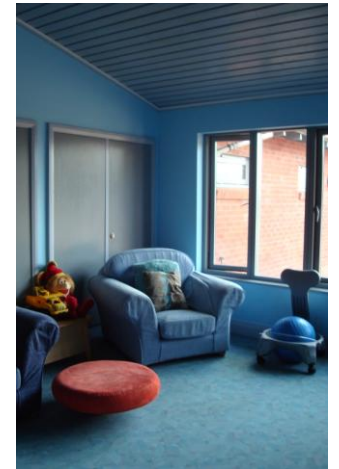
- Organic and non-toxic and low odour paints



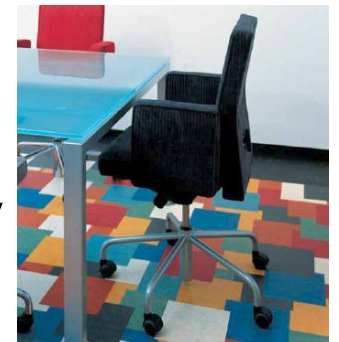
- Patterns should be avoided



- Soft furnishings should also be kept fairly plain



- Patterned floors can be confusing and may increase anxiety



GAA Colour Palette Selection



3010 R



0505 R30B



3010 R40B



1020 B10G



2020 B10G



1010 B30G



3020 R40B



1020 R90B



2020 R90B



3020 B50G



0505 G



3010 G



0502 B



1020 B



1010 B10G



3020 G



2010 G50Y



0505 G60Y



1005 Y40R



2020 Y50R



0505 Y60R

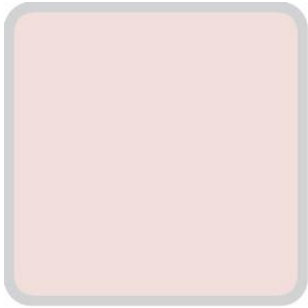


BS 00 A 01
PORTLAND



BS 10 B 15
GARDENIA

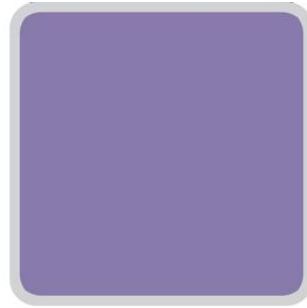
Colours used on various projects visited



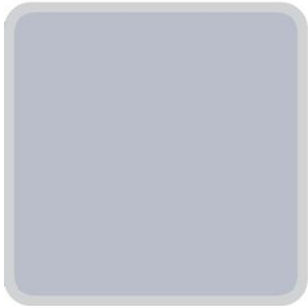
0510 R



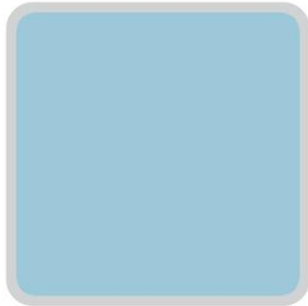
5502 R



3040 R60B



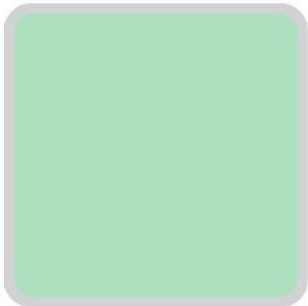
2010 R70B



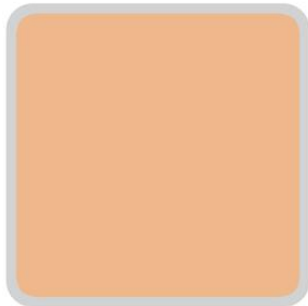
1030 B



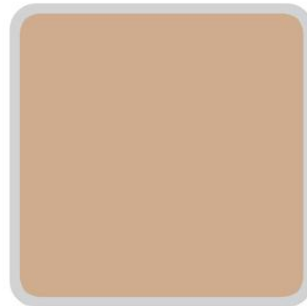
4005 B20G



0530 G



1030 Y40R



2020 Y40R

Colour palette presented to children



3030 B10G



1020 B50G



3020 B50G



2010 R



3020 R



1020 R40B



1020 G



3020 G



2010 G50Y



3020 R40B



1020 R90B



3020 R90B



3020 G50Y



1020 Y20R



2030 Y20R



1020 B



3030 B



1020 B10G



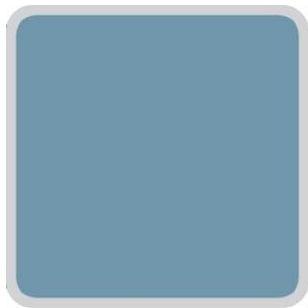
1020 Y50R



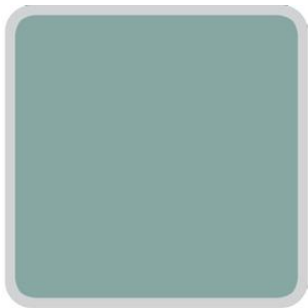
3020 Y50R

ASD friendly palette chosen by children

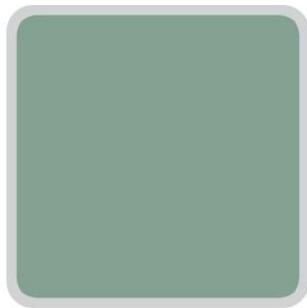
- Subdued and colours mixed with grey were favoured by the children with autism
- A predominant preference for colours in the Blue/Green hue sectors was notable
- A balance between colourfulness and greyness is seen to be popular.



