Land delivery for Low Cost Housing in Zimbabwe
Phase I

57

ABSTRACT

Zimbabwe is currently facing a national housing shortage. The major constraints to housing delivery in this country are: lack of adequate financial resources; limited human and institutional resources; escalating costs of building materials and equipment; and inadequate provision of surveyed and serviced land. The purpose of this study is to review the procedures and issues affecting the provision of surveyed and serviced land in the country and to identify possible solutions to problems. The study has two primary concerns: that the cost of serviced land is relatively affordable but action may be required in the future to continue to keep solutions affordable to both the public sector and the beneficiaries; and that the system by which land is acquired, subdivided and serviced for high density housing works relatively well but there are bottlenecks in the administration of the land delivery system which result in higher costs.

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REGIONAL HOUSING AND URBAN DEVELOPMENT OFFICE
(EAST AND SOUTHERN AFRICA)

In conjunction with

GOVERNMENT OF THE REPUBLIC OF ZIMBABWE
MINISTRY OF PUBLIC CONSTRUCTION AND NATIONAL HOUSING

LAND DELIVERY FOR LOW COST HOUSING IN ZIMBABWE
PHASE 1 : REPORT OF FINDINGS
(December 1989)

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PREFACE

This study was commissioned by the Regional Housing and Urban Development Office for East and Southern Africa of the United States Agency for International Development and was executed for the Ministry of Public Construction and National Housing of the Government of Zimbabwe. This Report details the findings of Phase I of the study. It was prepared by Colleen Butcher of Plan Inc. Zimbabwe P/L.

The views expressed in this document are those of the author alone and do not necessarily reflect those of USAID or the Government of Zimbabwe.

The author would like to express her appreciation for the assistance given by numerous officials of the Ministry of Public Construction and National Housing and the Ministry of Local Government,Rural Development; by officials of the Cities of Harare, Gweru and Mutare and of Gwanda, Bindura and Mvurwi Rural Councils; and by members of the private sector working in the housing finance and construction industries in Zimbabwe.

8 December 1989

ABBREVIATIONS

CRF	Central Rates Fund
DDP	Department of Physical Planning, MLGRUD
du	dwelling unit
GLF	General Loan Fund (Administered by MLGRUD)
MFEPD	Ministry of Finance, Economic Planning and Development
MLARR	Ministry of Lands, Agriculture and Rural Resettlement
MLGRUD	Ministry of Local Government, Rural and Urban Development
MPCNH	Ministry of Public Construction and National Housing
NHF	National Housing Fund (administered by MPCNH)
O & M	Operation and Maintenance
PPO	Provincial Planning Officer (in Dept. of Physical Planning)
RHUDO/ESA	Regional Housing and Urban Development Office for East and Southern Africa, USAID
RVO	Regional Valuation Office, MPCNH
USAID	United States Agency for International Development
USLO	Urban State Land Office, MLGRUD
ZIPAM	Zimbabwe Institute of Public Administration and Management

Currency :- The unit of currency used throughout this report is the Zimbabwe Dollar. Z$1 = US$2,2

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1. INTRODUCTION

1.1. Background to the Study

Zimbabwe is currently facing what the Ministy of Public Construction and National Housing has called a "national housing shortage". The total housing demand (for both rural and urban areas) has been calculated as being 1 950 000 dwelling units for all income groups for the period 1986-2000. Of this, the Ministry calculates that over the same period, 270 000 d.u.s will have to be constructed in the country's urban areas. This would be necessary to meet the existing housing backlog, replace substandard units and meet the needs of the growth in urban populations.(1) Approximately 70% of these units are needed by low income households.(2)

To understand the magnitude of this challenge one might consider the fact that over the period 1980-1985, only 6 300 d.u.s were constructed.

Although the First Five Year National Development Plan (1986 - 1990) proposes the ambitious annual construction of 18 000 d.u.s this will not eliminate the housing backlog over the Plan period. The MPCNH has acknowledged that the major constraints facing housing delivery are:

1. Lack of adequate financial resources;

2. Limited human and institutional resources;

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(1) The estimate assumes that 1 d.u./household (i.e. 3,99 persons) needs to be constructed, i.e. it does not legitimise the *de facto* existence of lodging. An alternative source (R. Martin et al, 1985) has argued that if the present practice of lodging were to continue, there would be, in reality, 6,45 persons/d.u. There would then be demand for some 167 000 d.u.s over the period.

Note : du = dwelling unit - a unit of shelter designed for use by one household. It can refer to either an attached or detached shelter type.

(2) For the purposes of this Report, the MPCNH'S definitions, (derived from the Central Statistical Office) are used, viz.

a) Low income: Households with monthly incomes of less than Z$485;
b) Middle income: Households with monthly incomes between Z$487 - Z$1000;
c) High income: Households with monthly incomes greater than Z$1001.

3. Escalating costs of building materials and equipment and
4. Inadequate provision of surveyed and serviced land.

The purpose of this study is to review the procedures and issues affecting the last of these constraints namely the provision of surveyed and serviced land in the country and to identify possible solutions to problems.

A consideration of building standards and land utilization forms a further part of this study. These issues are discussed with respect to both appropriateness and affordability. Finally there is a review of cost recovery and subsidisy mechanisms in place and the land survey requirements.

1.2. Study Objectives and Methodology

The study has two primary concerns. As defined in the consultant's Terms of Reference (see Annexe A), these are:

- that the cost of serviced land is relatively affordable but action may be required in the future to continue to keep solutions affordable to both the public sector and the beneficiaries;

- that the system by which land is acquired, subdivided and serviced for high density housing works relatively well but there are bottlenecks in the administration of the land delivery system which result in higher costs

The study is divided into two phases. Phase 1, reported in this volume reviews the agencies and procedures involved in the land acquisition and delivery system, building standards and land utilization, surveying and cross-subsidies in infrastructure cost recovery.

The report deals with each of the above issues by reviewing existing procedures and conditions, assessing their performance and recommending possible means of strengthening or streamlining procedures.

Phase 2, to follow, will involve a survey of a representative sample of households living in high density areas to assess ways in which they currently make use of land within their plots and their preferred options in terms of services required and plot sizes taking into account different levels of affordability.

2. THE LAND DELIVERY SYSTEM

2.1 Existing Conditions

(i) Agencies involved :
Land for high density (3) housing in the urban areas is acquired and serviced for future built development by a number of different agencies. The agencies involved are the following :

a) Municipalities

There are 11 municipalities in Zimbabwe, proclaimed in terms of Section 4 of the Urban Councils Act (Cap 214). These are:
- the 4 cities of Harare, Bulawayo, Mutare and Gweru, and
- the 7 municipal areas of Masvingo, Chinhoyi, Kwekwe, Kadoma, Chegutu, Redcliffe and Marondera.

All local authorities which have attained municipal status are empowered in terms of Section 98 of the Urban Councils Act to acquire (by way of purchase, exchange, donation, lease or expropriation) any land within or outside the municipal area for high density housing amongst other development.

If the land in question falls outside of a town planning scheme or Master Plan or Local Plan boundary, then the Minister of LGRUD must approve the acquisition. This is to ensure that development is not on an *ad hoc* basis but in accordance with sound town planning principles. The Minister's approval does not require the prior preparation of a Master Plan or Local Plan which are comprehensive statutory documents. It merely requires a technical justification by the local authority covering matters such as the sustability of the land for the proposed development, the Council's ability to service the land and the [illegible] servicing.

If the land in question falls within an existing town planning scheme/master/local plan boundary then the local authority may acquire, service and survey the land without further reference to the Minister or to any central Government department.

b) Urban State Land Office, MLGRUD

The MLGRUD, through its Urban State Land Office, acquires land on behalf of all other local authorities viz.

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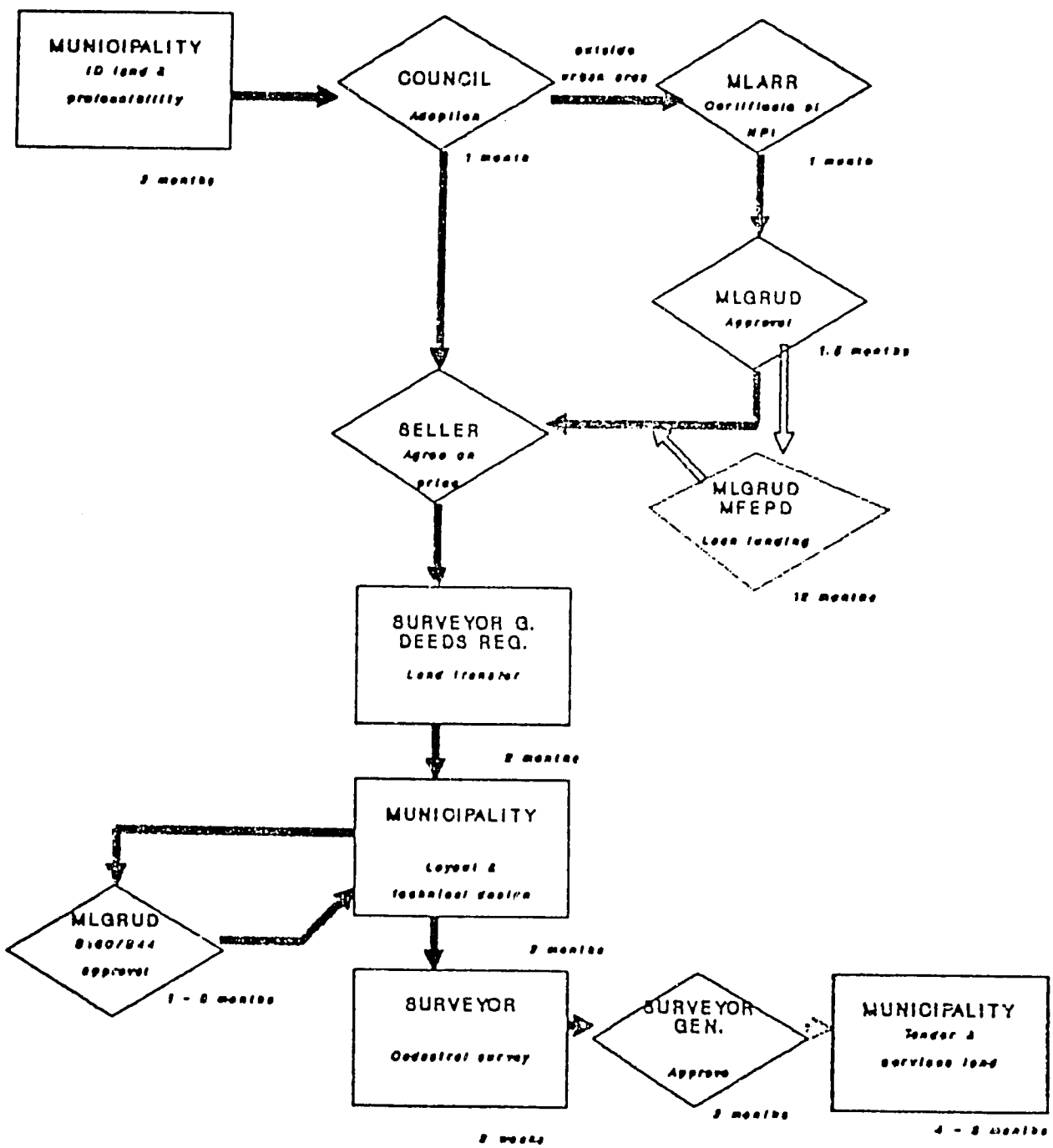
(3) Throughout this report the term "high density" is used as a synonym for "low income" as the term of choice used by the Government of Zimbabwe.

