

PART 2: Sectors of Emergency Assistance

21 Site selection, planning and shelter

22 Health

23 Food and nutrition

24 Water

25 Sanitation and environmental services

26 Social services and education

27 Supplies and logistics

Index

Site selection, planning and shelter



Site selection, planning and shelter

List of Contents

<u>Section</u>	<u>Paragraph</u>	<u>Contents</u>	<u>Page</u>
		<u>Overview</u>	2
21.1	1-5	<u>Introduction</u>	3
21.2	1-5	<u>Organization of Response</u>	3
		(including types of expertise)	
21.3		<u>Criteria for Site Selection</u>	4
	1	General	4
	2	Surface area	4
	3	Security and protection	4
	4	Accessibility	4
	5	Environmental conditions	4
	6	Water supply	5
	7	Topography and drainage	5
	8	Soil conditions	5
	9	Vegetation	5
	10	Land rights	5
21.4		<u>Site Planning</u>	5
	1-8	General considerations	5
	9-15	Specific design considerations (water, sanitation, circulation, fire prevention, housing, vegetation, recreation/gardening, administrative and community services)	6
	17-21	Physical layout	8
21.5		<u>Shelter</u>	10
	1-3	General	11
	4-8	Emergency shelter	11
	9-11	Improved shelter	12
		<u>Further references</u>	13

Site selection, planning and shelter

Need

The lack of a suitable and well planned site and adequate shelter is characteristic of the early stages of a refugee emergency. This can severely affect the well-being of the refugees, and in some cases their protection, as well as the delivery of assistance.

Aim

To meet the need for suitable shelter on an appropriate and properly planned site.

Principles of response

- ☐ Involve the refugees, whose home it will be.
- ☐ Site planning is essential, and should reflect a decentralized, small community approach.
- ☐ Temporary emergency arrangements often come to last much longer than expected; thus a well planned response is necessary from the start.
- ☐ Shelter must provide protection from the elements, space to live and emotional security. Local materials and designs are best.
- ☐ Site selection, planning and the provision of shelter require expertise and must be closely integrated with the planning of other services especially water and sanitation.

Action

- ☐ Assess the suitability of the refugee site and ensure that no site presents a major obstacle to refugee welfare.
- ☐ Simultaneously assess the need for emergency shelter and provide the necessary materials to meet immediate needs.
- ☐ Take the most urgently required measures to improve site planning and layout, and upgrade these as soon as possible.

21.1 Introduction

1. This chapter covers considerations relating to the site where the refugees live, the physical planning and organization of their community, and the shelter they need. These factors will have a major influence on the well-being of the refugees and on the provision of assistance.

2. The need for somewhere to live is a corollary of the granting of asylum, and the role and responsibility of the national authorities in site selection is obvious and of fundamental importance. Equally, the refugees themselves must be involved; ideally, the needs of the refugee community would determine the location, size and organization of the site where they live. In practice there is a compromise between these needs and external factors, both practical and political.

3. Land may be scarce in the country of asylum and no site may be available that meets the desired criteria. If, however, the present or intended site is clearly unsuitable, every effort must be made to move the refugees to a better site as quickly as possible. Both the problems as a result of a bad site and the difficulties inherent in a move increase with time.

4. The location of the refugees may range from spontaneous settlement over a wide area, through organized rural settlement, to concentration in a very limited area. Circumstances can make this last possibility unavoidable, but the establishment of refugee camps should not be an automatic response. A solution that maintains and fosters the self-reliance of the refugees is always preferable.

5. The prospects for durable solutions will be an important factor. For example, the likelihood of an early voluntary repatriation might outweigh practical disadvantages in the present location. Protection or political considerations may also be important. If no durable solution is in sight, this factor must be recognised and planning should assume a long stay. Particularly

in the context of this chapter, temporary arrangements, however unsatisfactory, can be hard to change once established.