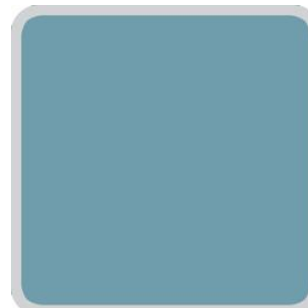
3030 B



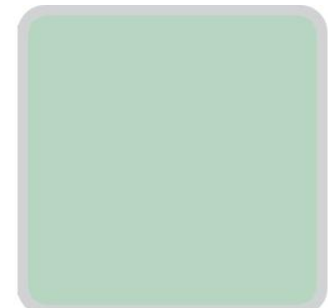
3020 B50G



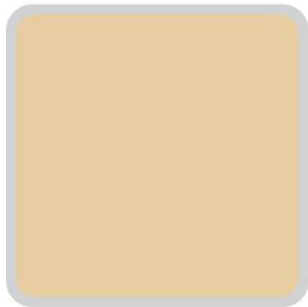
3020 G



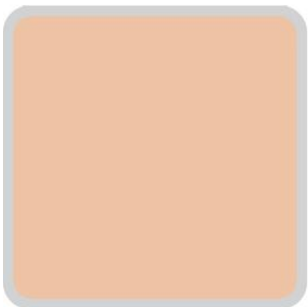
3030 B10G



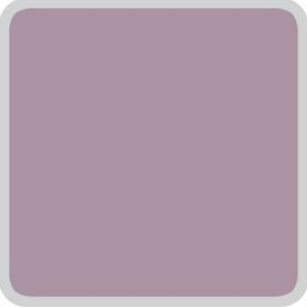
1020 G



1020 Y20R



1020 Y50R

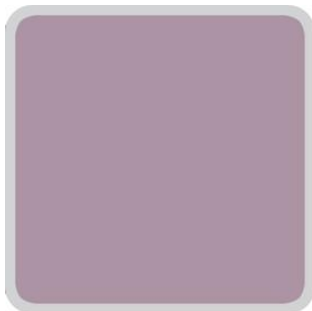
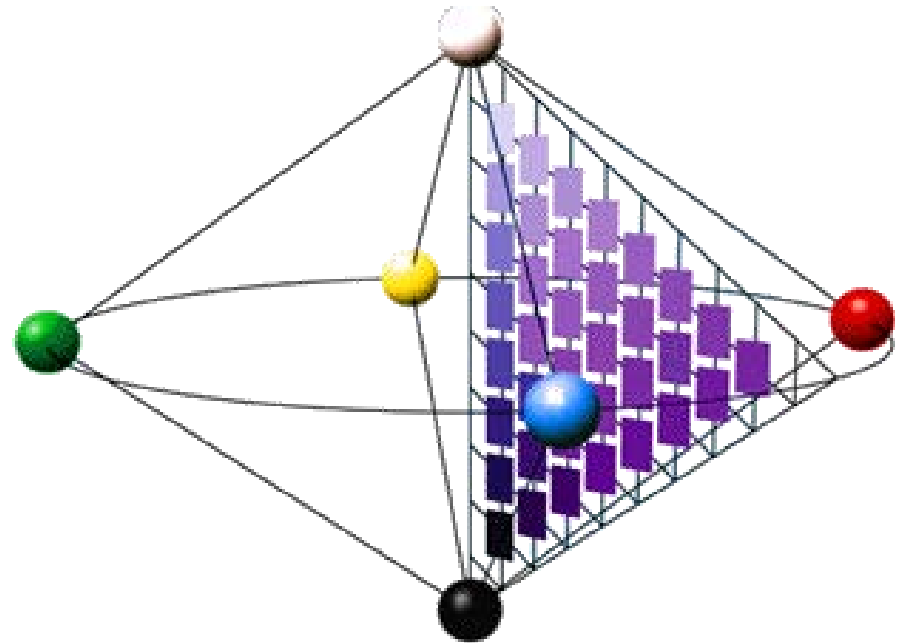
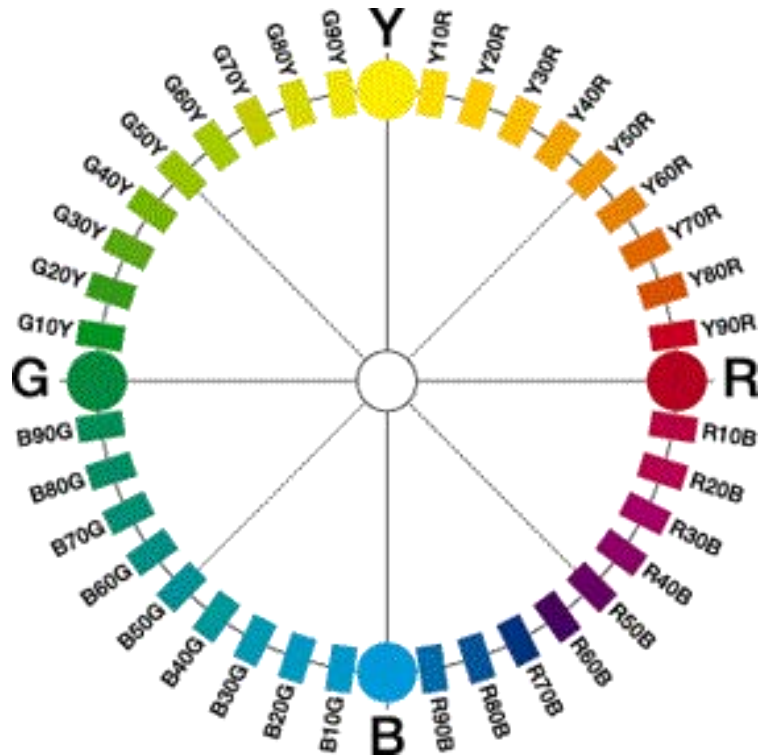


3020 R40B



3020 G50Y

The Natural Colour System



3020 R40B

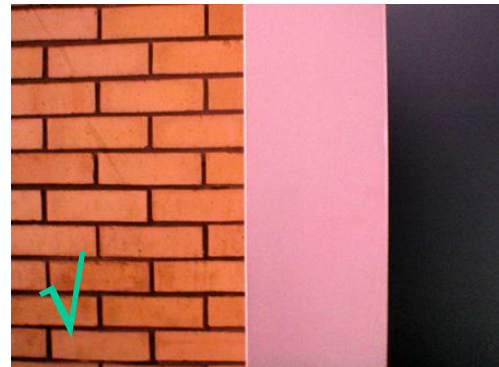
3020	R40B
30%Black	60% Red
20%Chromaticness	40%Blue
50% White	

Proxemics

Definition: How much space is needed around an individual to feel comfortable

Basic Principles:

- Too little space may result in feelings of discomfort and possibly claustrophobia