FIGURE 1: LAND DELIVERY PROCEDURES FOLLOWED BY MUNICIPALITIES

AVERAGE LEAD TIME : 1.5 - 2 YEARS



-the 7 other urban councils in the country comprising the 4 town Councils (of Victoria Falls, Shurugwi,Kariba and Chitungwiza) and the 3 Local Boards (of Chirundu,Hwange and Epworth); and

-the 50 high density townships in the designated areas within Rural Council areas of :

Amandas
Banket
Beatrice
Beitbridge
Bindura
Centenary
Chatsworth
Chimanimani
Chipinge
Chiredzi
Chirundu
Chivhu
Concession
Dete
Darwendale
Esigondini
Filabusi
Glendale
Golden Valley
Gutu
Gwanda
Headlands
Karoi
Lalapanzi
Lions Den
Macheke
Makuti
Mashava
Mazowe
Mount Darwin
Msuna Mouth
Mtorashanga
Mutoko
Mvuma
Mvurwi
Norton
Nyanga
Nyazura
Odzi
Penhalonga
Raffingora
Rusape
Rutenga
Ruwa
Shamva
Trelawney
West Nicholson
Zvishavane

Land thus acquired by the state can then either be serviced by means of the State Land Development vote of the USLO (grant funds from Treasury) or by the local authority making use of loan funds from the General Loan Fund.

c) Urban Development Corporation, MLGRUD

The UDCorp is a parastatal body established under the MLGRUD in 1986. The UDCorp has extremely broad objectives including :

- "to encourage and assist local authorities .... to plan and co-ordinate urban growth and development within development areas" (Section 19 (a), UDCorp Act);

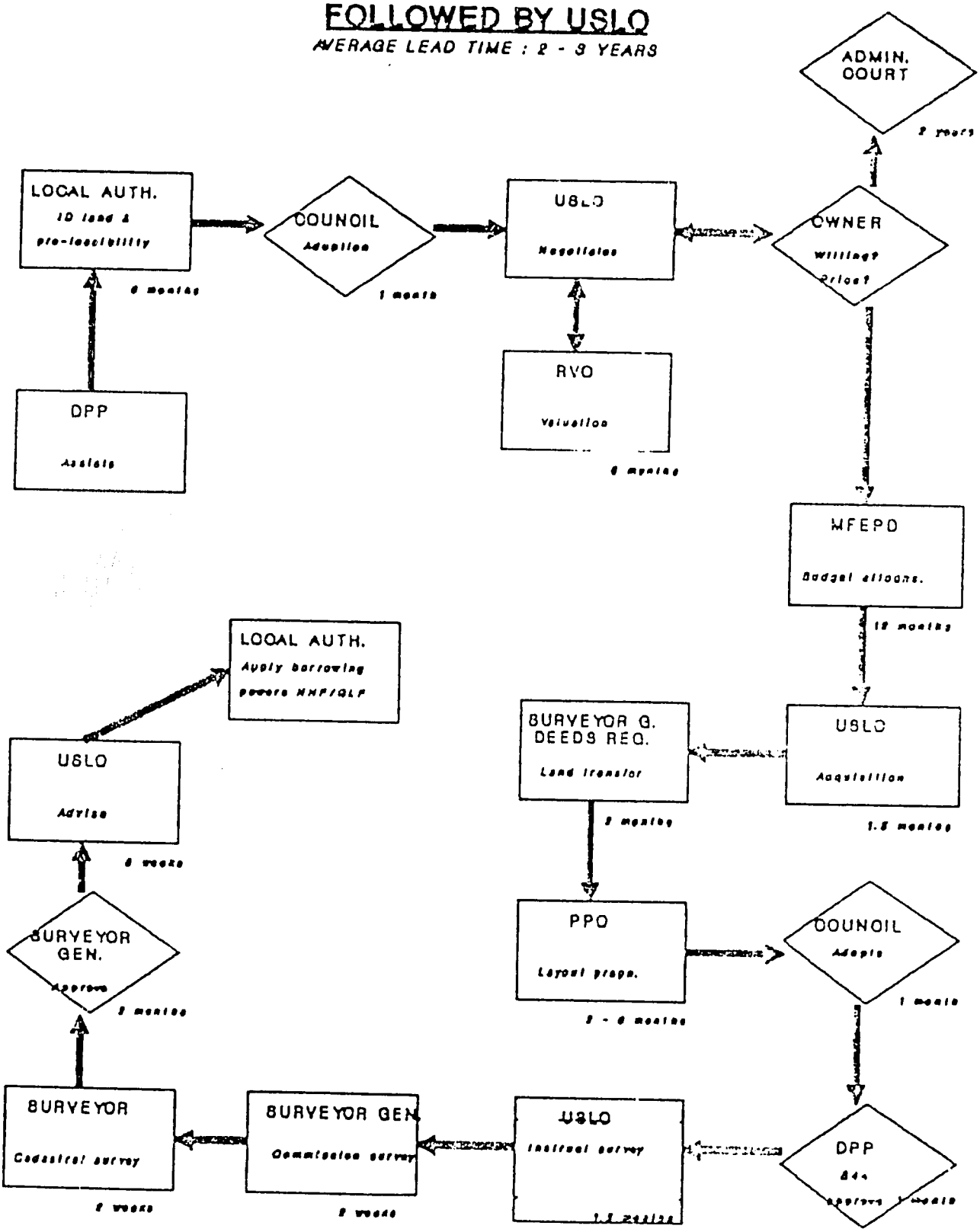
- "to assist in the provision of housing and social facilities within development areas" (Section 19 (c), UDCorp Act);

-"to acquire immovable property necessary or convenient for the exercise of its (the UD Corp's) functions (Part 3 of Schedule, UDCorp Act).

UDCorp's role is seen by its mother - Ministry as not so much a land acquisition agency, as a facilitator of servicing and surveying land on behalf of (particularly

FIGURE 2 : LAND DELIVERY PROCEDURES FOLLOWED BY USLO

AVERAGE LEAD TIME : 2 - 3 YEARS



smaller) local authorities. However given that it has only very recently been established, it has not as yet proved its capabilities in this respect.

d) Ministry of Lands, Agriculture and Rural Resettlement

In terms of Section 99 of the Urban Councils Act, a local authority has powers to expropriate land from a private owner if it proves to the Minister of LGRUD that the land is needed for its purposes and that it is unable to acquire such land through reasonable terms of agreement with the owner.

The procedures for land expropriation are governed by the Land Acquisition Act, 1985 which is administered by the MLARR. In terms of this Act too (Section 6) any owner of rural land may not sell it without first obtaining a "certificate of no present interest". This certifies that the Government has no present interest in acquiring the land for (amongst other things) town and country planning purposes.

Thus from a legal point of view, local authorities and the state have strong powers to acquire land and have the right of first refusal over all rural land for any expansion of urban areas.

The MLARR has expressed some concern that as urban areas expand, they are encroaching onto prime agricultural land. Urban development of high density housing in particular calls for relatively flat, well drained soils - criteria for excellent arable lands. However other than in the case of Harare (which has recently expanded very rapidly south eastwards, the Ministry's views are not regarded with much sympathy by local authorities, nor do many private owners of rural land seem to object to selling their land for urban purposes.

The consultant found quite the reverse to be the case. The owners of private farms on the peripheries of urban areas usually initiate a land sale to the local authority or state as their farming operations are hindered by urban encroachment (in the form of wood cutting, stock thefts, fence thefts, veld fires and similar).

e) Private Developers

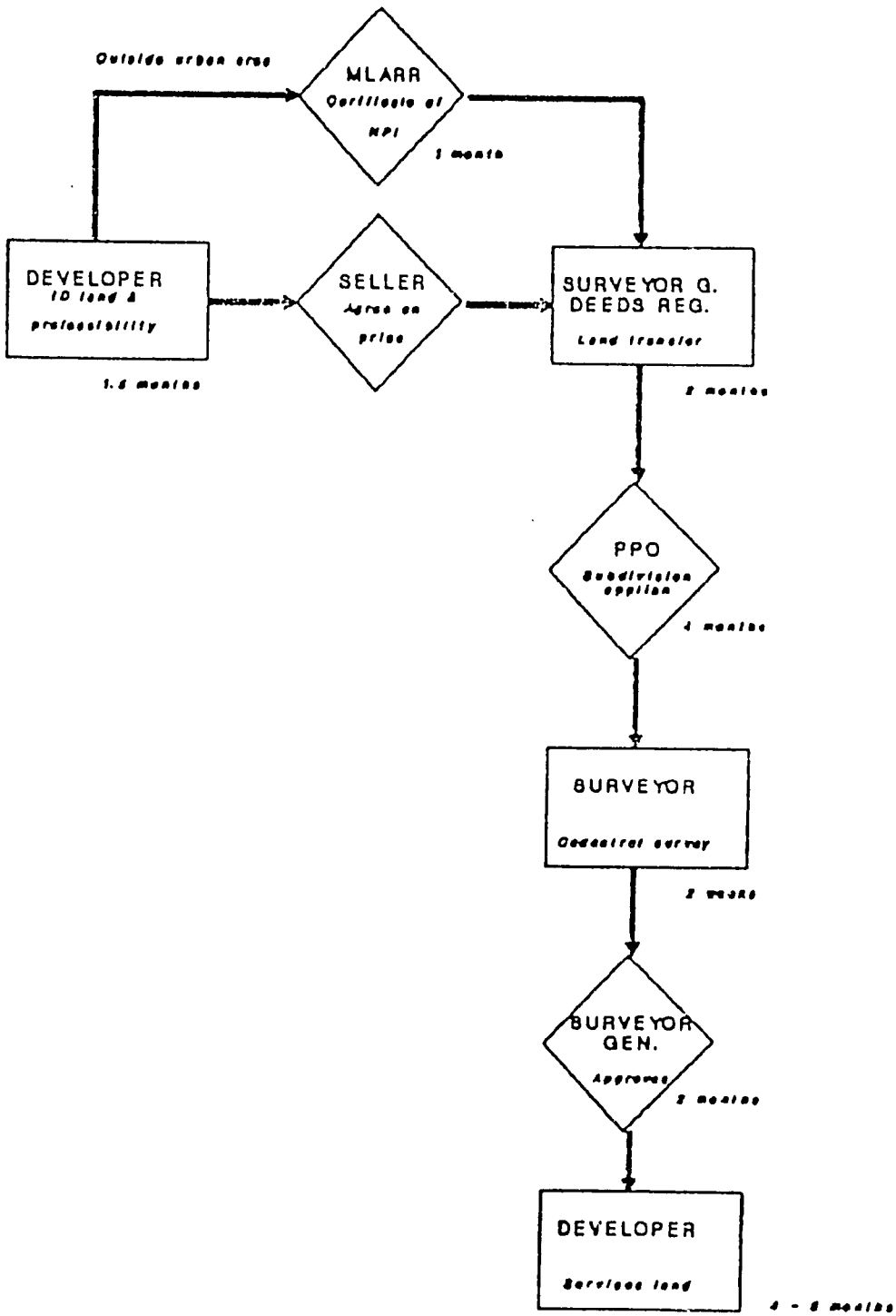
Private developers may acquire land on the open market and develop it for high density housing provided that :-

-the land is zoned in terms of an operative town planning scheme/master plan/local plan, for high density housing; or

FIGURE 3 : LAND DELIVERY PROCEDURES

FOLLOWED BY PRIVATE DEVELOPERS

AVERAGE LEAD TIME : 1 - 1.5 YEARS



-when an operative town plan does not exist but the local authority approves the development because it is in conformity with other land uses in the area or would not have a detrimental effect on other uses in the area.

With a few notable exceptions of company housing development for employees (eg at Ruwa and in many mining towns,) private developers usually apply to the local authority or state for serviced land on which to construct houses. They do not have much experience in land acquisition and servicing.

Given the present shortages of serviced land available, more and more local authorities are offering to sell raw land to private developers (including housing co-operatives) which the developer must then service and survey at its own cost.

(ii) Financing

a) Municipalities

On acquiring municipal status, all municipalities (with the possible exception of Harare) inherited substantial tracts of previously state land as commonage for future expansion. (Commonage is land owned by the local authority for "common" or public uses; for example open space, primary schools, local authority offices, and similar.) It is only in the recent past that this commonage has been fully developed and many urban councils are now having to acquire land from private owners.

The 11 municipalities generally keep seperate Reserve Accounts for land purchases. In theory they sell serviced plots to households at present day market values and this money goes into the Land Sales account - rolled over for future land acquisitions. In practice the actual prices charged by the municipalities (and smaller [illegible] authorities) tend to be lower than current market values. This issue is taken up in Section 2.2.3.

The Intrinsic Land Value (i.e. land only, excluding servicing and survey costs) paid by beneficiaries varies considerably from municipality to municipality. In Harare the present ILV charged to beneficiaries is Z$1,20/m² (i.e. approximately Z$360/plot whereas in Gweru the ILV charged is Z$0,40c/m². Both Councils claim that their Land Sales accounts show profits.

However particularly the small municipalities do seek loans from the MLGRUD to finance land acquisitions as their land sales are only a small fraction of what is required. (A recent case in point was that of Redcliffe.) This is probably because they turn over smaller numbers of plots on an infrequent basis compared to the larger authorities.

Thus they cannot keep up with inflation in land prices for future acquisitions.

Of the 11 municipalities, only Harare and Bulawayo are permitted (with authority from the Minister of LGRUD and FEPD) to borrow on the open market.

All are permitted to borrow from the Building Societies. However with the exception of Harare, Gweru and recently Redcliffe, none have availed themselves of this source of finance for servicing of land. This may be due to the higher interest rates charged by the Building Societies. (For example the City of Harare has borrowed Z$6 million short term bridging finance from the Central African Building Society to service Budirio 3 and 4 at an interest rate of 11,5% per annum compared with the Government rate of 9,75% per annum.)

A local authority wishing to borrow from a Building Society must have this approved by the MLGRUD. The Ministry will only approve the borrowing powers of a local authority from this source if it is convinced that the authority cannot get sufficient funds from central Government sources or if the money is needed at short notice and the local authority cannot wait until the following financial year when sufficient Government funds might be available.

Thus the MLGRUD views borrowing from this source as a last resort and applications take a long time for vetting and approval.

All municipalities (and small towns) borrow funds from the General Loan Fund (administered by the MLGRUD) and the National Housing Fund (administered by the MPCNH) for servicing of land. In both cases the loans are made at an interest rate of 9,75% per annum, set periodically by MFEPD.

Money from the GLF is used for the provision of primary bulk infrastructure (eg trunk sewers and treatment plants, water treatment works and main pipelines, access roads and similar,) i.e. the so-called "off-site"(4) infrastructure.

Loans from the NHF are used to finance the provision of on-site infrastructure; i.e. reticulation within the housing

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(4) For the purposes of this report, "off-site" refers to outside of the housing estate boundary as a whole. This is the definition used by the MPCNH and the major donor "on-site" -within. However the MLGRUD has not accepted this definition. The the MLGRUD "on-site" refers to within an individual plot boundary. The consequences of this dispute are discussed in section 2.2

estate (as well as for building the houses themselves where the local authority does this.)

The procedures for borrowing from the two funds are as follows:

NHF:

- The local authority makes an annual bid to the MPCNH drawing up its proposed housing and infrastructure programme for the following year.

