OBJECTIVE

To provide appropriate lighting levels for the function of an area, and for the activities taking place in an area so that the opportunities for crime are reduced and the area is perceived as safe.

GUIDELINES

1. General

1.1 The lighting design should achieve a uniformity that is relatively high so that surfaces are evenly lit and the perception of the space is one of overall light.

1.2 Where there are areas that have an abrupt change from high light to low light, complementary lighting should be added to provide a progressive transition of the light.

1.3 Lighting in a public space should be adequate enough to identify another person while they are a reasonable (15 m) distance away.

1.4 All recesses, entrances and egress points of areas should be well lit.

1.5 Provision of more lights at a lower wattage than a few at a higher wattage is preferred.

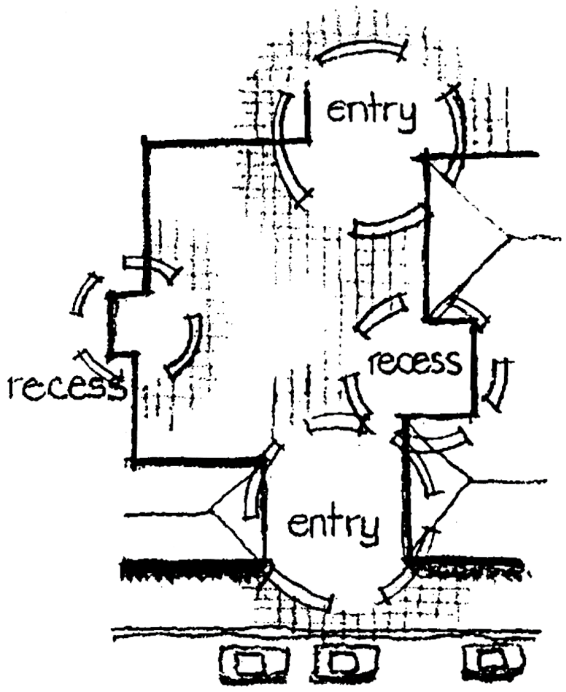
1.6 Preference should be given to fluorescent or metal halide (white) lamp sources.

1.7 Lighting control gear should be situated in unobtrusive secure cabinets, or concealed within the light fitting, rather than attached to the surface or mounted in the base, in the case of a lighting pole.

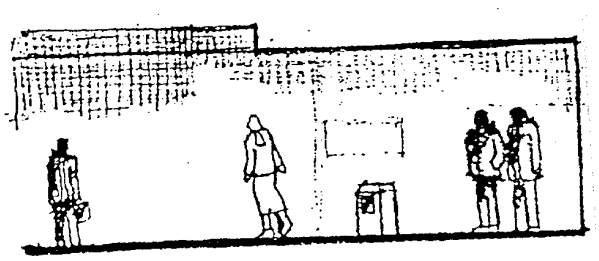
1.8 Excessive contrasts of light should be avoided except where a visual statement is required.

1.9 As far as possible and as is appropriate to the circumstance, lighting equipment should be vandal resistant in terms of material, design and location.

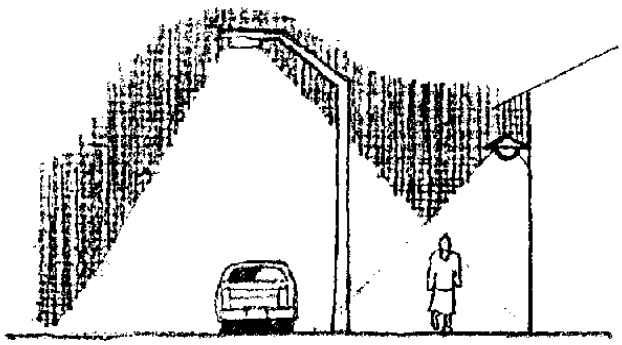
1.10 Attention should be given to the positioning of lights to allow access for maintenance and changing of lamps. A maintenance program should be developed to ensure continuity of light.



1.4 Recesses & entrance to be well lit



2.1 Avoid public spaces with low light level



3.1 Pedestrian lighting to supplement lighting for traffic

2. Open spaces

2.1 Where identified open spaces are to be lit, the lighting level should be between 10-20 lux at a uniformity ratio better than 0.3.