21.2 Organization of response

- ☐ Site selection, planning and shelter have a major bearing on the provision of other assistance.
- ☐ This subject must therefore be considered as an essential part of an integrated approach to needs assessment and response.
- ☐ Expertise is necessary as is swift action to improve existing conditions.

1. Site selection, planning and shelter has a major bearing on the provision of other assistance and these will be important considerations in the overall assessment of needs and planning of response. Decisions must be taken as part of an integrated approach and in light of the advice of experts and views of the refugees.

2. Expertise may be required in the fields of geology, physical planning, engineering (for example, water supply, sanitation, construction), public health and perhaps social anthropology. Familiarity with local conditions in both the country of origin and asylum is important. Prior experience in similar emergency situations and a flexible approach are particularly valuable, as the problems and solutions will not normally be familiar.

3. Expertise and advice should be sought from government, university or private industry sources, or from local offices of organizations such as UNDP, the World Bank, WHO, UNICEF and voluntary agencies. If necessary, Headquarters assistance should be requested.

4. The organization of the refugees' physical environment and level of services should be appropriate to the

needs of the emergency and practice in the country of asylum, while taking full account of both the traditions of the refugees and the typically crowded and dependent circumstances of a refugee emergency. In the particular case of refugees who were normally nomadic, their own solutions are generally to be preferred, provided space and suitable materials are available and other considerations allow.

5. The following sections provide guidelines for advance site selection and planning, for example when refugees are to be transferred to a new location. In the first phase of an emergency, however, it is rare that this will be possible in practice. There may be little opportunity for advance planning, and the immediate priority will be action to improve existing conditions.

21.3 Criteria for site selection

- ☐ In addition to considerations specific to the refugees and their background, criteria include available surface area, security and protection, accessibility, the environment, water supply, topography and drainage, soil conditions, vegetation, and land rights.

1. General: The social and cultural background of the refugees will be an important determinant of the most appropriate type of site, and must be a primary consideration whenever possible. However, in many circumstances choice will be limited and any land that meets even minimum standards may be scarce. In this regard, it may be wise to establish why the site is not already in use, and examine whether the reason - for example, no water or because it floods in monsoon - does not also exclude use by the refugees.

2. Surface area: The site must allow sufficient usable space for the refugees. WHO recommends 30 sq. metres per person plus the necessary land for agricultural activities and livestock.

More refugees may arrive and it is essential that the site allows for a major expansion beyond the area theoretically required for present numbers. It is particularly important that, having allowed space for expansion, this is safeguarded until really needed. Otherwise the initial settlement will occupy all the space, and major upheavals of existing arrangements will be necessary as more refugees arrive.

3. Security and protection: Sites should be removed from the frontier and potential military objectives in order to provide security and protection for the refugees, and to prevent hostile activities by the refugees against the authorities of their country of origin which would undermine the principle that the granting of asylum is not an unfriendly act. This criterion is specifically mentioned in Article II, paragraph 6 of the OAU Refugee Convention: "For reasons of security, countries of asylum shall, as far as possible, settle refugees at a reasonable distance from the frontier of their country of origin". Only where the interests of the refugees would be better served otherwise, for example if there are good prospects for early voluntary repatriation and security and protection considerations allow, should exceptions be made to this rule.

4. Accessibility: The site must be accessible and therefore close to all-weather communications links, and preferably also to sources of the necessary supplies such as food, cooking fuel and shelter material. Proximity to national community services is desirable, particularly with regard to health care. There are generally advantages in choosing a site near a town, subject to consideration of possible friction between the local inhabitants and refugees.

5. Environmental conditions: The area should be free of major environmental health hazards such as malaria, schistosomiasis (bilharzia) or tse-tse fly. Climatic conditions should be suitable the year round; take careful account of seasonal variations: a suitable site in the dry season may be

untenable in the rains. A daily breeze is an advantage, while emergency and temporary housing, and especially tents, need shelter from high winds. To the extent possible avoid major changes of climate; for example, settling refugees from malaria-free high ground in a marshy area where the disease is endemic can be disastrous.