- The MPCNH puts the bids of all local authorities to the MFEPD.

- This total amount is invariably cut by MFEPD depending on the national budget.

- The MPCNH then decides how much money should be loaned to each local authority. It then advises the MLGRUD at the same time as the local authority of the amount to be allocated.

- The local authority then applies in duplicate to MLGRUD and MPCNH for approval of borrowing powers to borow this money. The MPCNH considers the layout plan for the area, the number of stands to be developed, the lines of services, how the local authority intends to build houses and the house building plans. Having vetted these details the application is then forwarded formally to the MLGRUD for borrowing powers approval.

- The MLGRUD has not had much forewarning of the housing programme, and as the allocation made by the MPCNH from its global allocation may or may not fit in with the amount being allocated from the GLF, the MLGRUD then liases with MPCNH and tries to marry the two votes, taking into account the local authority's overall ability to repay both loans. The MLGRUD investigates the overall financial viability of the local authority (not just its housing account) prior to recommending approval of borrowing powers.

- All applications are then sent to the Minister for his approval.

- The loan funds must be drawn down or committed in the same financial year or else they are sent back to Treasury). Loans are made at an annual interest rate of 9,75% per annum, repayable over a 25 year period.

GLF:

- The local authority makes an annual bid in November to the MLGRUD detailing its development proposals.

- The Ministry compiles the bids submitted by all authorities and submits it to the Minister for his approval.

- These bids are then defended in January or February at the MFEPD.

- The MFEPD takes into account the national growth rate and assesses how individual urban centres are growing in comparison to this. The amount of funds approved are therefore limited to this percentage e.g. in 1988/89 funds were generally allocated to allow for a 6% urban growth rate.

- In May or June of each year the MFEPD gives a tentative figure as to how much has been approved; this amount is confirmed in the budget statement in July or August.

- The local authority is notified of this figure; it advertises its intention to borrow the sum and 30 days later (the period allowed for public comments or objections) it submits it application for borrowing powers for this amount to the MLGRUD.

- The application is automatically approved as it has already been vetted.

- As in the case of the NFH, money from the GLF is lent at an interest rate of 9,75% per annum repayable over 25 years.

All municipalities endorse a policy of full cost recovery of the land and servicing costs from the beneficiaries. However there is some cross subsidisation across the entire high density area and in some cases across the city as a whole. This is discussed in more detail in Section 6.

In terms of Section 100 of the Urban Councils Act, after purchasing new land for expansion, the municipalities are obliged to transfer to the State any land required for police stations and schools, as well as land reserved for any other state purposes in terms of the town planning layout for the area. The state does not pay for this land.

Furthermore, when a local authority is granted municipal status and the state transfer commonage to the authority, it retains a further 10% commonage for state purposes. Given the large sizes of stands set aside for public purposes the cost of such land can be considerable. This is discussed further in Section 5.

b) <u>Urban State Land Office, MLGRUD</u>

The USLO, as noted above, acquires all land for urban growth

(including for high density housing) on behalf of 57 local authorities in the country. It keeps a seperate Land Acquisition vote (account) and makes yearly bids to Treasury on the basis of requests received from local authorities.

The actual amounts granted by Treasury vary from year to year depending on the state of the national economy and the degree of urgency for which the land is required. For example in 1988/89 the vote was a mere Z$200 000 - for all lands use purchases, not only for high density housing. The MFEPD does not support land banking and will only grant funds for land purchases when there is a compelling need to do so.

Land sales of state land to individual homeowners varies from area to area depending on the market price of land although present (1989) prices were set some 3 years ago. At present, typical prices being charged for state land sold for high density purposes (6) are as follows:

Chitungwiza	:	Z$1,65/m²
Bindura	:	Z$1,15/m²
Karoi	:	Z$1,00/m²
Rusape	:	1,00/m²
Chipinge	:	Z$1,00/m²
Chatsworth	:	Z$0,75c/m ²

These prices are for a typical plot which has services (particularly a road access and piped water) to the stand boundary. Direct servicing costs are not calculated but are an estimated 75% of the land sale price. Intrinsic land values are therefore only approximately 25% of the above costs.

The Regional Valuation Office keeps these land sales prices low so as not to discourage growth in the smaller centres.

25% of the money raised from the sale of state land goes back to the Central Treasury rather than back into the Ministry's Land Acquisition vote. 75% of the amount raised from land sales in a particular area is given by MLGRUD back to the small local authority of the area into an endowment fund to offset servicing costs of land. However this amount if very small in comparison to the land servicing needs. It is generally about Z$200 000 pa for the whole country.

As in the case of municipalities, land reserved for state

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(6) i.e. For stands of approximately 300m² . In the case of larger stands a much reduced rate of approximately Z$0,50c/m² is charged after 1 000m²

purposes is transferred to the respective Ministries at no cost.

c) Private Developers

Private developers finance land purchase costs and servicing costs directly from the households to whom they sell the individual plots. Although some private sector developers are now quite heavily involved in constructing houses (usually for employees) on serviced land, they have been less interested in servicing raw land for development. This is primarily because it requires a longer bridging finance period before the stands can eventually be sold (a minimum of about 10 months rather than the 2 months needed to get a roll over on houses built on local authority serviced land).

Prior to 1980 there is an example of a consortium of employers who acquired land and successfully developed a middle-income housing area at Marimba Park, Harare. Since 1980 there have not been many similar developments. However a recent well publicised case has been that of Mashonaland Holdings. The company acquired land at Ruwa growth point (25km east of Harare) in the early 1980s, fully serviced the land and has constructed duplexes and detached houses on a home ownership basis for its semi-skilled employees and middle managers respectively.

However in such cases, the developer has had to bear the full capital costs of servicing the land (including, in the case of Ruwa, the capital costs of developing the primary infrastructure). In areas where there is no existing primary infrastructure or where it is inadequate, a private developer, unlike a municipality, must recoup the full costs of infrastructure directly from the beneficiary households.

Some Building Societies (notably CABS) have expressed an interest in the possibilities of servicing raw land. However they are not easily able to do so in terms of the provisions of the Building Societies Act. In terms of the Act, Building Societies are only permitted to advance money to individuals or on the strength of individual mortgages unless the Minister approves an alternative.

It is understood that the Ministry may be reluctant to approve the general case of Building Societies entering the field of property development in competition with other finance houses.

CABS has recently received Ministerial approval (one year after applying) to service raw land for 220 high density stands in Hatcliffe, Harare. The stands are to be developed by CABS' low income employees who only require a 2% deposit as they are staff members. The houses will have a slightly higher standard of finish than the national minimum

standards. The scheme is based on full cost recovery (i.e. servicing costs and capitalised interest are included in the plot sale price) but is being run at cost, i.e. CABS will not be making a profit out of the development.

Private developers, as in the case of municipalities, are required to set aside at their own cost a proportion of land for roads and public purposes (e.g. schools, open space and similar). In the case of high density residential developments, this is 20% of the total estate/township.

2.2 Discussion

2.2.1 Availability of Land

The availability of raw land for urban expansion and in particular for high density residential development appears not to be a major inhibiting factor. With the inevitable encroachment of urban uses onto adjacent farmlands the general case (with the possible exception of Harare) appears to be of willing sellers approaching the responsible authority to buy their land. Delays thereafter with respect to acquisition are related to the actual price to be paid for the land - this point is discussed further in Section 3.

In instances where a town seeks to expand onto adjacent farmland and the owner of that land is unwilling to sell, there are adequate legal statutes (in the form of the Urban Councils Act and the Land Acquisition Act, 1986) for the responsible authority to compulsorily purchase that land. The latter statute has not been used to maximum effect in the past (e.g. in the case of Harare) because in cases of compulsory land purchase a proportion of the sale price must be paid outside of the country. It is highly likely that this provision will be amended in 1990 (with the lapsing of the Lancaster House Agreement).

A further reason why local authorities seem to shy away from compulsory acquisition is that it calls for court approval which can be a lengthy procedure.

2.2.2 Land Banking

The consultant came across no examples of local authorities which have clear forward planning programmes for high density housing expansion and which have adequate reserves of land to meet development needs of the medium term future.

In part this is due to the fact that municipalities inherit large commonages from the state at the time of attaining municipal status. (Much of the state land originated from Deeds of Grant from the colonial British/South Africa Company). It is only recently that land availability has become a hindrance to development.

In part too, the urban growth rate in Zimbabwe prior to

independence was low in comparison to more recent urban growth rates. The table below illustrates this for a cross-section of towns.

Table 1 : Comparative Urban Growth Rates in Zimbabwe 1962-1989

Urban centre	Growth Rate for Period (%)		
	1962-1969[1]	1969-1982[2]	1982-1989[3]
Harare	2,3	4,6	8,1
Bulawayo	1,7	4,4	7,0
Mutare	-0,2	4,0	5,1
Bindura	9,4	4,5	8,0
Mvurwi	7,1	6,m4	6,4-10,0
Total urban	3,1	5,4	7,0

Notes

1: Based on Central Statistical Office figures.
2: Based on Central Statistical Office figures.
3: Based on local authority estimates.

Many local authorities are only now, faced with rapidly growing populations, realising their need to acquire more land.

This deleteriousness has been reinforced by the attitude of MFEPD on which many of the larger and all of the smaller urban centres rely for funds to purchase land. Granted that the national budget is strained to meet the annual demands placed on it. Yet the MFEPED seems to have taken a concious decision not to allocate funds for land acquisition until the need of a particular centre is critical.

This attitude fails to take into account the lengthy procedures involved in land acquisition (see Section 3) and the resultant *ad hoc* and therefore frequently unecessarily costly outward expansion of towns with asscciated infrastructure.

An example of this is the recent development of Chiwaridzo high density area in Bindura. This estate was planned and serviced as a static unit in 1986 and sewage maturation ponds built to the immediate south (downstream) of the houses. A mere 18 months later when the local authority began to investigate its future land acquisition needs, it realised that the most suitable area of land for expansion was to the south of Chiwaridzo. Therefore, rather than duplicate the construction of sewage ponds to service the

more southerly proposal, it proposed to build one large set of ponds to the extreme south of the existing Chiwaridzo and proposed extension. Acquisition of a small (15ha) piece of land for these purposes delayed the eventual of Chiwaridzo by a further 18 months.

Acquiring land in advance of need would not only keep prices down but would also give the local authority/government - as land owner - control over what is developed and where and when.

However a word of caution should be noted with respect to land banking. It is only a positive policy instrument if the land is then used efficiently by the local authority. Large-scale, long term land banking programmes are not only difficult to administer but can also contribute towards urban blight. Any new land banking programmes should therefore initially be small-scale and carefully monitored in administrative and financial terms before being expanded upon.

2.2.3 Land Charges

Illustrative of the local authorities' and state's somewhat *laissez-faire* attitude towards land as a key element of housing programmes, is the amounts charged by the authorities for land (the Intrinsic Land Value).

This ranges from the probably realistic market price in Harare of Z$1,20/m2 to the extremely low rate of Z$0,40c/m2 charged by Gweru and the even lower rate of Z$0,25c/m2 (7) charged by the RVO for centres such as Chipinge, Rusape and Karoi. Land prices are infrequently reviewed and are based on current market values of the property rather than on the replacement value.

Given that agricultural land around the country is increasing in value over time, neither local authorities nor the state are able to build up reserve funds for future land acquisitions. Many local authorities are reliant on Treasury funds for this. To some extent therefore, there is a central Government subsidy on the land prices paid by

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(7) This is the Intrinsic Land Value only. A flat rate of Z$1,00/m2 is charged in these centres but this includes the assumption that the stand is serviced. As 75% of state land sales are transferred to the local authority for capital costs of servicing it seems that the rough rule of thumb of 1:3 (land: services) is used. As already noted on page 10, the amount of servicing endowment is very small, particularly in comparison with total servicing costs. Therefore local authorities borrow the shortfall from the GLF or raise finances from alternative sources (for example, beer sales in the case of Chiredzi).

beneficiaries. This subsidy is justified by the RVO on two counts:

(i) that low income households could not afford higher prices; and

(ii) the subsidy will encourage (or at least not discourage) decentralisation of economic activities to smaller urban centres. In support of this point, a sliding scale is used on land prices (Z$0,50c/m2 on plots bigger than 1 000m2 compared to Z$1,00+) - thereby benefitting higher income groups and industrial users.

However it should be noted that at present land constitutes a mere 1% of the total costs of a serviced, 4 - roomed core house. If the land price were as much as doubled (on a par with, for example, prices charged by the City of Harare), this would only constitute 3% of the total costs of a serviced house. It would be unlikely to have a significant impact on the affordability by households of the housing.

On the second issue, it is highly unlikely that industrialists are likely to decentralise to smaller urban centres because of low land prices when one considers that current land prices (for high density housing equally as with industrial uses) consistute a mere 1 - 3% of total development costs.

Accumulated research by the World Bank has shown that government spatial policies designed to influence where industries locate have limited effect. For example, many new industries are prepared to pay high land costs in central locations so as to be close to input suppliers, customers for finished goods, services and skilled workers.

As long as land is seen as a cheap commodity that does not pay for itself, local authorities and central treasury will be inclined to treat it as a low priority. This in turn leads to *ad hoc* forward planning, uneccessarily high infrastructural development costs and uncertain future financing of land acquisitions.