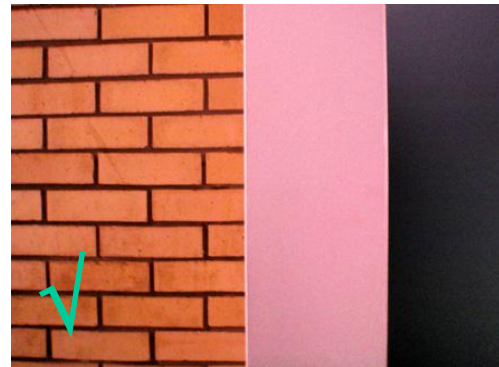
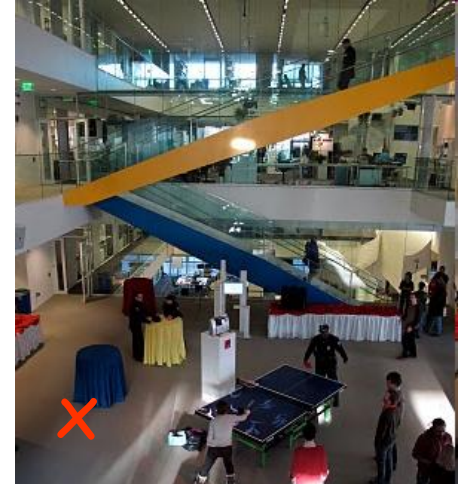


Proxemics

Definition: How much space is needed around an individual to feel comfortable

Basic Principles:

- Too little space may result in feelings of discomfort and possibly claustrophobia
- Too much space may result in feelings of isolation

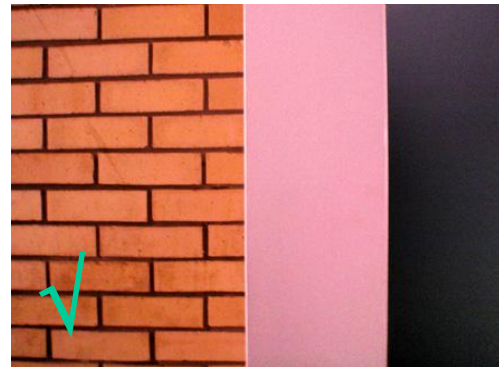
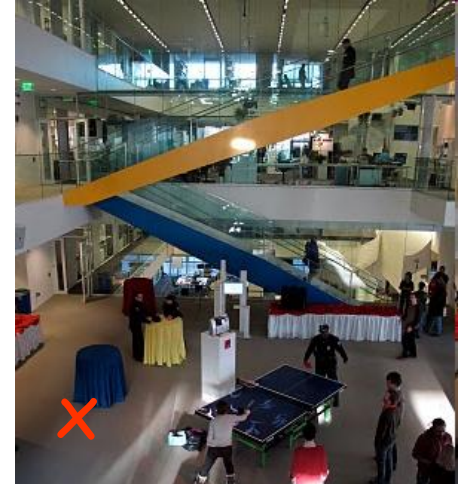


Proxemics

Definition: How much space is needed around an individual to feel comfortable

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- Too little space may result in feelings of discomfort and possibly claustrophobia
- Too much space may result in feelings of isolation
- Colour used in tonal blocks helps to understand the space around

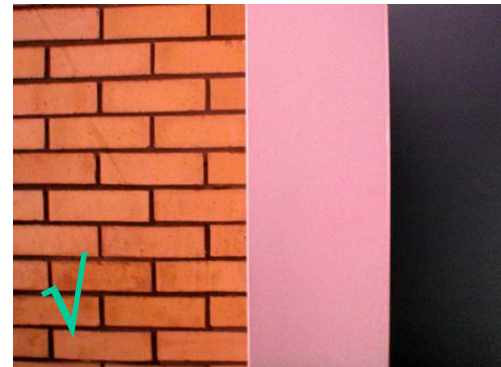
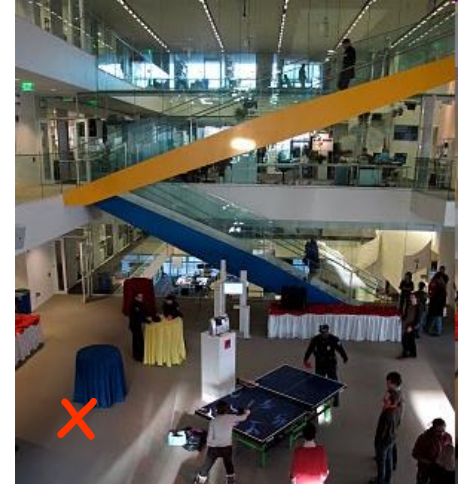


Proxemics

Definition: How much space is needed around an individual to feel comfortable

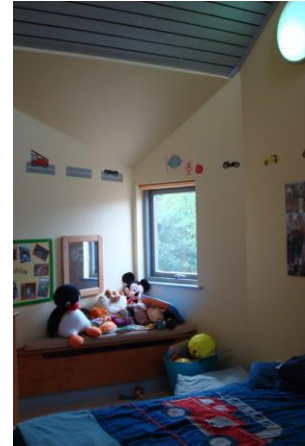
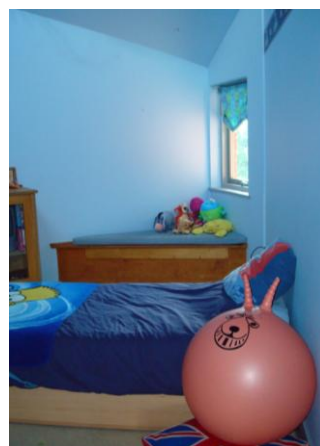
Basic Principles:

- Too little space may result in feelings of discomfort and possibly claustrophobia
- Too much space may result in feelings of isolation
- Colour used in tonal blocks helps to understand the space around
- Lighting and shade helps the relationship between the space and the individual



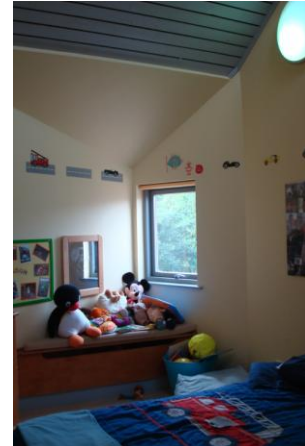
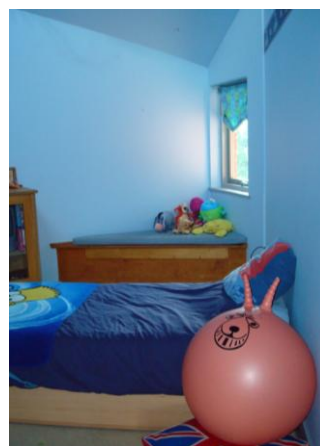
Colour coding