6. Water supply: The availability of an adequate amount of water on a year round basis has proved in practice to be the single most important criterion, and commonly the most problematic. A site should not be selected on the assumption that water can be acquired merely by drilling, digging, or hauling. Drilling may not be feasible and may not provide adequate water. No site should be selected where the hauling of water will be required over a long period. Professional assessment of water availability should be a prerequisite to selection of a site. More information on water is provided in chapter 24.

7. Topography and drainage: The whole site should be located above the flood level, preferably on a gently sloping area. Flat sites can present serious problems for the drainage of waste and storm water. The watershed of the area itself will be a consideration.

8. Soil conditions: Marshes or areas likely to become marshy or soggy during the rainy season should be avoided, as should excessively rocky sites. If possible, select a site where the land is suitable for vegetable gardens and small-scale agriculture. Specific criteria for the selection of a suitable site for rural settlement are given in the UNHCR handbook "Planning rural settlements for refugees", pp. 1-13.

9. Vegetation: The site should have a good ground cover (grass, bushes, trees). Covering vegetation provides shade, and will reduce erosion and dust.

10. Land rights: The land should be exempt from right of use by other people (ownership, grazing rights, etc.). This can be a major cause of local resentment and there may be occasions when the authorities proposing the site are

unaware of customary rights exercised by the local population. Often, sites are provided on public land by the government. Any use of private land must be based on formal legal arrangements in accordance with the laws of the country.

21.4 Site planning

- ☐ At the start of a refugee emergency the immediate provision of relief goods and services is generally more important than efforts to change the way people have arranged themselves on a site.
 - ☐ As soon as time and needs permit, or when refugees are to be moved to another site, site planning is essential.
 - ☐ Site planning should start from the characteristics and needs of the individual family, and reflect the wishes of the community as much as possible.
 - ☐ A refugee settlement is not a natural community and particular care will be required to ensure that needs are met.
 - ☐ There are a number of specific design considerations; under-estimation of space required for communal services is a common problem.
 - ☐ The overall physical layout of a site as well as other aspects of site planning should reflect a decentralized community-based approach with family, village or ethnic groups.
-

General considerations

1. Site planning is necessary because the physical organization of a settlement can markedly affect the health and well-being of a community of people. The smaller the area available for a given number of refugees the greater the importance of site planning, though any site must be planned to allow the equitable, efficient and economic distribution of goods and services.

2. The refugees will normally already be arranged in some way on a particular site. Even if desirable, radical changes in their patterns of location are likely to be a lesser priority than meeting immediate needs for relief goods and services, and only those changes which are most necessary and feasible should be made in the initial emergency phase. The site planning guidelines can be more fully applied later, but must be considered if the refugees are to be moved to another site.

3. A fundamental consideration in site planning is the layout preferred by the refugees and to which they are accustomed. For example, some communities may traditionally site their place of worship in the middle of their community, some may wish to have open space and common ground in the centre, others may attach particular importance to communal meeting places and their siting, such as by water distribution points. Site planning should therefore be a locally-controlled exercise to the extent possible.

4. However, it must be recognized that the community's preferred layout will rarely be that which would allow the most expeditious delivery of outside emergency assistance, and that lack of space or of familiar materials will often necessitate some outside assistance. Furthermore, a refugee settlement is not a natural community. Circumstances force large groups of refugees to live together, often in limited space, with minimal resources and without their accustomed source of livelihood. For this reason, the regulating mechanisms of traditional communities may not work, at least initially. Compromise solutions will be required to reconcile conflicting considerations. Refugee site planning requires special care to ensure that goods and services are equitably provided and communal responsibilities are met.

5. Outside assistance in site planning should start from the perspective of the needs, preferences, and traditions of the individual refugee family. Begin by considering the needs of the individual household, such as

distance to water and latrines; the relationship to other members of the community (other relatives, clan, or ethnic groupings); and traditional housing and living arrangements. Developing the small community layout in this way, and then considering the larger issues of overall site layout, is likely to yield much better results than beginning with a complete site layout concept and breaking this down into smaller communities, finally considering how the individual family fits into the scheme.