A final issue under land charges is that of land set aside (ultimately to the beneficiaries' expense) for schools and public purposes. This is discussed in more detail under Section 5. However it should be noted that the state is currently paying for the costs of extremely generous land provisions for public purposes - often up to 40% of a total housing estate.

2.2.4. Private Sector Financing

Few local authorities are in a position to borrow from banks for servicing land. As long as they have to have approval

from the Ministry of LGRUD before being able to increase tariffs in the high density areas, they are in a precarious position with respect to repayments for loans. (It should be noted however that in terms of the standard plot purchase agreements, the local authority can increase the purchase price if interest rates have increased.)

Some of the larger authorities have recently taken out substantial loans from Building Societies for the servicing of new areas. This calls for careful future evaluation particularly with respect to possible increases in costs (due to higher interest rates) being passed on to beneficiaries.

However it seems that the MLGRUD's position that Building Society loans should only be used as a last resort may be overly cautious. This is particularly so given the limits to government funds and the huge housing backlog. It may well be that if funds from Building Society sources were used to service land at present day capital costs, the slightly higher interest rates would still be less than the capital costs of infrastructure at future, higher costs (when Government funding might become available).

At present Building Societies are typically lending at a rate of 12% over 15 years. In comparison, government funds for infrastructural services are lent at 9,75% over 25 years.

This reticence on the part of the Ministry means that it takes some time to investigate applications to borrow from a Building Society. In a recent case, for example, it took 11 months for the City of Harare to get borrowing powers for a CABS loan approved.

The Ministry has stated that local authorities should include borrowing from Building Societies in their five-year Public Sector Investment Programme bids. However Building Society funds, by nature are extremely volatile(8). By the time that the bids are approved five years hence, costs would have esclated beyond the initial borrowing power application and the Building Society may no longer have sufficient funds available for loan.

The Building Societies themselves have expressed a tentative interest in being able to service raw land for development. However to do so requires special approval by the Minister or, for the general case, would require an amendment to the Building Societies Act which currently restricts loans being

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(8) Given that they only have a few, large, long term depositers. The bulk of their accounts are small with high turnovers (used much as bank current/chequing accounts)

made to individuals on the basis of individual title.

7.3.5. Public Sector Financing

The present procedures by which local authorities apply to borrow from the GLF in the Ministry of Local Government, Rural and Urban Development and at the same time from the NHF in the Ministry of Public Construction and National Housing are a shambles.

As the MLGRUD is responsible for overseeing the overall financial viability of local authorities it approves borrowing powers applications in all sectoral development including high density housing.

In terms of the Urban Councils Act (Part XIX) "borrowing powers" refers to an authority granted by the Minister of LGRUD for the local authority to borrow money to undertake a variety of projects (listed in Section 238 of the Act). The Minister does not delegate these powers of approval.

Furthermore, in the case of high density housing applications the MLGRUD and MPCNH do not liase sufficiently prior to making their annual bids to MFEPD. This lack of adequate liason and eventual juggling of funds to marry the two vote allocations only occurs after the funds have been approved by MFEPD. Local authorities are then faced with the constant threat that they will have to send uncommitted funds back to Treasury at the end of the financial year.

The problems of this situation are further exacerbated by the MPCNH's recent schemes with local authorities whereby the Ministry's Provincial Maintenance Units construct houses for local authorities (making use of NHF monies) prior to borrowing power applications being approved.

This is most undesirable as it means that houses are built according to MPCNH's standard plans with no local preferences or flexibility with respect to standards being taken into account. Furthermore the houses are invariably more expensive than they need be because materials are purchased through central Government tenders and then have to be transported to the project town (9).

By the time that borrowing powers are approved the local authority usually finds that it has to repay more than it originally applied for. The MLGRUD is now threatening to instruct local authorities to refuse to accept these houses

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(9) For example housing being built in Gwanda at present makes use of materials transported from Bulawayo (120 km distant) instead of making use of locally manufactured cement bricks.

from MPCNH. The MPCNH has argued that in this event, the houses would be allocated to civil servants on the Ministry's own waiting list. However this procedure merely circumvents the problems of delays in borrowing power approvals rather than solving the problem and is not recommended.

Recommended procedures for facilitating liason between the two Ministries are shown in Figure 4. Two changes to the existing procedures are recommended:

(i) liason between the two Ministries prior to bids being made to MFEPD;

(ii) Delegation of borrowing power approval authority by the Minister of LGRUD down to Deputy Secretary official level in the case of annual applications of Z$200 000 or less.

The dispute between the Ministries is further exacerbated by their lack of agreement over the definitions of "on-site" and "off-site" with respect to infrastructure. Thus when bidding to MFEPD there is the danger of overlap between the two funds; this must be resolved before borrowing powers are approved. This issue is discussed in more detail in Section 6.

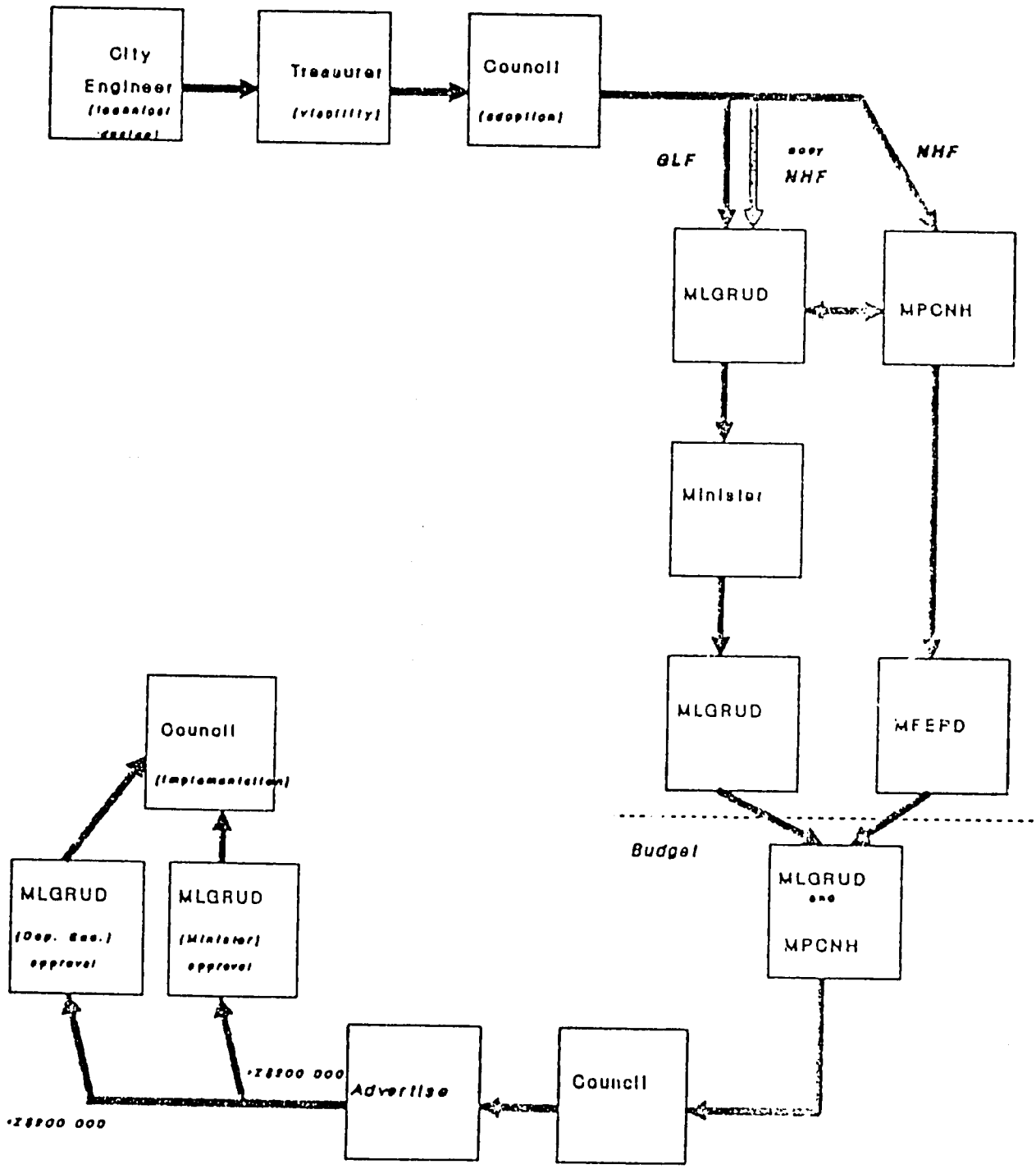
2.2.6. Private Developers

Private sector developers in high density housing are still viewed with some reserve by central Government and local authority officials.

A developer in a new or very small centre finds that s/he has to finance not only the capital costs of reticulating services within the township to individual plots but frequently also has to bear the costs of [illegible] infrastructure. (For example Mashonaland Holdings had to sink boreholes at Ruwa for water supply to its plots). These costs are inevitably passed on to the eventual homeowners or else have to be subsidised by the developer (as is sometimes the case when the developer is a company and servicing land for its employees).

In larger centres when local authorities service raw land for high density housing they offset the capital costs of water supply and sewerage against area - wide (or in the case of Harare, city - wide) tariffs. However when a private developer services land they (and in turn the beneficiaries) are not afforded this area - wide tariff system and have to bear the full capital costs of water supply and sewerage. This issue is discussed further in Section 6.

FIG. 4 : RECOMMENDED PROCEDURES FOR BORROWING FROM THE GENERAL LOAN & NATIONAL HOUSING FUNDS



However, it should be noted here that local authorities do have powers to protect themselves against maintenance costs of unviable estates. In terms of Section 43 of the Regional, Town and Country Planning Act, 1976 all or portions of previously approved estates (subdivisions) can be cancelled if the local authority finds that the costs of providing services to that estate are excessive and the subdivisions have not been developed, leased or sold for more than 15 years.

2.3. Recommendations

2.3.1. Availability of Land

2.3.1.1. Noting that the availability of raw land for urban expansion is not a problem faced by most local authorities and that there are adequate legal statutes in place for the compulsory expropriation of land where necessary, it is recommended that no further action or policy review be called for.

2.3.2. Land Banking

2.3.2.1. Noting that most urban local authorities have enjoyed large commonages and low growth rates in the past but that they are now facing rapid expansion and the need for more land, it is recommended that local authorities be exposed to the concept of and need for medium-term, controlled land banking programmes.

2.3.2.2. Noting that most urban local authorities are dependent on the Central Treasury for funds to purchase land (either directly or through USLO) and that MFEPD only allocates funds when land acquisition is critically needed, it is recommended that the concept of and need for medium-term, controlled land banking programmes be further discussed with officials within the MFEPD.

2.3.3. Land Charges

2.3.3.1. Noting that municipalities are generally charging low and outdated prices for the intrinsic land value element of plot sales, it is recommended that further work be undertaken with these authorities to assess the possible impact on beneficiaries of increasing plot sales prices to not only present day market values but also building in a replacement (i.e. future cost) value.

2.3.3.2. Noting that the prices charged by the RVO for plot sales are extremely low and out of date, and that increases in these prices are unlikely to negatively affect decentralisation to smaller centres, it is recommended that the state charge market values plus a future replacement cost value for land sales so as to generate necessary funds

for future land acquisitions and to support the case for land banking.

2.3.3.3. Noting that the RVO charges for plot sales on a sliding scale which favours large plots to the detriment of national revenues, it is recommended that the State charge land prices for all plot sales at the same unit cost/m^2 for the first basic 300m^2 and that a sliding scale be introduced whereby higher prices/m^2 are charged on plots larger than 300m^2.

2.3.4. Private Sector Financing

2.3.4.1. Noting the limits of public sector funds available for servicing new high density residential areas, it is recommended that the recent experiences of Harare and Redcliffe (which have borrowed funds from Building Societies to service raw land) be carefully monitored and evaluated with respect to the effects of higher interest rates being passed on to beneficiaries.

2.3.4.2. Further noting that these increases are likely to be minimal in relation to the overall costs of a serviced core house, it is recommended that this information be passed on to the MLGRUD for its consideration when approving borrowing powers from Building Society sources.

2.3.4.3. Noting that a limiting factor faced by local authorities in servicing land is lack of finance and noting the interest by Building Societies in possibly servicing raw land, it is recommended that further investigations be undertaken to ascertain the views of Ministries, local authorities, Building Societies and other developers on this matter and to investigate present legal restrictions (particularly in the Building Societies' Act,) limiting the role of Building Societies as developers.

2.3.5. Public Sector Financing

2.3.5.1. Noting that there is very poor liason between the Ministries of LGRUD and PCNH in the annual bidding for funds from the MFEPD, in the subsequent allocation of funds from the GLF and the NHF and that this results in delays in the approval of borrowing powers to the detriment of local authorities and beneficiaries, it is recommended that MLGRUD and MPCNH make greater efforts to liaise <u>prior</u> to and <u>after</u> bidding for funds on behalf of local authorities so as to provide more integrated and expeditious financing to local authorities. The suggested procedures for this liason are shown in Figure 4.

2.3.5.2. Noting that the Minister of LGRUD does not presently delegate his powers of approval of borrowing powers applications and that this causes some delays in the

drawing down of funds from the National Housing Fund, it is recommended that powers of approval for all applications for borrowing powers for amounts equal to or less than Z$200 000 be delegated to Deputy Secretary level in the MLGRUD.