- Review preferred colour palette



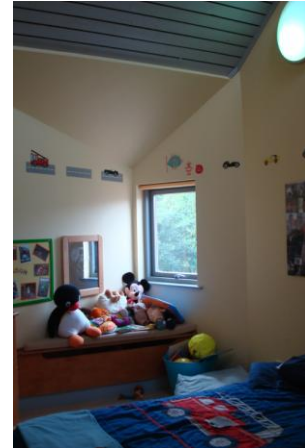
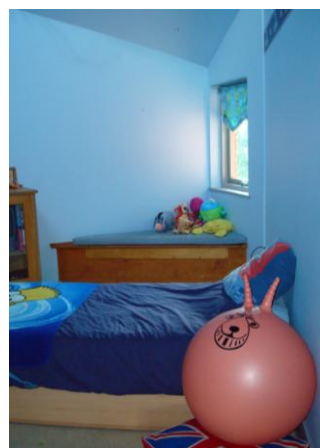
Colour coding

- Review preferred colour palette
- No stimulating colours



Colour coding

- Review preferred colour palette
- No stimulating colours
- Consider colours in daylight and artificial lighting conditions



Lighting

- Lighting and room layout influence the perception of colours



Lighting

- Lighting and room layout influence the perception of colours
- No flickering fluorescent lighting



Lighting

- Lighting and room layout influence the perception of colours
- No flickering fluorescent lighting
- Hidden or indirect lighting preferred



Lighting

- Lighting and room layout influence the perception of colours
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- Hidden or indirect lighting preferred
- We seek an interior that glows



Lighting

- Lighting and room layout influence the perception of colours
- No flickering fluorescent lighting
- Hidden or indirect lighting preferred
- We seek an interior that glows
- Incorporate dimming facilities



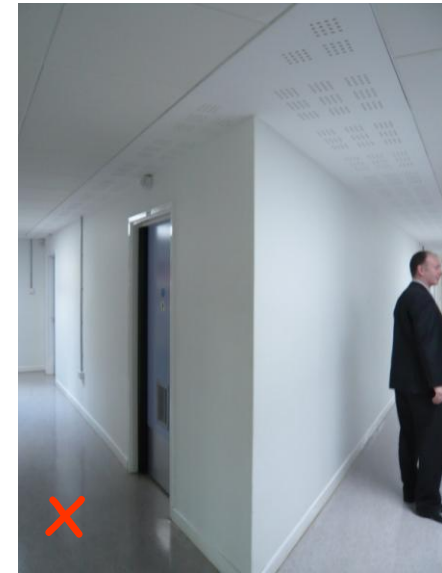
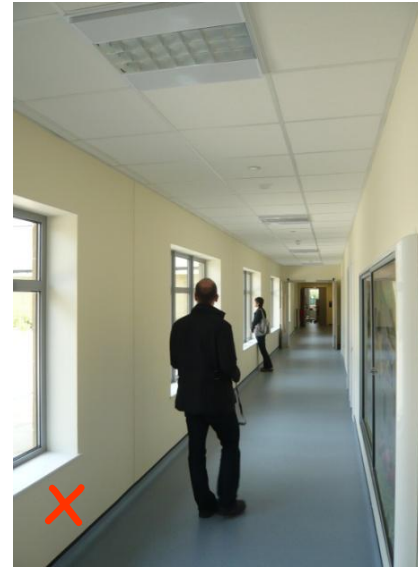
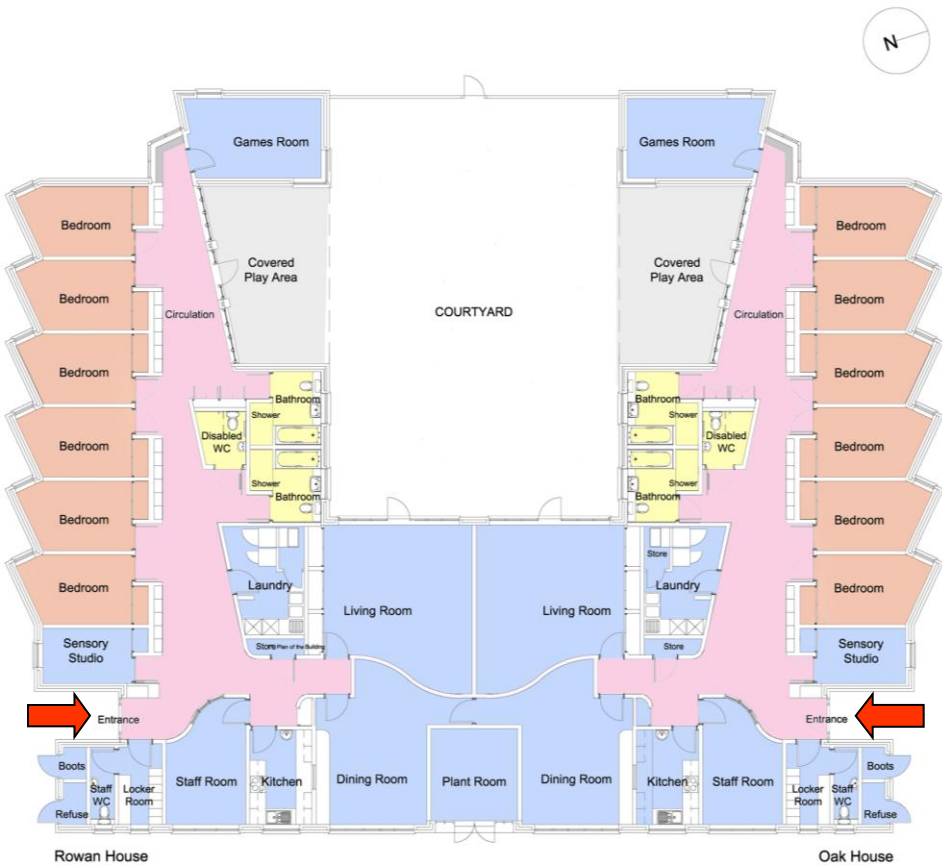
Lighting