6. The social organization of the refugee population should be taken into consideration as much possible. Whether it is made up of extended families and/or clans, or nuclear families, whether the refugees have come from urban or rural, village or nomadic backgrounds, are all factors that will influence the physical organization of a site. A socio-economic survey of the refugee population should be conducted as soon as possible, and will also be important in subsequent planning, particularly for durable solutions.

7. Provided sufficient land is available, the number of refugees at each site should be determined by practical considerations rather than arbitrary limits. Previous groupings should be maintained to the extent possible. Any hostile groups or factions among the refugees should be kept apart. Much more important than absolute size is the planning of the site to foster communities and a sense of family and small group identity.

8. Thus, as many services as possible should be provided at the small community level, for distinct family, village or ethnic groups, and with convenience for the refugees as the criterion. Centralized and impersonal services should be avoided to the extent practicable.

Specific design considerations

9. Water supply: Where possible, the maximum distance between any house and a water distribution point should be 100 metres. Water will often be pumped from the source to an elevated point in order

to allow gravity feed distribution. Planning of the site should take this into account. See chapter 24 on water.

10. Sanitation: The method of excreta disposal will have an important bearing on site planning. If latrines are used, at least one should be provided for every 20 people. They should be no further than 50 metres from any house, with the minimum distance from a house determined by the type of latrine and space available. If communal latrines are unavoidable, they should be accessible by road to facilitate maintenance. Latrines must not contaminate water sources. The site must also have an effective drainage system, which is easy to maintain and repair, both for rain water and waste water. See chapter 25 on sanitation.

11. Circulation: Many communities will not be accustomed to metalled roads or road networks but provision must be made to deliver the assistance. A site should have access and internal roads and walkways connecting the various areas and facilities. Roads should be above the flood level and have adequate drainage. If there has to be a significant amount of vehicle traffic on the site, this should be separated from pedestrian traffic.

12. Fire prevention: A firebreak (area with no buildings) 50 metres wide is recommended for approximately every 300 metres of built-up area. This will be an ideal vegetable growing or recreation area. The distance between individual buildings should be great enough to prevent a collapsing burning building from touching adjacent buildings.

13. Housing: Types of housing are considered in the following section. The space between houses will depend on their type; in addition to fire risks, failure to allow enough space between houses will increase public health dangers, particularly as a result of garbage and waste water disposal problems.

14. Vegetation: Every effort must be made to safeguard existing vegetation and the design should be adjusted accordingly. Trees must not be cut unless absolutely necessary and grass or other ground cover, and any sources of shade, should be preserved.

15. Recreation/gardening: Recreation and vegetable garden space should be planned from the outset. It is recommended that recreation space be provided on a small community or section basis and vegetable gardening space be provided adjacent to each house and/or in the firebreaks.

16. Administrative and community services: At the start of an emergency it may be difficult to foresee all administrative and community services that are likely to be required beyond the immediate term. Where adequate space is available, free areas must be allocated for future expansion of these services. Under-estimation of the space required for future communal needs is a common problem. Buildings for administrative and community services should be traditional structures, if possible of a multipurpose design to facilitate alternative use, for example buildings for initial emergency services which could later be used as schools. The following administrative and community services are commonly required and provision for the necessary space and buildings must be considered in site planning. The division is indicative only; the importance of maximum decentralization has already been stressed.

(1) Likely to be centralized

Site administrative office;

Essential service co-ordination offices;

(health care, feeding programmes, water supply, education, etc.);

Tracing service;

Hospital (but location should be quiet) and therapeutic feeding centre (if required);

Warehousing and storage (including water);

Initial registration/health screening area.

(2) Likely to be decentralized

Bathing and washing areas;

Community services (health centres, social service centres, etc.);

Supplementary feeding centres;

Education facilities;

Institutional centres (for example, for the disabled and unaccompanied children) if required;

Religious facilities;

Recreation space.