2.3.5.3. Noting that the construction schemes by the MFCNH prior to the local authority's borrowing powers being approved, have a tendency to provide housing at higher costs than if local authorities or local contractors had directly undertaken the work and that there is an increasing reluctance by local authorities (with backing from MLGRUD) to take over these houses once completed, it is recommended that no further such schemes be undertaken prior to a local authority's borrowing powers being approved and until the procedures recommended in 2.3.5.1. and 2.3.5.2. above have had a chance of being implemented.

2.3.6. Private Developers

Noting that private developers play an important role in supplementing the national high density housing stock and that they have an interest in and capacity to service raw land on behalf of local authorities it is recommended that uniform systems of recouping capital costs of water supplies and sewerage systems (both primary and internal reticulations) be implemented across low and high density residential areas alike, in keeping with the one-city concept.

3. LAND ACQUISITION

3.1. Existing Conditions

As described in Section 2 above, land is acquired, serviced and surveyed by different agencies depending on whether it is within a municipality or not and whether the developer is private or public. The following three flow charts overleaf summarise the procedures followed by the private developers, municipalities and USIO (on behalf of small towns).

3.2. Discussion

As is to be expected given the large sums of money involved in land acquisitions and servicing, the lead times on the procedures are lengthy. However some private developers have managed to acquire and service raw land in as little as 8 months whereas municipalities and the state can take 2 - 3 years or more. There are a number of points in the procedures which are currently causing delays.

3.2.1. Identification of Land

The onus is on the relevant local authority, from the

largest to the smallest, to keep a record of land requirements and to initiate the necessary procedures in adequate time to purchase raw land.

At present the majority of local authorities only flag that they need more land when that need is already acute and do not give due recognition to the lengthy lead times involved. There is little or no awareness of the need for land banking (See Section 2.2.2. above).

In cases where the local authority has identified the need for further land and suitable land is either outside of an existing town planning scheme area in the case of a municipality or else is needed by one of the smaller local authorities, the local authority needs to prepare a written report justifying acquisition of the land to the MLGRUD.

The consultant found many local authorities to be unaware of the requirements of this written report. A statutorily approved town planning master plan or local plan is not necessary. If the local authority is not able to produce the report in-house, it may request assistance from the DPP. The DPP could, if so requested by local authorities, prepare 1 or 2 reports per month in each of the 7 Provinces.

The report is not a complex technical document but, based on local knowledge and consultations, identifies suitable land for development, reports on how existing services could be extended to the land and gives a cost estimate for extending the services.

Such a report falls in line with the "Integrated Urban Infrastructure Development Plans" proposed by the World Bank for its Second Urban Development Project in Zimbabwe. These IUIDPs are intended to be medium range (10 - 15 years) "infrastructure action plans" which would provide a guide for the expansion of all land uses with associated infrastructure in the town (i.e. are not limited to housing).

Furthermore, the consultant found that local authorities are typically not very *au fait* with the procedures to be followed for land acquisition.

For example, the municipality of Masvingo recently acquired land for (low density) housing and began servicing it. However the land in question was outside of the existing town planning scheme boundary. Therefore the local authority should have sought prior approval from the MLGRUD. It is now attempting to prepare a Master Plan to regularise the situation (by establishing new town planning scheme boundaries). However such a plan - being a statutory document - will take at least 8 to 12 months to prepare, be approved and be adopted.

In a similar vein , the Gwanda Rural Council identified its need for more land for high density housing in early 1988. Instead of following the procedures as per the flowchart above (through USLO), the Council approached a Senior Minister (and political figurehead in the area) who promised to look into the matter. Nearly 2 years later, USLO is still unaware of Gwanda's request for more land.

3.2.2. Land Prices

Although land owners on the peripheries of urban centres are frequently willing to sell their land and the need for compulsory expropriation is uncommon (see Section 2.2.1. above) frequent disputes arise over the selling price being asked for the land.

In cases where the local authority offers a realistic market price for the land and has local knowledge of the circumstances of why the seller wishes to sell the land, the purchase price can be settled fairly rapidly. Gweru, for example, recently purchased Randolph farm for the development of some 7 000 new high density residential stands. Using the services of an independent valuer, it took the Council only four months to acquire the farm - and at half the original asking price.

However, as discussed in Section 2.2.3. many municipalities and in particular the state (through its RVO) estimates unrealistic prices for land. Disputes therefore frequently have to be settled by the Administrative Court. At present it takes nearly 2 years for cases to be heard by the Administrative Court due to the huge backlog of cases (not all pertaining to land prices).

3.2.3. Delays in the Regional Valuation Office

The RVO, responsible for advising USLO of the value of various properties prior to bidding for funds, is extremely short-staffed. Not infrequently, requests for straight forward valuations can take up to 6 months to be actioned.

3.2.4. Treasury Funding

As discussed in Section 2.2.2. above, the MFEPD is reluctant to allocate funds for land acquisitions (or for servicing) well in advance of development. The general case is for it only to allocate funds to areas already faced with critical shortages of land or serviced stands. Depending on national priorities, requests for land acquisition funding or servicing are frequently only successful on the second or third submission (i.e. two or three years later).

3.2.5. Preparation of Layouts

The Department of Physical Planning is responsible for preparing layouts for the 7 municipalities and all high density residential areas on state land (i.e. in the 50 smaller urban local authorities). (The four cities prepare their own layouts using in-house planners.)

The Department is faced with severe trained staff shortages, having 52% vacancies in Town Planning Officer posts; 55% vacancies in Technicians; 30% vacancies in Senior Technicians and 43% vacancies in Provincial Planning Officer posts. However the Department has expressed optimism that these staff shortages will be substantially overcome in the next 2 - 5 years as the University of Zimbabwe trains about 20 Town Planning Officers per year.

Despite its current shortages the DPP has managed to produce and approve a considerable number of layouts over the recent past:

- Approximately 4 000 plots per annum are approved in terms of Section 160 of the Urban Councils Act (i.e. layouts prepared by the larger municipalities and sent to the MLGRUD for final approval);

- 1986: 16 layouts (primarily for high density housing) were prepared and approved in terms of Section 44 of the Regional, Town and Country Planning Act. (i.e. on state land of smaller municipalities and all small urban local authorities);

- 1987: 12 layouts in terms of Section 44;

- 1988: 32 layouts in terms of Section 44 (which provided for 4 138 high density residential plots, 1 547 medium density residential plots, and associated industrial, commercial and recreational activities;

- 1989 (Jan - Sept): 15 layouts in terms of Section 44.

Layouts on state land are prepared by the Provincial Planning Offices and must be adopted by the local authorities. This preparation can take 6 weeks or substantially longer depending on other office priorities. Thereafter the plans are submitted to DPP's Head Office for approval by the Director (in terms of Section 44 of the Regional, Town and Country Planning Act). Assuming that the plan is basically sound and does not require major amendments, this formal approval takes 3 - 4 weeks.

Layouts prepared by the Municipalities (on municipal owned land) or by DPP on behalf of Municipalities have to be approved by the Minister of LGRUD in terms of Section 160 of

the Urban Councils Act. This approval is on technical and financial feasibility criteria. If there is no existing town planning scheme for the area the local authority must place the layout on public exhibition for 21 days. Once lodged with the Ministry, the plan approval period is highly variable but is often unnecessarily delayed if there has been no prior liason with the Provincial Planning Office or if the Council does not submit an adequate covering report stating how it intends to service the layout and finance the development. Some Councils (the City of Harare has been cited) submit poor technical plans straight to the Ministry and attempt to exert political leverage to have the plan approved.

Some local authorities visited by the consultant criticized the length of time taken by DPP to formally approve layouts. They recommended that the powers of approval be delegated down to Provincial Planning Officer level. In the early 1980s, PPOs were delegated approval powers. However these were subsequently withdrawn in the face of strong political pressures at the local level to approve plans which were not always technically or professionally sound. The consultant found that in many instances delays with respect to layout plans are not so much in the approval stage as in the plan preparation stage.

3.2.6. Survey

Once the layouts are approved, a land surveyor is commissioned to carryout the cadastral survey prior to the infrastructure services being laid. There is a national shortage of land surveyors which inevitably results in delays in the survey work being undertaken; this point is taken up in more detail in Section 7. However once a surveyor is commissioned, s/he is able to survey at a rate of approximately 100 stands per 2 weeks (assuming that the local authority has cleared the site of tall grass and vegetation and similar). Nonetheless, there are a number of further points which contribute to the slow pace of surveying.

Firstly, in the case of state land, layouts prepared and approved by the Director of Physical Planning are forwarded to USLO - an administrative, non-technical section which controls the vote to pay for surveys. USLO in turn instructs survey by the Surveyor Generals' Office. As the SG has insufficient staff to do the survey in-house, his office in turn commissions the work from a private land surveyor. It can thus take 5 - 6 weeks of little more than file passing from the time that a plan is approved the time that a surveyor is actually commissioned to carryout the cadastral survey. Equally, if the surveyor has queries concerning the layout s/he must go back along this chain of offices to get clarification from the original planner.

Secondly, it is not uncommon for surveyors on the ground to find anomolies in approved layout plans (prepared by both DPP and municipalities). This is brought about by a number of factors including the shortage of trained planners; the lack of vehicles/mileage votes for the planner to carry out careful field surveys of the site; lack of awareness by planners of the delays caused by lack of attention to detail; and lack of adequate base-mapping.

Minor amendments to the plan can be approved by the Provincial Planning Officer. However, more serious amendments (typically involving amendments of 5 metres or more) require that the amended plan be readopted by the local authority and resubmitted to the DPP or Ministry of LGRUD for re-approval.

Once the ground survey is completed, the surveyor lodges the diagram and calculations in the SG's office for approval of the General Plan. There, all calculations are carefully rechecked. This approval typically takes 2 months.

3.2.7. Once the land has been acquired, the layout prepared and approved and the General Plan surveyed and approved, the local authority applies for borrowing powers to borrow money to service the land. This procedure and associated problems have been discussed in detail in Section 2.2.5. above.

3.3. Recommendations

3.3.1. Identification of Land

3.3.1.1. Noting that the onus for initiating land acquisition procedures lies with local authorities and that there is a tendency for local authorities to wait until the last moment to initiate these procedures, it is recommended that local authorities be trained in the need for preparing medium term land use and service infrastructure expansion plans as a framework (albeit non-statutory) for identifying suitable land for future acquisition.

Such plans would assess existing land uses (including high density housing) and the adequacy of existing services (i.e. assess the absorptive capacity of the town); predict future growth rates of the town; identify the location and extent of land for expansion of each of the land uses (particularly housing); report on how services might be extended to these new parcels of land and the "order of" costs of extending services. Such plans would be prepared either by the DPP's Provincial Offices or by private planning consultants.

3.3.1.2. Noting that many local authorities are not familiar with the detailed procedures to be followed in land

acquisition, it is recommended that local authorities receive training in the issues of land identification, land banking and land acquisition procedures. Various fora might be suitable for such training, including Urban and Rural Councils Associations annual conferences, ZIPAM (Public Services Training Centre), AID project towns training programmes and specially formed urban management workshops.

3.3.2. Land Prices

3.3.2.1. Noting that land acquisitions are frequently delayed by disputes over the selling price of the land and that many local authorities and in particular the state's RVO do not update land values on a regular basis it is recommended that discussions be raised within the MPCH (RVO), the MLGRUD (USLO) and the MFEPD on the need to both charge market value prices for land sales (see Section 2.3.3.2.) and to expect to pay present market value prices when acquiring land.

3.3.3. Delays in the RVO

3.3.3.1. Noting that the valuation of properties for acquisition takes many months, it is recommended that a seperate, supplementary professional services vote be opened in USLO to pay for the services of private valuers. Valuations carried out by private valuers would be subject to checking by the RVO in much the same way as the Surveyor General currently approves the work of private land surveyors or the Director of Physical Planning recommends the approval of layouts prepared by municipal or private planners (in terms of Section 160 of the Urban Councils Act).

3.3.4. Treasury Funding

3.3.4.1. Noting that the MFEPD is reluctant to allocate funds for land banking, it is recommended that the concept of and need for medium-term, controlled land banking programmes be further explored with officials within the MFEPD. (This recommendation is the same as 2.3.2.2.

3.3.5. Preparation of Layouts

3.3.5.1. Noting that plan approval periods are sometimes delayed due to lack of adequate consultation between the local authority and the DPP and by lack of detail being forwarded by the local authority, it is recommended that the following procedures be adopted:

(i) In the case of layouts prepared by the Provincial Planning Offices for Section 44 approval:

(a) Provincial Planning Officer prepares draft layout

plan;

(b) Provincial Planning Officer submits draft plan to Head Office for comments;

(c) Provincial Planning Officer incorporates Head Office's comments and submits plan to local authority for comments or adoption;

(d) Provincial Planning Officer submits plan noting local authority's adoption to Head Office for approval.

(ii) In the case of layouts prepared by the local authority for Section 160 approval:

(a) Local authority prepares draft layout plan;

(b) Submits draft plan to PPO for technical comments;

(c) Incorporates PPO's comments and draws up covering implementation proposals;

(d) Draft plan and report submitted to Council for approval;

(e) Plan, report and PPO's comments submitted to MLGRUD and copied to DPP for approval.

3.3.6. Survey

3.3.6.1. Noting that much time is lost between the time from which a plan is approved by DPP to when a surveyor is commissioned, it is recommended that DPP submits copies of approved plans simultaneously to USLO and to the S.G's office. Thus the S.G. may immediately begin preparing the brief to commission a private surveyor and send the brief on as soon as USLO confirms that it has sufficient funds to pay for the survey.