- Lighting and room layout influence the perception of colours
- No flickering fluorescent lighting
- Hidden or indirect lighting preferred
- We seek an interior that glows
- Incorporate dimming facilities
- Consider coloured lighting for scene setting



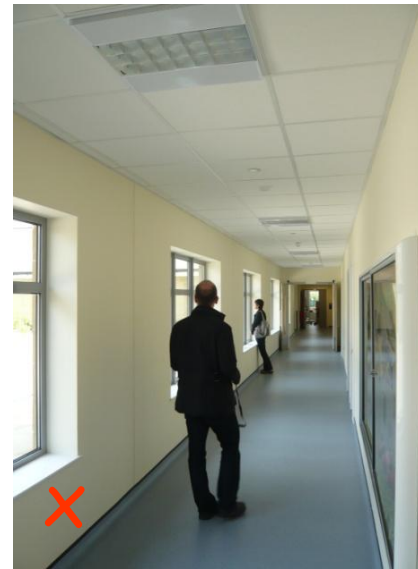
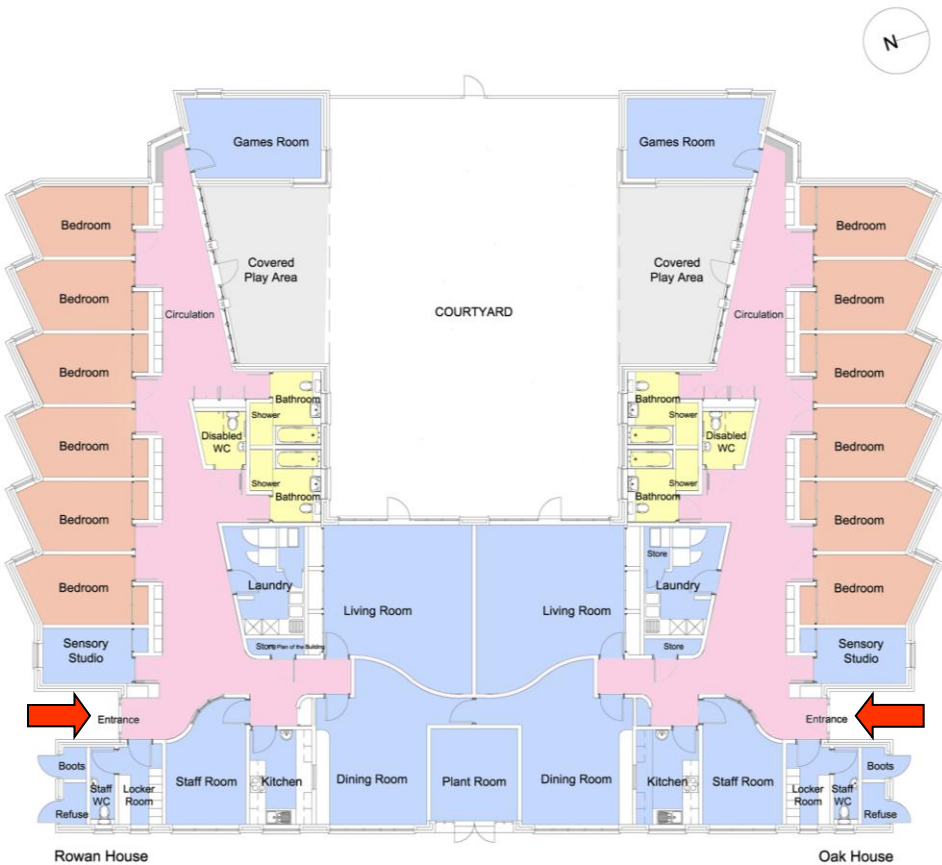
Way finding

- Clear geography



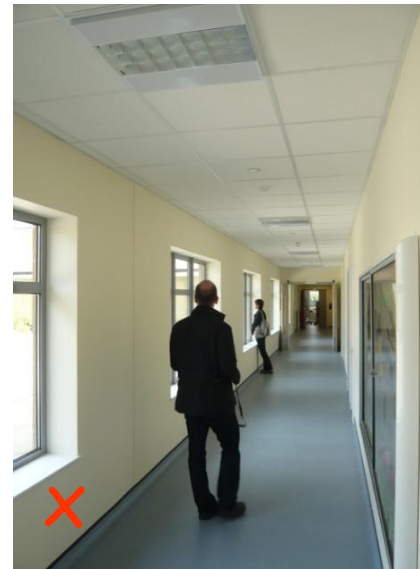
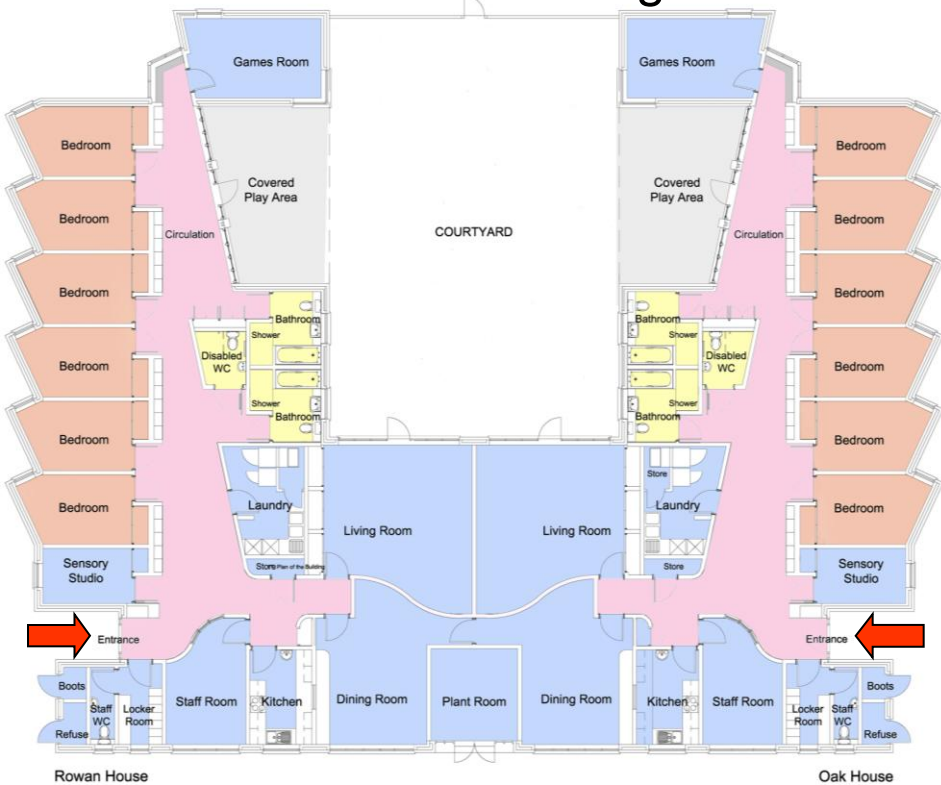
Way finding