Physical layout

17. Even after taking due account of space availability, topography, preference, traditional living patterns and the specific design considerations, many different layouts are possible. The basic principle should be to organize the site by small, semi-autonomous community units or villages, containing the decentralized community services. These units are in turn organized around the central services. There are obvious advantages in a pattern that allows the addition of further units while preserving open space.

18. The location of the centralized services will depend on the specific situation and in particular on the space available. Again, the views of the refugees must be taken into account. Where sufficient space is available, there may be clear advantages in having the centralized services in the middle of the site. Where space is scarce, it may sometimes be better to have the centralized services located near the entrance to the site. In particular, this will avoid the lorries delivering supplies, etc. driving through a densely

populated site, with the attendant problems of dust, noise and danger to pedestrians, and even of drivers getting lost in a large site. If some form of closed camp is unavoidable, at least the centralized administrative services will probably have to be located near the entrance. Three examples of possible site layouts are given below; there are many other possibilities. As has already been emphasized, the layout of the basic community unit should, as far as possible, be that desired by the refugees.

19. The linear or grid layout, with square or rectangular areas separated by parallel streets, has often been used. It has the advantage of simplicity of design and speed of implementation, and allows a high population density. However, environmental health problems and disease are directly proportional to population density in refugee camps, while a rigid grid design makes the creation of community identity difficult, as the refugees are not usually accustomed to living in such a pattern. Where space is very scarce, a broadly rectangular grid layout may be unavoidable, but should be adapted to the landscape, with variations in the shape of the basic community unit rectangle and flexibility in the layout of houses within the community unit. Figure 21-1 gives an example.

20. Where space is available, the cluster or cross-axis layout illustrated in figure 21-2 may be considered. This arrangement is flexible and suitable for relatively flat ground. Provided the topography allows, the limitation on the addition of community units will be organizational rather than physical, depending on the distance of outer units from the centre, and the administrative span of control of the whole.

21. Another possibility is the circular layout illustrated in figure 21-3. This requires more space and cannot easily be further expanded once the circle is complete. An odd number of community units is recommended for a complete circle, with seven a suggested maximum for reasons of administrative span of control. It allows a high degree of decentralization, and may