3.3.6.2. Noting that plan anomolies cause considerable delays, it is recommended that S.G's office copies its brief to the surveyor to the relevant Provincial Planning Office (which prepared the plan) and that surveyors liase directly with PPO's when querying layout details. The onus is then on the PPO to appraise the DPP H.O. and USLO of any amendments made (reapprovals in terms of Section 44 by the HO would still have to be made for substantive amendments).

3.3.6.3. Noting that plan anomolies cause considerable delays and that these plan anomolies are often rooted in inadequate base-mapping, it is recommended that DPP attempt to fill its existing vacant post of Chief Technician (Survey) with an experienced, registered (if possible) land

surveyor who would be responsible for closely supervising the Departments' survey teams and for improving the base-mapping provided to the Town Planners.

3.3.6.4. Noting that DPP has been unable to fill its Chief Technician (Survey) post because of the low salary scales offered by the Public Service, **it is recommended that USAID offer to top up the post's salary to a competitive scale.**

4.0. BUILDING AND INFRASTRUCTURAL STANDARDS

4.1. Existing Conditions

When local authorities borrow funds for housing construction through the NHF they are constrained by national minimum standards with respect to the size of the building and plot and minimum levels of infrastructure.

These national minimum standards for units constructed for home-ownership are:-

- a four roomed core house plus ablution facilities of minimum plinth of 50m² which must be built by the beneficiary within 24 months of being allocated a stand (with a further 12 month grace period); the core house should be designed so as to be extendable to 7 rooms;
- the minimum permitted plinth for one room is 7m²;
- a minimum plot size of 300m²;
- road access to all plots;
- reticulated water and sewerage to all plots;
- the quality of building materials should be cement blocks or kiln-fired bricks for foundations; compressed earth ("terrablocks") are permitted for above foundation walls; steel door- and window- frames (although second-hand frames are permitted, wooden ones are not); asbestos roofing sheets.

For the purposes of this study, the consultant investigated the standards being implemented by Harare, Gweru and Mutare City Councils and Bindura and Gwanda Rural Councils and the actual costs of the infrastructure and costs to beneficiaries. The results of this investigation are summarised in the Table overleaf.

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TABLE 2 : BUILDING AND INFRASTRUCTURAL STANDARDS APPLIED BY FIVE COUNCILS

	HARARE	GWERU	MUTARE	KADOMA	GWANDA
EXISTING HSG. STOCK	73 008	[illegible]	[illegible]	[illegible]	1 193
HSG. WAITING LIST	57 000	12 000	12 000	3 200	1 124
STANDARDS UTILIZED					
Typical plot sizes:	300m2	455m2	300m2	300m2	
Min. house size:	4 room core	2 - 4 room core	4 room shell	4 room core	4 room core
Water:	INDIVIDUAL PLOT CONNECTIONS				
Sewerage:	WATER BORNE TO EVERY PLOT OR BEING UPGRADED TO SAME				
Roads:	All tarred	Bus routes tarred; rest gravel	Bus routes tarred; rest gravel	Main gravel; rest formed	Main gravel; rest formed
Electricity:	ELECTRIFYING ALL HOUSES - FUNDS PERMITTING			PUBLIC TOWER LIGHTS	
Materials permitted (de facto):	Terrablocks (compressed earth)	Terrablocks (compressed earth)	Wooden shacks	Cement/kiln fired bricks	
TYPICAL SERVICING COSTS (300m2 PLOT UNIT COST) ;					
Intrinsic land value:	@ Z$1,20/m2 Z$ 360	@ Z$0,40/m2 Z$ 120	@ Z$0,50/m2 Z$ 150	@ Z$0,29/m2 Z$ 87	@ Z$0,25/m2 Z$ 75
Survey:	Z$ 90	Z$ 90	Z$ 90	Z$ 90	Z$ 90
Roads and s.w.d.:	Z$1 458	n/a	Z$1 300	Z$ 785	}
Water reticulation:	Z$ 450	n/a	Z$ 590	Z$ 571	} Z$2 590
Sewerage:	Z$ 600	n/a	Z$1 055	Z$1 769	}
Water & sewer connectn:	Z$ 160	n/a			
Capitalised interest:	Z$ 157				
Total:	Z$3 275	n/a	Z$3 185	Z$2 252	Z$2 801
Electricity: (where indiv. connctd)	Z$1 500	Z$1 500	Z$1 500	Z$1 500	Z$1 500
TYPICAL MONTHLY CHARGES TO BENEFICIARIES					
Supplementary charges: (1 st? house)	} Z$6,78	Z$ 10,87	Z$ 12,69	Z$ 12,69	Z$ 5,52
Water:	} Z$3,45 +	+/- Z$8,05	+/- Z$10,55	Z$ 4,00	Z$0,50/m3
Sewerage:	} Z$5,43	Z$ 5,10	Z$ 4,90	Z$ 18	Z$ 4,14
Refuse collection:	} Z$2,55	Z$ 4,20	Z$ 3,05	Z$ 8,00	Z$ 2,21
Roads:	} [illegible]				

4.2. Discussion

4.2.1. Building Standards

All Councils visited by the consultant looked to the MPCNH to set the minimum building standard for houses. This is presently a four-roomed core house with a plinth of 49m² (designed so as to be extendable to 7 rooms with a 97m² plinth) with an internal toilet and shower room. The standard of finish is high, typically incorporating:-

- exterior and interior walls 115mm thick kiln-fired bricks or cement blocks to meet Central African Standards Association compressive strengths;
- endurite or trafford (asbestos) roofing sheets on 50mm x 150mm wooden purlins;
- pressed metal doorframes and window frames fitted with wooden doors and glass respectively;
- stainless steel sink in kitchen, wash hand basin in shower room, and ceramic pedestal w.c. fitting;
- 75mm concrete floor slab on a 75mm thick hardcore;
- electrical conducts fitted to feed lights and plugs;
- external finish with cemwash.

Using these standards and finishes, houses cost in the order of Z$700 - Z$250/m². (10) The cost of such units (including labour) is in the order of Z$10 000 to Z$14 000 depending on the centre and the sourcing of materials.

Figures 5, 6 and 7 overleaf are floor-plans for popular house types built in Harare, Gweru and Bindura.

A four-roomed core house is defended by local authorities and the MPCNH on the grounds that it caters for the need for seperate bedrooms for boy and girl children. However, this preference is compromised in reality: when one compares (for

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(10) In 1988 a four-roomed core house in Sunningdale, Harare cost an average Z$9 087 to construct; in Glen Nora, Harare it cost an average Z$8 870 to construct. Construction costs outside of Harare are generally higher than this due to transportation costs.

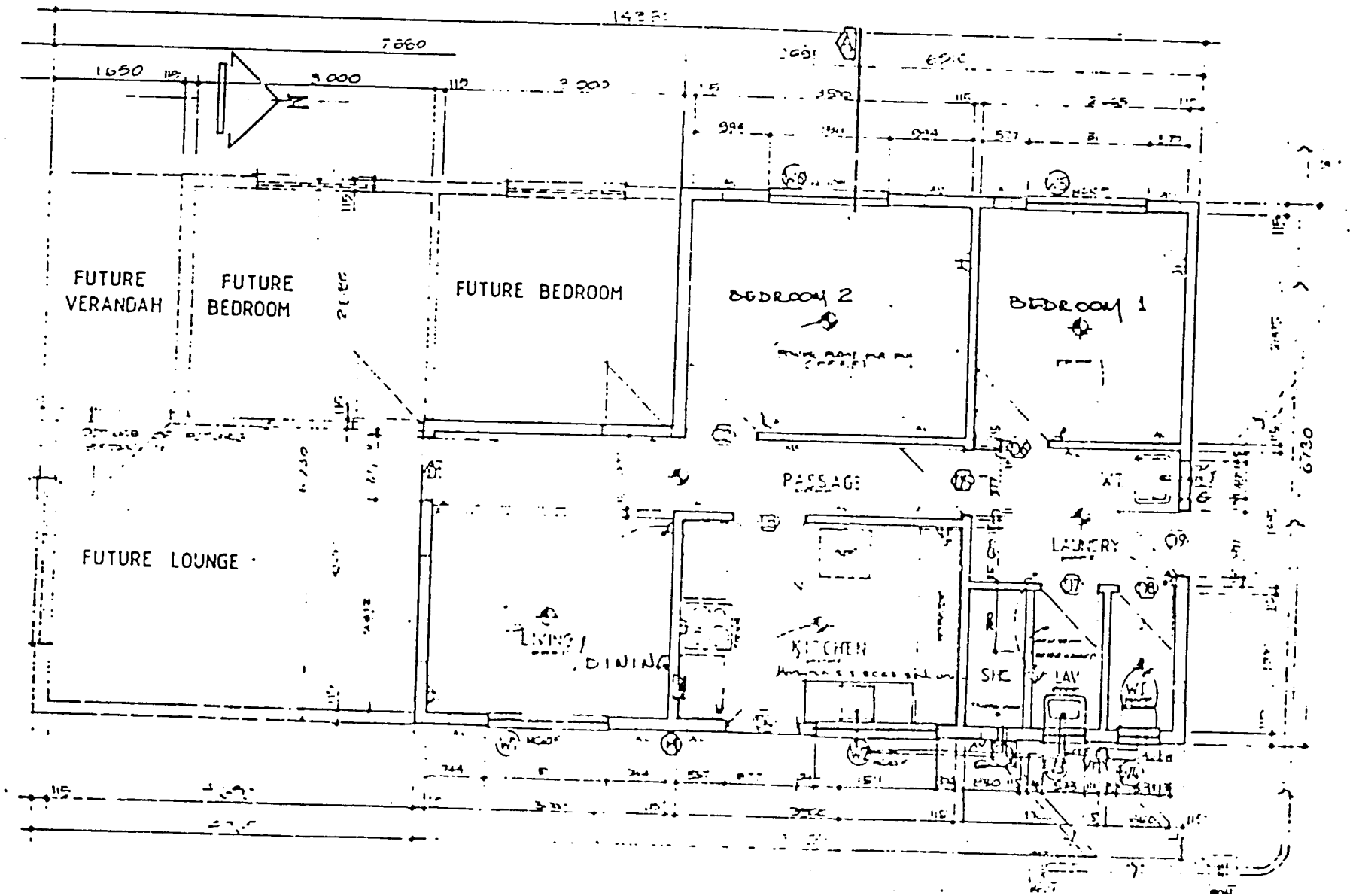


FIGURE 5 : FLOOR PLAN OF POPULAR HOUSE TYPE IN HARARE

FIGURE 7 : FLOOR PLAN OF POPULAR HOUSE TYPE IN BINDURA

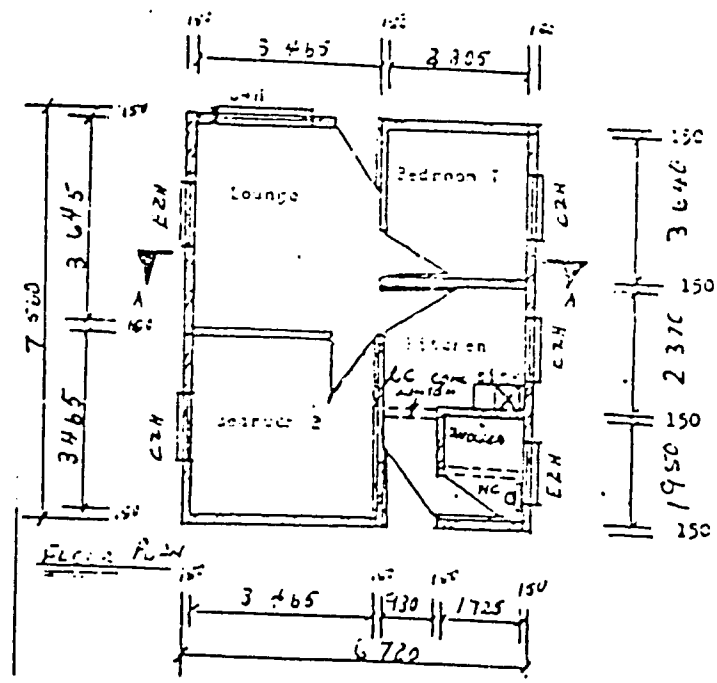
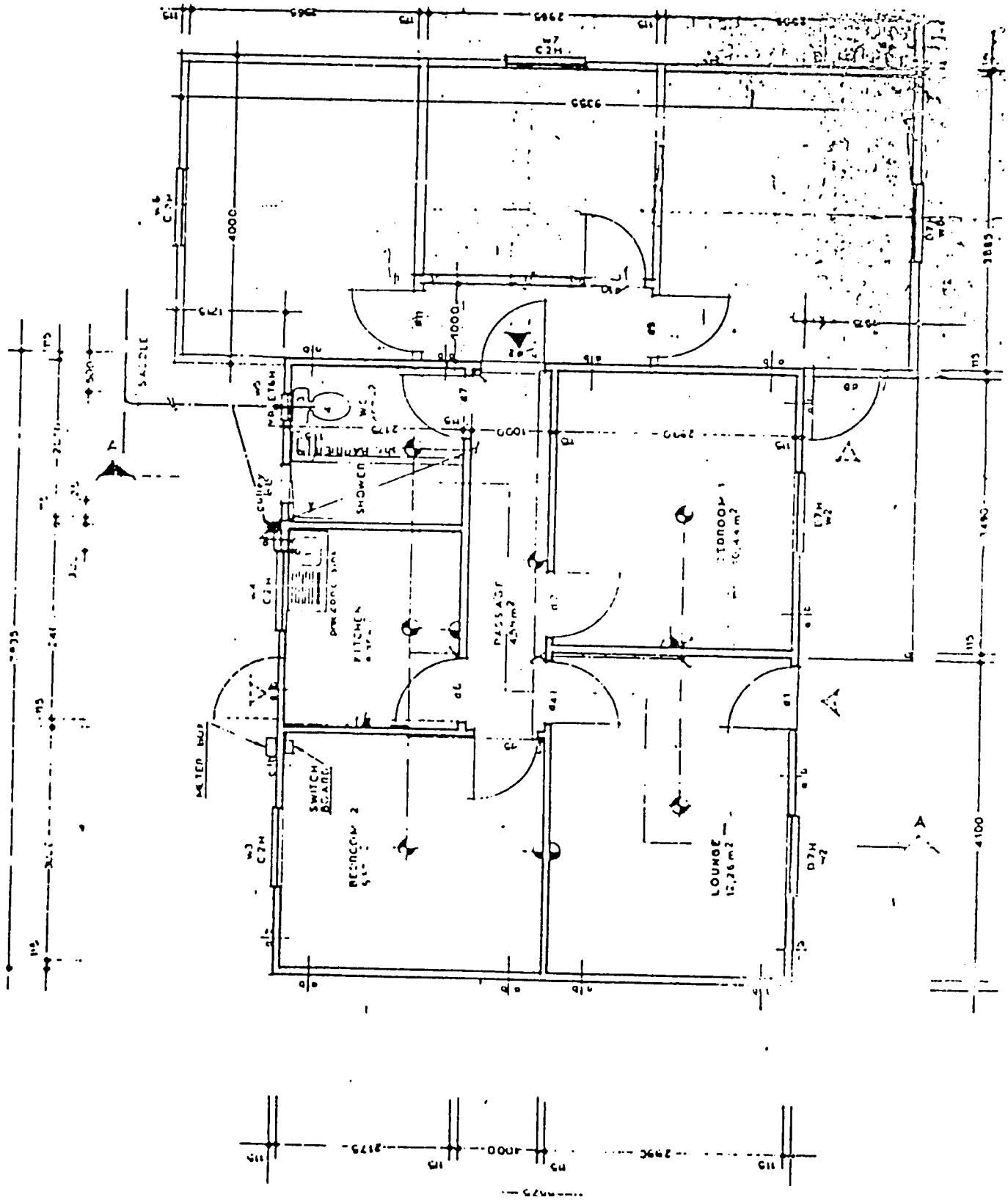