- Clear geography
- Curved walls



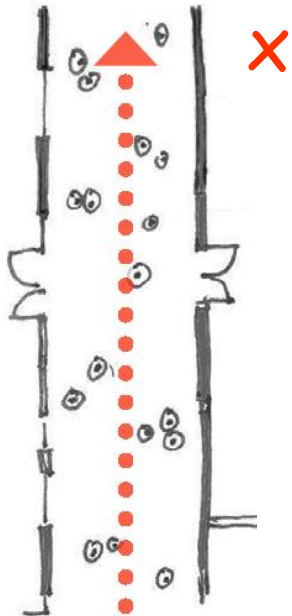
Way finding

- Clear geography
- Curved walls
- Using colours to distinguish walls, floors and furniture makes it easier to navigate



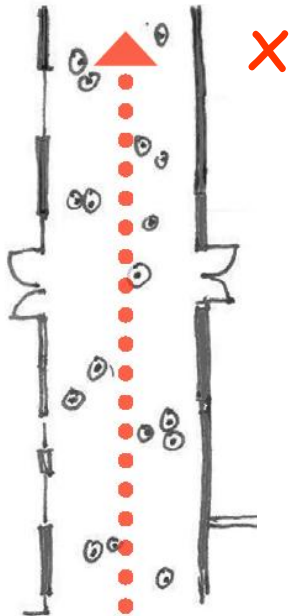
Circulation

- No 'corridors', consider circulation spaces



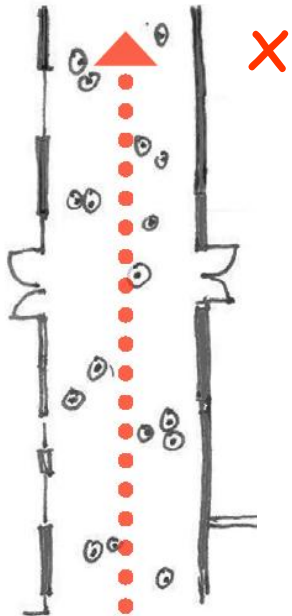
Circulation

- No 'corridors', consider circulation spaces
- Eliminate running opportunities



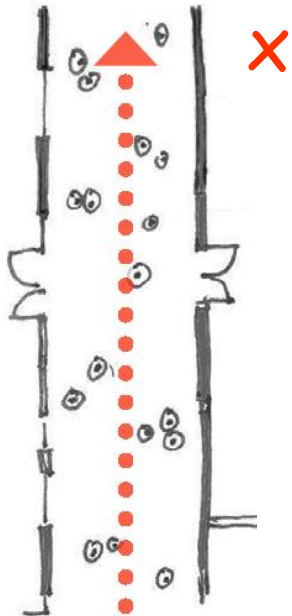
Circulation

- No 'corridors', consider circulation spaces
- Eliminate running opportunities
- Spaces for socialising and being alone



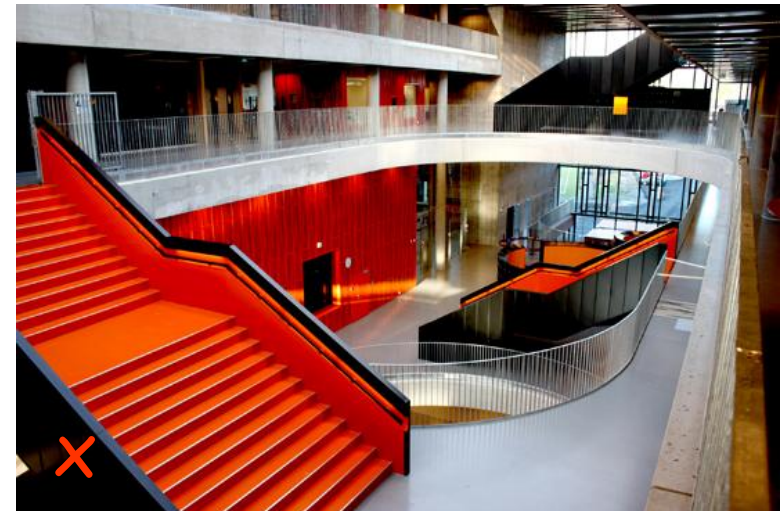
Circulation

- No 'corridors', consider circulation spaces
- Eliminate running opportunities
- Spaces for socialising and being alone
- Point of interest, recognisable spaces