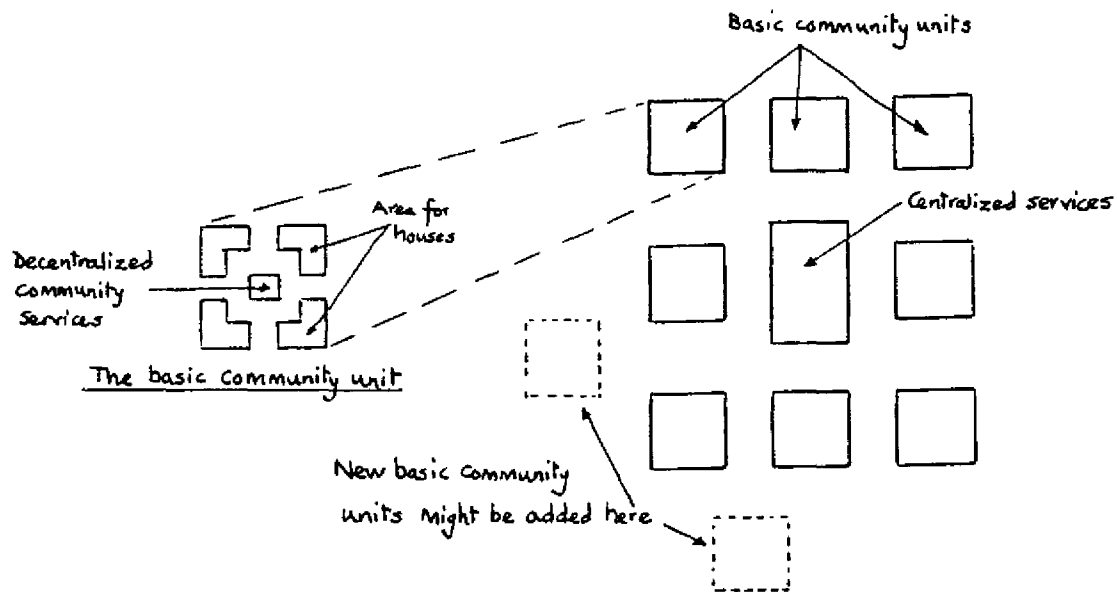


Figure 21-2. Example of a cluster or cross-axis layout.

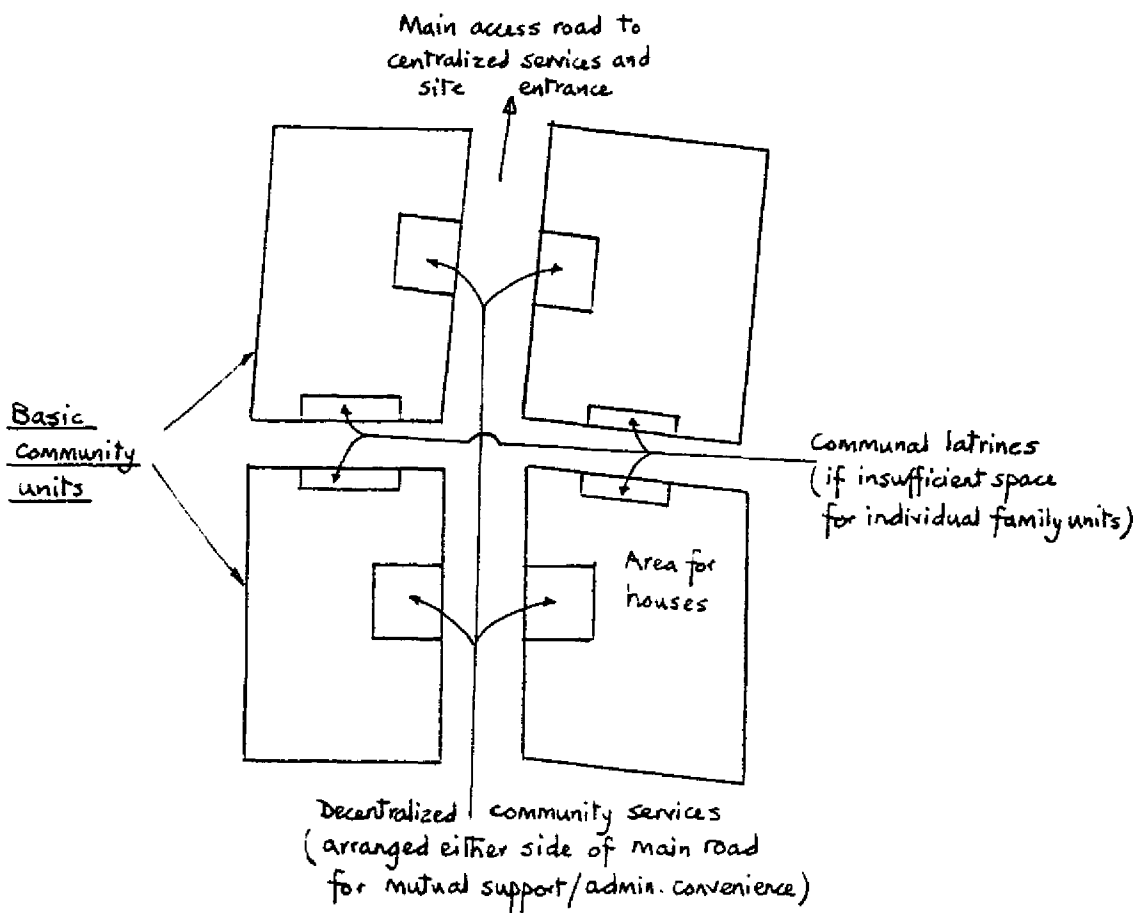


Figure 21-1. Example of limited-area grid layout adapted to terrain.