FIGURE 6 : FLOOR PLAN OF POPULAR HOUSE TYPE IN GWERU



example) the existing housing stock to the waiting list in the 5 centres visited it is apparent that the occupancy rate is nearly 2 households/d.u - effectively 2 rooms/household. Nonetheless, 4 roomed houses are the preferred alternative for family home-ownership schemes - in fact many housing co-operatives which have sprung into existence in the last 5 years offer their members 5 and even 6 roomed houses.

The MFCNH has however recently accepted certain changes to its 4 roomed core policy. Recognising the shelter needs of single people, small emerging/recently formed families, and elderly couples with no children, the Ministry has accepted that single rooms (with sanitation and cooking facilities within the room) may be built. The Ministry envisages that rows/blocks of approximately 8 single rooms (giving a plinth of 56m²) would be built on a 300m² plot.

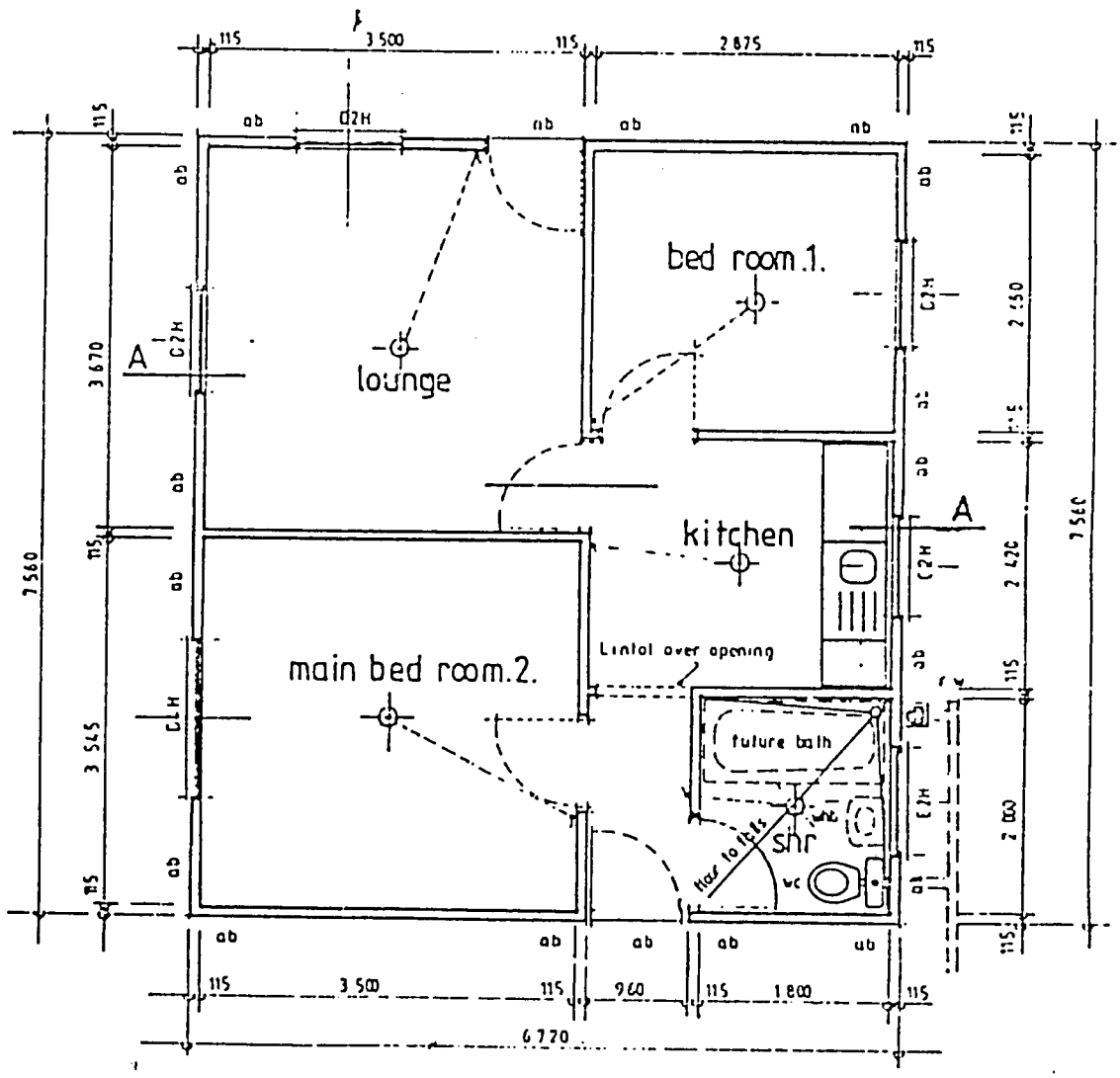
Furthermore, so as to cater for single parent households with small children, the Ministry will now accept the construction of rows of 2 roomed houses (with internal sanitation and cooking facilities). In both of the above cases the units are to be for rental purposes only although the possibilities of converting to individual title have not been ruled out for the future.

Recognising the prohibitive cost of existing minimum building standards, some local authorities too have begun to experiment with alternatives. For example the City of Mutare has calculated that the building costs of a 2 - roomed core to the finishes described above are equal to the costs of a more rudimentary finished 4 - roomed "shell" house. The Council is therefore undertaking the building of shell houses on an experiemental basis. The standard of finish and concept of shell-houses is based on the experiences of Bulawayo.

Figure 8 overleaf is a floor plan for a 4 - roomed shell house as is being constructed in the City of Mutare. The basic structure is of 115mm bricks with Trafford (asbestos) roofing sheets on 50 x 150mm timber purlins. No doorframes or window frames are fitted at the time of construction; only external doors - no internal ones - are provided; only a toilet pan is provided but no bath tub, basin or kitchen sink. No electrical conduits or fittings are provided and no guttering on the roof. No plastering or painting of internal or external walls is undertaken. The MFCNH views the shell houses in a positive light.

In a recent, pragmatic mood, the City of Mutare has agreed not to demolish hundreds of illegal wooden structures built in backyards of existing houses and housing some 10 000 people. The Council, recognising the acute accommodation shortage has resolved to permit these structures to be occupied until it has sufficient funds to construct

FIGURE 8 : FLOOR PLAN OF FOUR-ROOMED SHELL HOUSE IN MUTARE



alternative accommodation elsewhere.

The four roomed shell costs less than half of the four roomed core house. The City of Harare has also mooted the idea of building 4 roomed shell houses.

The City of Gweru has expressed interest in the concept of two roomed core houses as a means of reducing building costs. However the smaller Councils (Bindura and Gwanda) will only adopt lower standards if so instructed of a change in national the policy by the MPCNH.

Many local authorities are willing to accept Terrablocks (compressed earth) and sisal cement roofing sheets (as is the MPCNH). However, the Building Societies are not willing to accept terrablocks.

A recent survey carried out by the City of Harare in Glen Nora high density area found that once transfer to the plot had taken place, 51% of beneficiaries took 1 - 3 months to actually begin building. 80% then took an average of 10 months to complete 4 rooms and 4% took longer than 20 months. It would appear therefore that the majority of beneficiaries do manage to construct the necessary minimum four rooms within the time allowed.

However most local authorities do not anyway strictly enforce the time limit policy. They generally adopt the attitude that if a beneficiary household has made even a minor attempt to begin construction on the plot (by, for example, laying the slab)an extension of time to complete the four rooms will be given. Repossession of the plot is only enforced in cases where the household has abandoned the plot altogether.

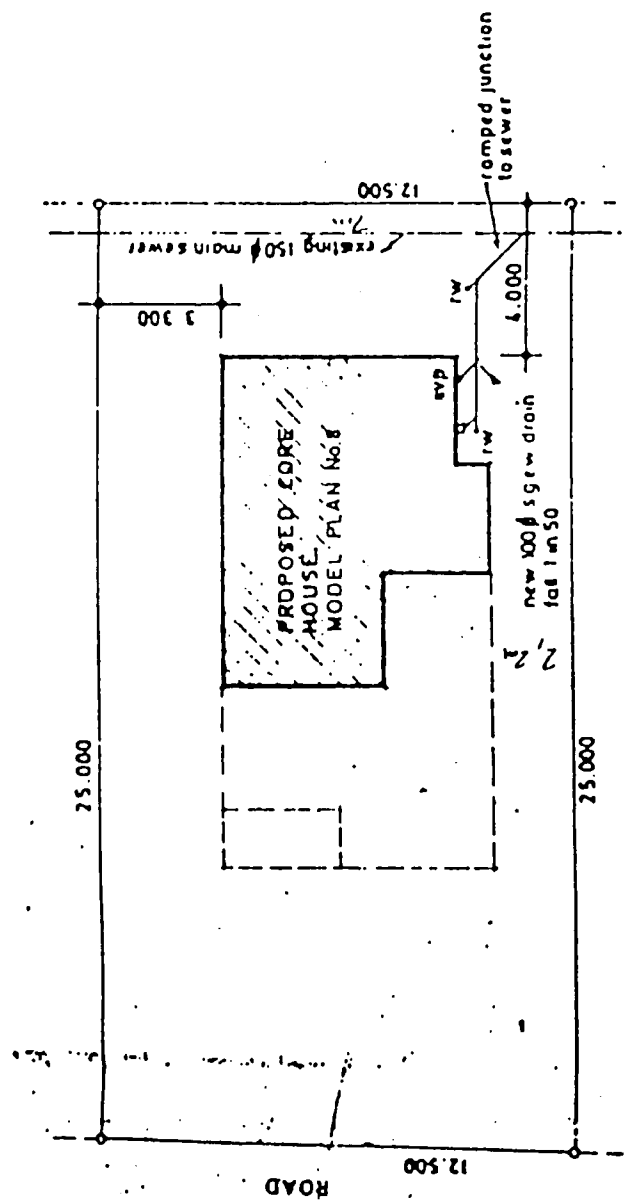
4.2.2. Plot Sizes

The minimum permitted plot size is 300m² and the MPCNH is not willing to change this policy at present. The plots were increased to this size from 200m² at independence in response to the criticisms that 200m² were too small and that the housing areas looked like rows of matchboxes.

Typically, plots are in fact 312,5m², being 12,5m wide by 25m deep. Figure 9 shows how a typical 4 roomed core house, 7m wide fits onto a stand and how it can be extended. Side boundaries of 2,2m and 3,3m on either side of the house are left. Reasons put forward justifying these side boundaries are:

a) so as to be able to drive a motor vehicle onto the plot;

FIGURE 9 : TYPICAL SITE PLAN FOR 300M² PLOT



b) for privacy, so that a person does not look directly into a neighbour's house;

c) to leave adequate room for the laying of infrastructure (eg water or sewer lines) should this ever become necessary.

The need to park a car on the plot is recognised.