2.2 A high vertical illuminance is required to show movement of shadows and to otherwise show clear indications of movement.

2.3 Over-lighting and high glare should be avoided.

2.4 The light poles and standards should be aesthetically pleasing.

3. Street lighting

3.1 Street lighting for pedestrians should be supplementary to the lighting for traffic.

3.2 Increased illumination should be provided in shopping areas to make the use of these areas more appealing and to increase the perception of safety.

3.3 The appropriate lighting level for street lighting is:

- for commercial areas with a high pedestrian activity 15-20 lux.
- for intermediate areas with a moderate pedestrian activity 10-15 lux.
- for residential areas with a low pedestrian activity 5-10 lux.
- The lighting should produce a minimum uniformity of 0.3.
- Lighting under verandas should be 20 lux at a uniformity ratio better than 0.5.
- Where security cameras are in use, lamp sources should be metal halide (white) type rather than sodium (yellow) type, if colour differentiation is important.

4. Parks

4.1 The lighting should take account of present and future vegetation growth and avoid creating shadows which may be used for concealment.

4.2 Light fittings should be located where they will not be obscured by growing trees or other impediments.

4.3 Potential concealment and entrapment areas should be identified and illuminated.

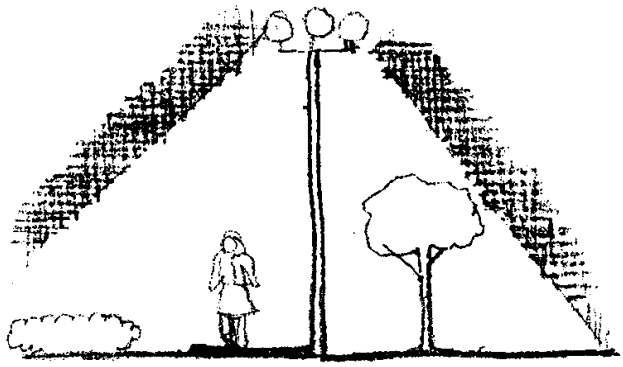
4.4 The lighting should clearly delineate the route through the vegetation. Paths or spaces not intended for night-time use should not be illuminated, to discourage their use.

4.5 Lighting should not be provided where it may contribute to a false sense of confidence that the park is frequented by the general public or policed at night. Lighting paths that have high adjacent vegetation may give a false impression that the area is well used in evening hours and portray a false sense of security.

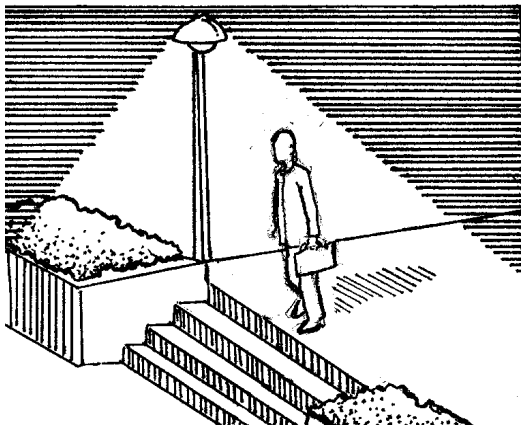
4.6 The appropriate lighting level on paths is 10-20 lux with an uniformity ratio better than 0.3.

4.7 Corners, changes in direction and level, and intersections etc. should be clearly illuminated.

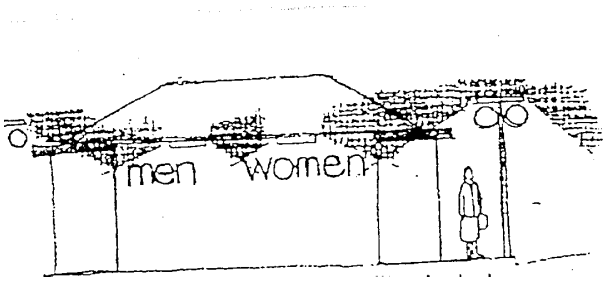
4.8 Service buildings for the use of public, within park areas, should be illuminated during hours of darkness.