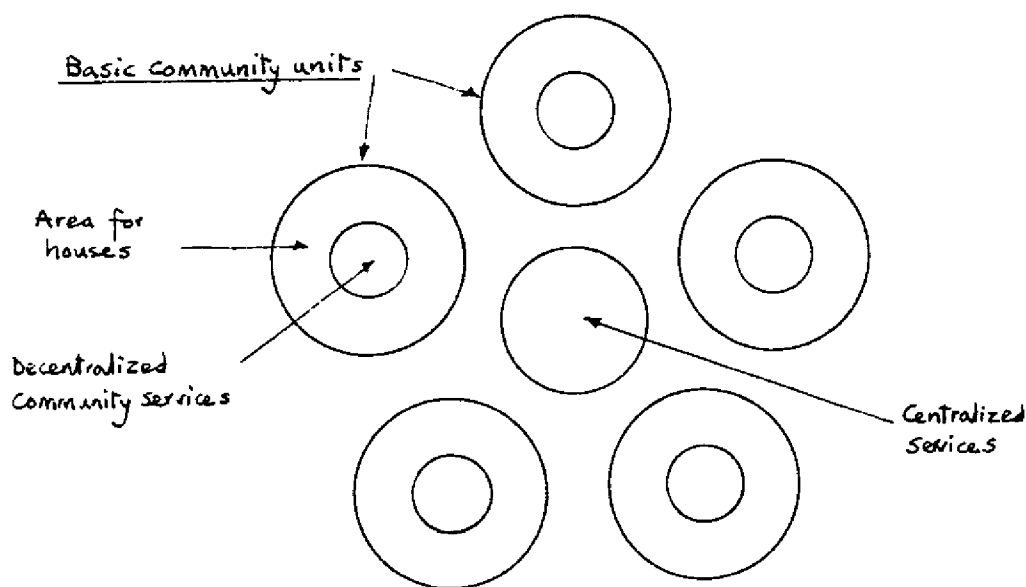


Figure 21-3. Example of a circular layout.

be suitable where the topography does not allow expansion of a cluster or cross-axis layout.

21.5 Shelter

- ☐ Shelter must provide protection from the elements, space to live, and emotional security.
- ☐ Assess the adequacy of whatever emergency shelter arrangements refugees have already made themselves and meet immediate needs through provision of simple local materials. The first step is to put a roof over people's heads.
- ☐ Prefabricated or special emergency shelter has not proved to be a practical option on either cost or cultural grounds.
- ☐ Refugee housing must be culturally and socially appropriate and familiar. Local materials are best if available.
- ☐ Individual family housing should be built whenever possible, unless multi-family units are traditional.
- ☐ Shelter must withstand the seasons.
- ☐ Wherever possible, refugees should construct their own housing, with the necessary organizational and material support.

General

1. Shelter must at least provide protection from the elements, space to live and store belongings, and emotional security. Shelter is likely to be one of the most important determinants of general living conditions and is often one of the largest items of non-recurring assistance expenditure. While the basic need for shelter is similar in most emergencies, such considerations as the kind of housing needed, what materials and design are used, and who constructs the housing will differ significantly in each situation.

2. To date neither pre-fabricated building systems nor specially developed emergency shelter units have proved effective in refugee emergencies. Reasons include high unit cost, transport problems including cost, inappropriateness, inflexibility and the fact that emergency shelter arrangements will have been made before these systems can arrive. For similar reasons, tents are often not an effective means of providing shelter. They are difficult to live in and provide little insulation from extremes of temperature. There are, however, circumstances in which tents may be useful and appropriate, for example when local materials are not available or for refugees of nomadic background. A limited number of tents may also serve as transit accommodation while more appropriate shelter is constructed. Standard specifications for two types of tent are given in Annex 2 to chapter 27.