Calm and simple spaces

- No stimulating colours



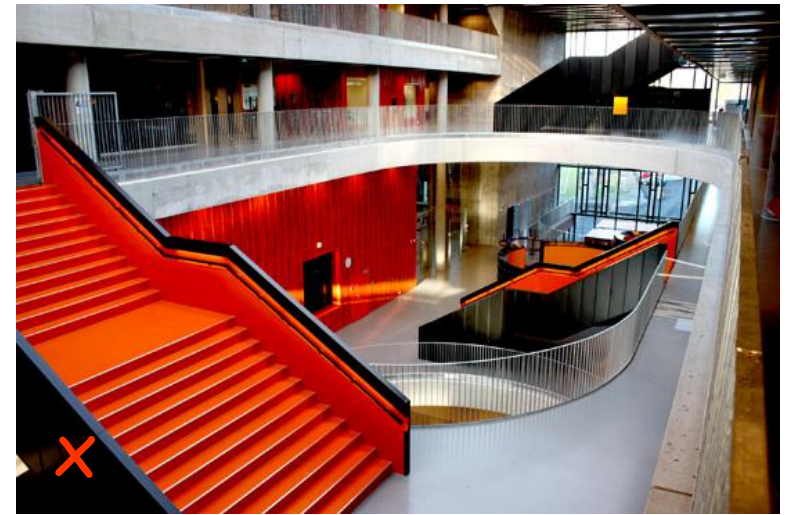
Calm and simple spaces

- No stimulating colours
- Good acoustics



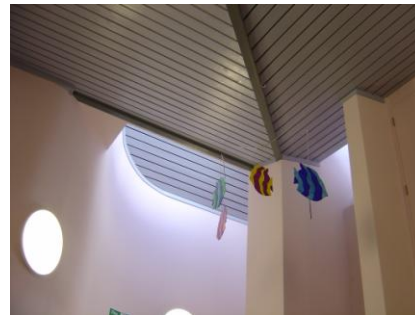
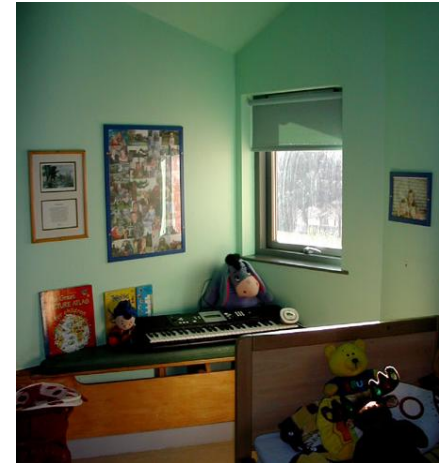
Calm and simple spaces

- No stimulating colours
- Good acoustics
- No confusing textures



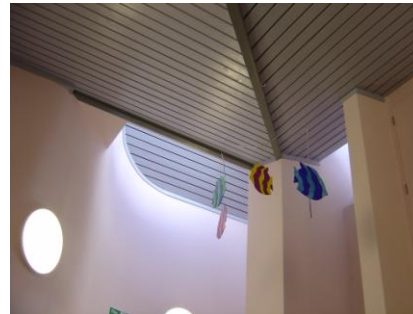
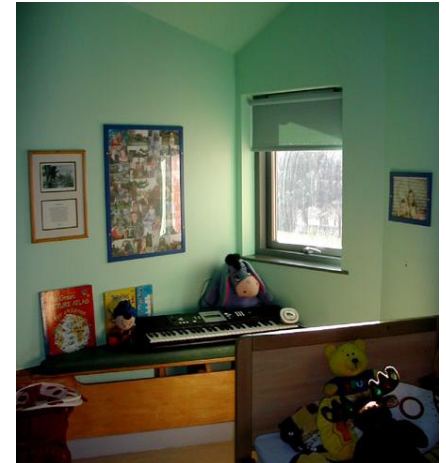
Bedrooms

- Soft colours to the ceiling



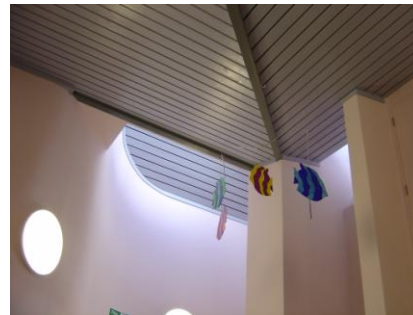
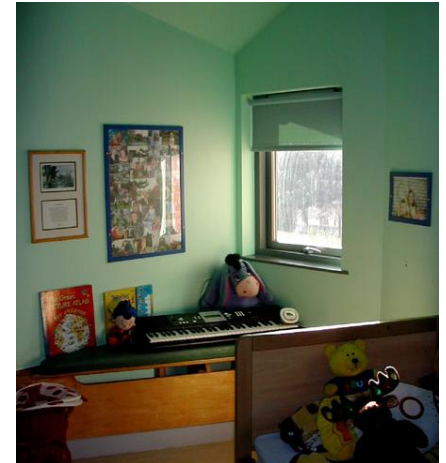
Bedrooms

- Soft colours to the ceiling
- Screening and filtering the sunlight



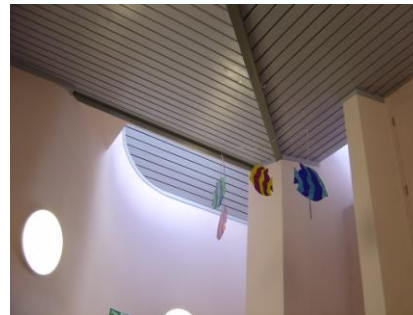
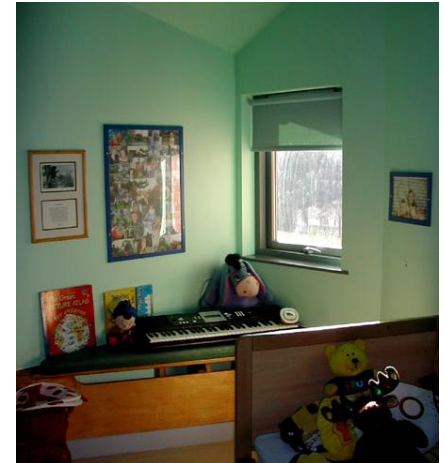
Bedrooms

- Soft colours to the ceiling
- Screening and filtering the sunlight
- Flexibility to choose colours from a selected palette



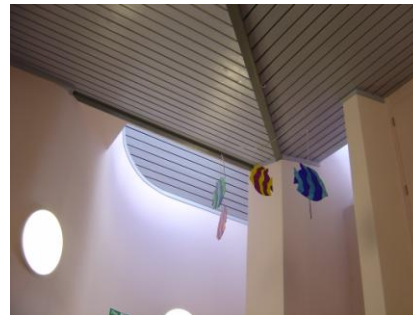
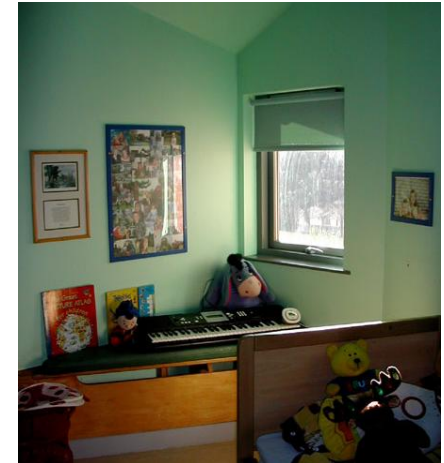
Bedrooms