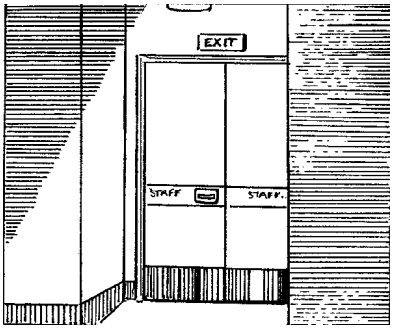
4.4 Lighting to clearly delineate path through vegetation



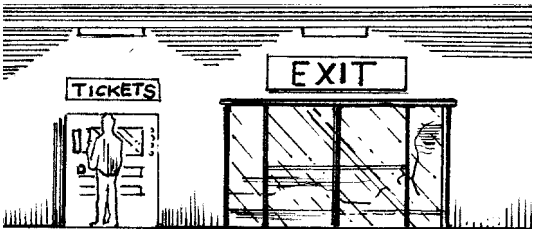
4.7 Corners, changes in level to be clearly illuminated



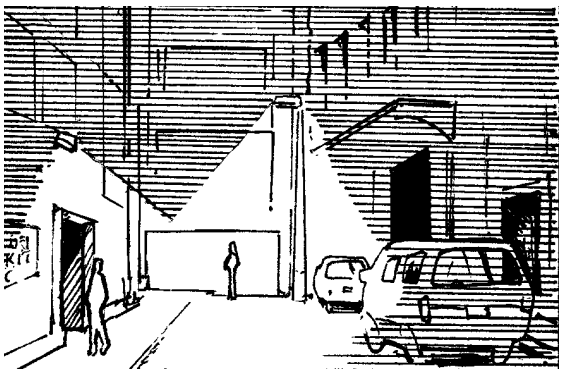
4.8 Services buildings to be illuminated



5.3 Doorways to be illuminated



6.2 Exits and ticket machines in internal carparks to have a higher level of illumination



7.2 Lighting on high masts and walls to deter criminal activity

5. Internal access ways

5.1 For internal access ways (including access ways to carparks) and through site links without stairs, appropriate horizontal lighting level, at floor level, is 100 lux at a minimum uniformity of 0.6

5.2 For internal access ways and through site links with stairs, escalators and travelators the appropriate horizontal lighting level, at stair level, is 150 lux at a minimum uniformity of 0.6

5.3 Recessed areas such as doorways and alcoves should be illuminated.

6. Internal carparks

6.1 The appropriate lighting level is 50 lux at a minimum uniformity ratio of 0.3.

6.2 The control booths, ticket machines, and entry/ egress points should have a higher level of illumination.

6.3 Consideration should be given to painting appropriate walls and surfaces white.

7. External car parks

7.1 Appropriate lighting level should be 10-15 lux at a minimum uniformity level of 0.4.

7.2 The lighting should be mounted on high masts or walls and directed to deter or detect criminal activity by producing a high vertical lighting component such that the figures of intruders are clearly visible.

7.3 The control booths, ticket machines, and entry/ egress points should have a higher level of illumination.

7.4 Glare should be avoided by directing the lighting away from adjacent buildings, pedestrian facilities and areas of overlook.

7.5 Where the carparks are situated adjacent to footpaths or access routes, the adjacent area should be lit to allow clear visibility of an approaching threat.

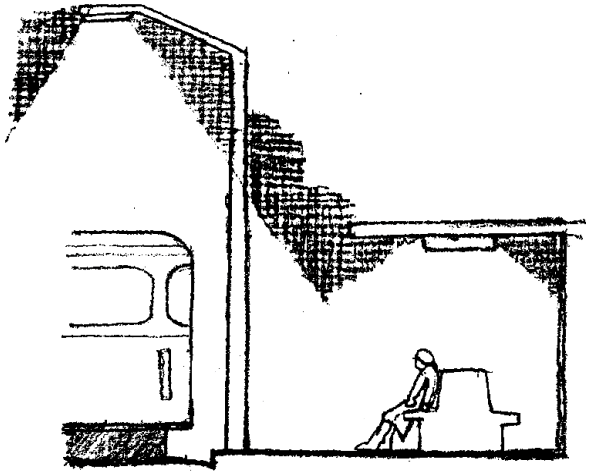
8. Vacant site

8.1 The footpath perimeter of a vacant site should be lit for a depth of 15 metres into the site to allow recognition of an approaching threat.