3. The best way to meet emergency shelter needs is to provide the same materials or shelter as would be normally used by the refugees or the local population. Only if adequate quantities cannot be quickly obtained locally should emergency shelter material be brought into the country. The simplest structures, and labour intensive building methods, are to be preferred.

Emergency shelter

4. The establishment of emergency shelter is a high priority, even when not essential to survival. Temporary shelter must be available before other services can be developed properly. Immediate action should be taken to assess the adequacy of any arrangements already made, and to meet obvious short-comings through the provision of local materials, such as bamboo poles, thatch, rope, matting, wooden boards and timbers and perhaps metal roofing. This may be supplemented if necessary by canvas or plastic sheeting. Details of suitable plastic sheeting are given in Annex 2 to chapter 27. To the extent possible, emergency materials should allow re-use later in the construction of improved housing.

5. The key to providing an adequate shelter is provision of a roof. If materials for a complete shelter cannot be provided, provision of adequate roof materials will generally suffice, as walls can usually be made of earth or other materials found on site or locally available.

6. Some emergency shelter may be found in national public buildings such as schools. This is, however, usually a very temporary solution and unsuited to large numbers.

7. While different cultures have different minimum individual needs, WHO recommends a minimum usable floor space of 3 sq. metres per person in an emergency shelter. Overcrowding is a common problem and has serious implications for health.

8. Experience has shown that whatever the original intentions, emergency shelter is often upgraded in situ, so that the initial emergency layout becomes also that of the long term. It is important to remember that even the most rudimentary emergency shelter is a home.

Improved shelter

9. When the most immediate needs of the refugees in the early part of an emergency are being adequately met, the provision of improved housing must be considered. Many of the considerations have already been mentioned. Housing must meet the cultural and social requirements of a home. Appropriate housing will help reduce the disorientation and emotional stress suffered by refugees. To the extent possible, longer term housing must be similar in design and construction to that with which the refugees are familiar, while reflecting local conditions and practice. This will generally mean single-family shelters, unless the refugees are used to multi-family units. Although more costly, the benefits to the refugees of individual homes cannot be over-estimated. If multi-family shelters must be used, no more than some seven families (say 35 persons) should normally be assigned to any one

structure. Experience has shown that there are likely to be social and environmental problems above this number, while buildings made from local materials may be approaching their structural limits at this size.

10. Materials and design should meet minimum technical standards throughout the local seasons. Thus roof material may have to provide shelter from the sun, rain and snow. Wall material must afford privacy and protection from the elements. In buildings where cleanliness and hygiene are particularly important, for example the kitchens of feeding centres or in hospitals, the floor should be washable.

11. Emergency and temporary shelter, including communal buildings, can and should almost always be constructed by refugees themselves, provided adequate organization and material support is given. This will help to ensure that the housing will meet their particular needs, will reduce their sense of dependence, and can cut costs considerably.

FURTHER REFERENCES

- Curry F. (1971) Refugee Camps and Camp Planning Series Intertect
 A guide to camp planning based on a series of reports and case studies in East India in 1971. Four separate reports: I Camp Planning, II Camp Improvements, III Camp Development Programming, IV Camp Layouts.
- Davis I. (Ed.) (1981) Disasters and the Small Dwelling Pergamon
 Report of a 1978 conference which while focused on natural disasters gives a good overview of the subject, with lessons from practical experience.
- Davis I. (1978) Shelter after Disaster Oxford Polytechnic Press
 Also in Spanish
 (Gustavo Gilli SA, Barcelona)
- Howard J. (1981) Plastic Sheeting: its use for emergency housing Oxfam
 Spice R. and other purposes
 An Oxfam Technical Guide: clear and practical.
- Intertect (1974) Relief Operations Guidebook
 Vol III Housing: comprehensive discussion of considerations in the construction of relief shelter and housing.
- UNHCR (1979) Planning Rural Settlements for Refugees: PCS/326
Some considerations and ideas