- Soft colours to the ceiling
- Screening and filtering the sunlight
- Flexibility to choose colours from a selected palette
- Collect items from their early childhood. Familiarity even if visually stimulating and potentially disturbing



Bedrooms

- Soft colours to the ceiling
- Screening and filtering the sunlight
- Flexibility to choose colours from a selected palette
- Collect items from their early childhood. Familiarity even if visually stimulating and potentially disturbing
- Natural ventilation through high level windows



Classrooms

- Simple layout



Classrooms

- Simple layout
- Between 6-12 pupils per classroom



Classrooms

- Simple layout
- Between 6-12 pupils per classroom
- Recommended area of 52m²



Classrooms

- Simple layout
- Between 6-12 pupils per classroom
- Recommended area of 52m²
- Tonal colours i.e. colours from the same colour group such as blue



Classrooms

- Simple layout
- Between 6-12 pupils per classroom
- Recommended area of 52m²
- Tonal colours i.e. colours from the same colour group such as blue
- Colours are used for identification of areas such as 'personal' space



Classrooms

- Simple layout
- Between 6-12 pupils per classroom
- Recommended area of 52m²
- Tonal colours i.e. colours from the same colour group such as blue
- Colours were used for identification of areas such as 'personal' spaces
- Filtered light to avoid distraction and glare



Classrooms

- Simple layout
- Between 6-12 pupils per classroom
- Recommended area of 52m²
- Tonal colours i.e. colours from the same colour group such as blue
- Colours were used for identification of areas such as 'personal' spaces
- Filtered light to avoid distraction and glare
- Subdivision of areas / quiet areas

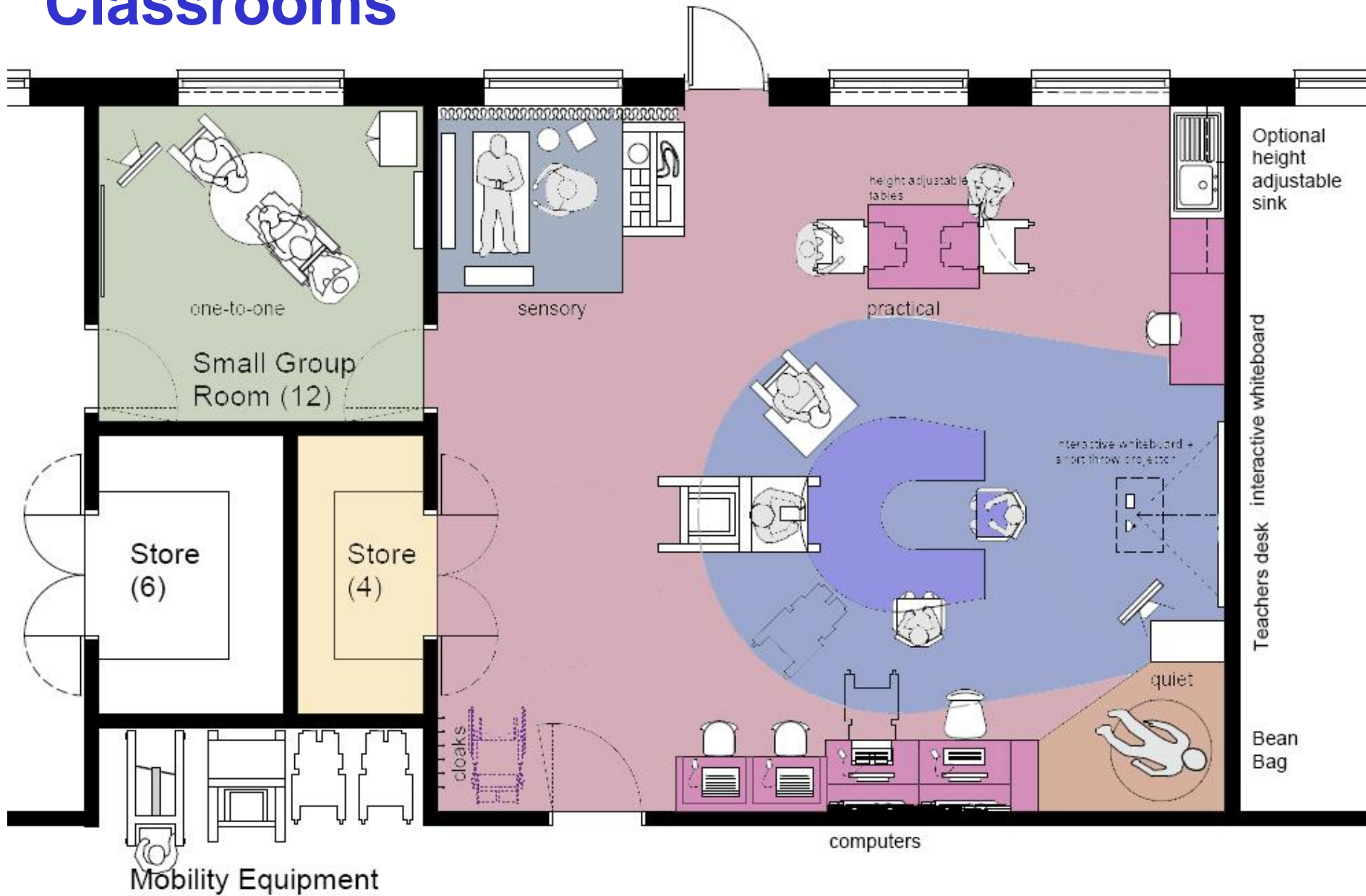


Classrooms

- Simple layout
- Between 6-12 pupils per classroom
- Recommended area of 52m²
- Tonal colours i.e. colours from the same colour group such as blue
- Colours were used for identification of areas such as 'personal' spaces
- Filtered light to avoid distraction and glare
- Subdivision of areas / quiet areas
- Dedicated external areas



Classrooms



Conclusions

- Balance between grey and colour treatments
- Predominance of blue and green
- Lighting and shape of room can affect the colour perception
- Avoidance of stimulating colours
- Consider:
 - Proxemics
 - Way finding and circulation areas
 - Calming spaces



Designing Environments for Children and Adults with *ASD*

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