9. Public waiting areas

9.1 For public waiting areas (eg. bus stops, taxi stands, rail stations , public, telephones), the appropriate lighting level should be 30 lux with a minimum uniformity ratio of 0.5 within the immediate waiting area.

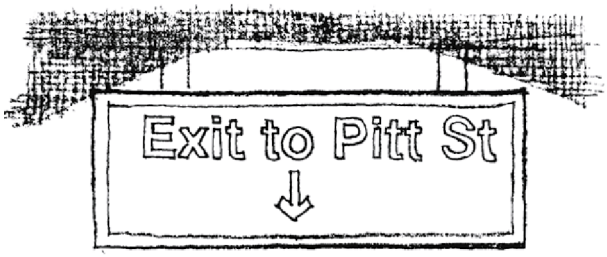
9.2 Approaches to public waiting areas within 15 metres should be lit to a appropriate level of 10-15 lux with a minimum uniformity ratio of 0.3.



9.1 Public waiting areas to be well lit

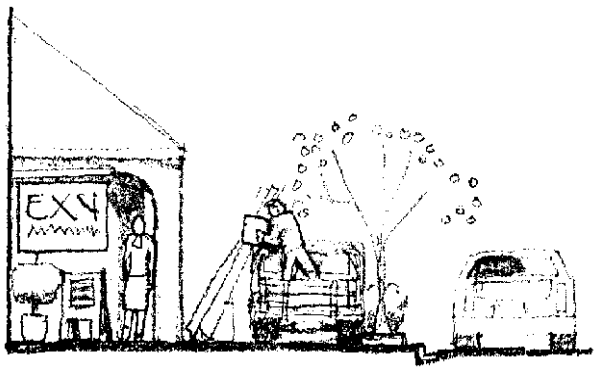
10. Illuminated signage

10.1 Safety and way-finding signage (both internal and external) should be lit during the hours of darkness. (see signs guidelines and Auckland city consolidated by-law, *Signs*).

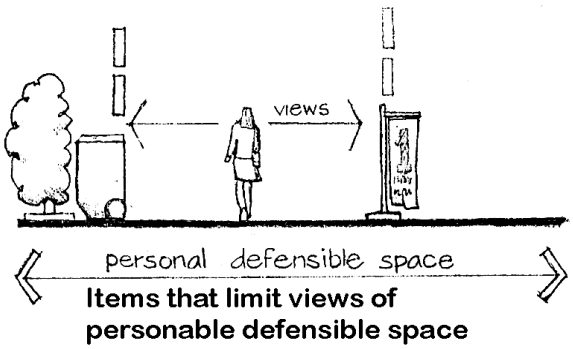


10.1 Way finding signage should be illuminated

OBSTRUCTIONS ALONG PEDESTRIAN ROUTES



Obstructions



Items that limit views of personable defensible space

Anything that impedes the movement or view may have a negative effect on the safety of a place or a route. These things which have a negative effect are defined as *obstructions* for the purpose of these guidelines.

Examples of those qualities which are deemed to have a positive effect but would impede movement or view are:

- Activity Promoters:

  signs or sandwich boards which promote information and direction.

- Interest Features:

  landscape or architectural features such as planting, archways, seating areas, art objects, water features, feature planting.

- Physical Directors:

  walls, steps, rails, fences.

Obstructions include:

- Screened overview of space.
- Items that will create entrapment areas.
- Items that will create hiding places.
- Items that will block clear lines of sight (see guidelines for visibility).
- Items which partially / temporarily interrupt lines of sight are not necessarily obstructions. However an accumulation of such items would be considered obstructions.
- Dangerous items that are obscured from sight.
- Items that limit the view of personal defensible space.