As regards the question of privacy, there is no reason to believe that any more privacy is afforded tenants of houses 4,4 metres apart (ie using the typical side boundaries of 2,2 metres each) than, for example, two houses 2 metres apart (using 1 metre side boundaries).

As regards point c), the laying of future infrastructure, this appears to rarely be a problem. If the local authority were to maintain a 2 meter to 3 metre building line on one side only, any future servicing needs could still be met.

Zimbabwe is poised for rapid urban growth. In 1989 the population living in urban centres is 2 million. By the Year 2000 this will have doubled to 4 million. Given that land is finite and that there are numerous costs not immediately obvious which are associated with urban sprawl (costs of transportation, services and similar), there are strong reasons to consider smaller plot sizes.

By narrowing the frontages of the 312,5m² plot, it is possible to effect substantial servicing savings. For example:-

Plot Frontage	Side Bldg. Lines	Plot Size (X25mdeep)	Servicing Costs (Estimates)	Savings
12,5m	2,2m; 3,3m (1)	312,5m²	Z$3 208,88	0
11,3m	1m; 3,3m	282,5m²	Z$3 804,82	10%
10,3m	0m; 3,3m	257,5m²	Z$3 468,11	18%
9m	0m; 2m	225m²	Z$3 030,39	28%

Notes : (1) Sufficient to drive a car.

Of course the critical factor in the servicing costs is the plot <u>frontage</u> as opposed to the total plot size. Thus the overall plot size could be kept constant (at 300m²) by increasing the depth of the plot and this would not greatly affect servicing costs. 0 metre or 1 metre building lines would call for a blind wall (no openings) along the side of the house.

4.2.3. Infrastructure Standards

All local authorities and the MPCNH and MLGRUD interviewed by the consultant accept individual plot water connections and water-borne sewerage as a non-negotiable minimum standard. In areas where alternative waste disposal systems are in place (eg. the bucket system in Senga, Gweru or pit latrines in Mvurwi) the local authorities are upgrading to water-borne sewerage systems.

However, an area presenting policy flexibility is that of road standards. As can be seen from Table 2 on plot servicing costs in Section 4.1. above, roads and stormwater drains vary from 22% (Bindura) to 44% (Harare) (excluding electricity costs).

The (past) Ministry of Local Government and Housing in its document "Infrastructure Design Standards" (1982) set out guidelines on the road hierarchies to be employed in high density residential layout plans as follows:

District distributors (bus routes):		20m reservation
Local distributors (local traffic):		10,5m reservation
Stand access road	:	8m reservation.

There are many design features which, if carefully used, can minimise the lengths of road required to serve an estate - for example:

- double loading roads (residential plots on both sides);

- Use of P-loops which maximises double-loading of plots and leads to increases in overall densities (eg. using 300m² stands and P-loops it is possible to increase densities from 22 d-u/ha to 25du/ha;

- Use of pan handles which results in very low average frontage per plot; and so on.

The standard of surface of roads is also open to policy flexibility. The City of Harare maintains that the capital costs of double-seal surfacing all roads is economically advisable in the long term as it cuts down on continuing operation and maintenance costs. However vehicle ownership in the high density areas is extremely low and all other local authorities interviewed by the consultant believed that only bus routes need be tarred with other roads being gravel surfaced or (in the case of small centres) formed with no surfacing.

In Gweru's Nkoba 12 high density area, serviced by the local

FIGURE 10 : USE OF P-LOOP ROADS TO MAXIMISE DOUBLE-LOADING OF PLOTS

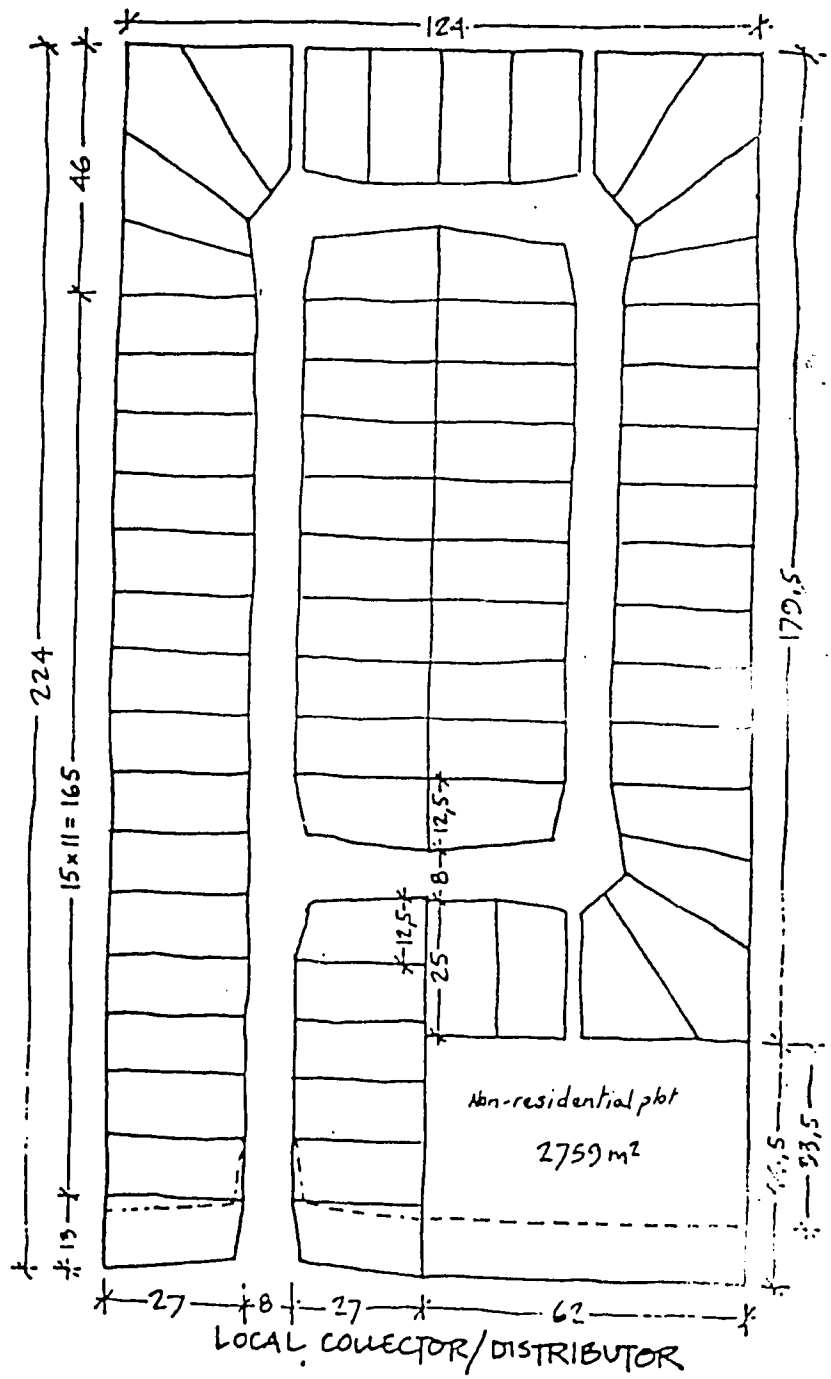
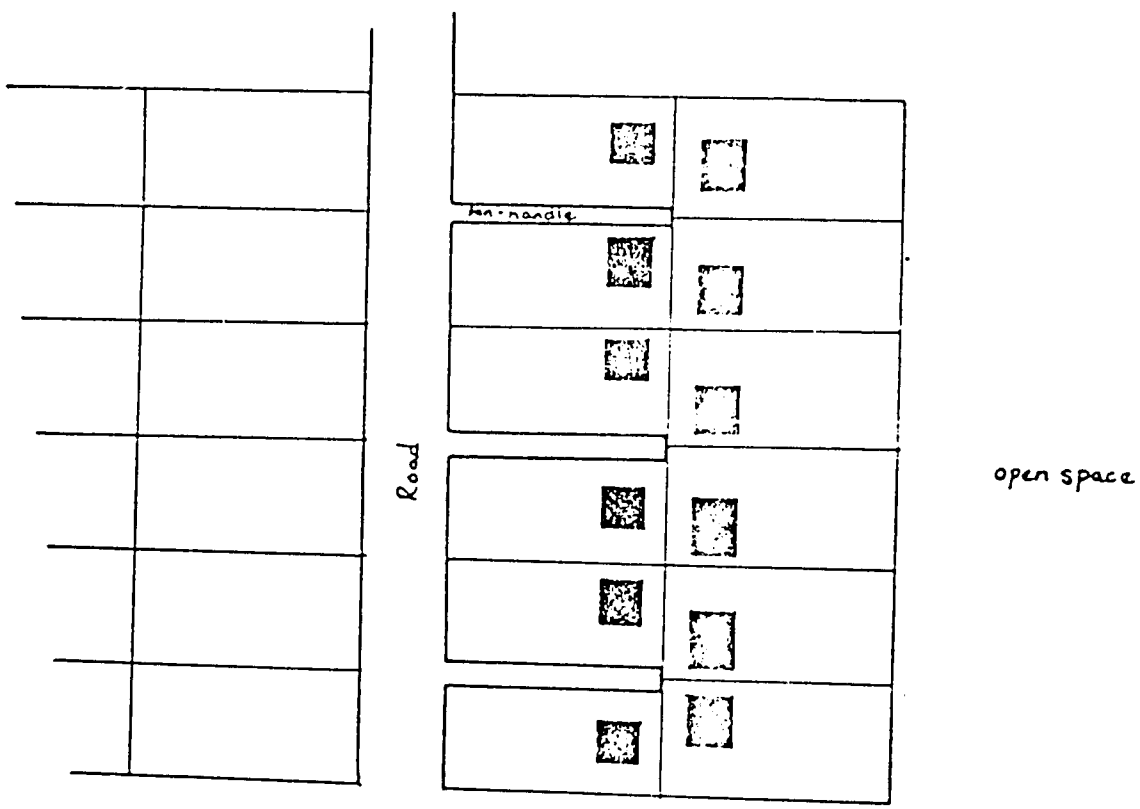


FIGURE 11 : USE OF PAN-HANDLE PLOTS TO MINIMISE ROAD FRONTAGES



authority and the MPCNH, all roads were tarred. However, because of the high costs of this development, the Council subsequently passed a resolution that only bus routes be tarred in the future.

The Department of Physical Planning is prepared to accept, on flat terrain, that access to individual plots need not be formed (let alone surfaced) roads, as long as access to the vicinity of groups of houses is provided so as to cater for emergency vehicles. Whilst the City Councils are not willing to accept this lower standard smaller local authorities are open to the idea. There are at least two cases of local authorities already adopting this standard in recently developed housing estates.

4.2.4. Recouping of Costs

This matter is dealt with under Section 6.

4.3. Recommendations

4.3.1. Building Standards

Noting that present national policy for home ownership is a 4 roomed core house to a high standard of finish but that the costs of such housing are becoming visibly unaffordable in many urban centres, it is recommended that the recent efforts by some local authorities to construct shell houses be carefully monitored with respect to building costs and acceptability to beneficiaries and that technical and institutional support be given to local authorities to develop the use and testing of local building matertials including Terrablocks and sisal-cement roofing sheets.

4.3.2.1. Plot sizes

Noting the increasing costs of urban sprawl, that land is finite, that there is no qualitative reason for plot frontages to measure 12,5m and that infrastructural costs are directly tied to frontages, it is recommended that a minimum plot frontage of 11m be adopted and that in time a minimum plot frontage of 10m be adopted.

4.3.3.1. Infrastructure Standards

Noting that roads and stormwater drains cost from 22 - 44% of total plot servicing costs, it is recommended that terrain permitting and depending on the level of private vehicle ownership, 20% of all plots in new housing layouts should have footpath access only. In such cases, provision should be made for gravel access roads to the vicinity of groups of houses. Furthermore, only bus routes should be tarred in new housing estates; all other roads to be gravel surfaced.

5. LAND UTILIZATION

5.1. Existing Conditions

In Section 4.3.2. above the issue of plot sizes was discussed and it was noted that Zimbabwe has fairly large minimum plot sizes of 300m2. Gross densities (10) are low in comparison with international standards. Gross densities in Harare's density suburbs are only 11,2 du/ha and in Chitungwiza they are only 17 du/ha whereas densities in, for example Indonesia's planned high density suburbs are approximately 32 du/ha; in the unplanned suburbs as high as 82 du/ha. (11)

Densities are low in Zimbabwe due to a number of factors:-

(a) the large plot sizes (see Section 4.2.2. above);

(b) the generous road hierarchies used in layouts (see Section 4.2.3. above); and

(c) the generous provisions made for community facilities.

Standards required or commonly endorsed by DPP in approving layouyts (in terms of Section 44 (state land) or Section 160 (municipalities)) are laid down in DPP's "Amended Planning Standards for High Density Low Income Housing Areas", 1980. They are as follows:

1 primary school/500 households	:	6 ha
2 secondary schools/5 primary schools	:	12 ha (each)
1 place of public assembly/1500 people	:	0,2 ha
1 community centre/10 000 people	:	0,2 ha
1 area administration office (as needed)	:	0,5 ha

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(10) Gross densities include the land required for residential plots; internal access and distributor roads; commercial, service industrial, recreational, health and educational facilities; car parking; and footpaths.

(11) The case of Indonesia is used as a topical example as senior planners in the DPP recently visited the country on a study tour.

1 ZRP Office/suboffice (as needed)	:	1 ha
1 primary care clinic/40 000 people	:	0,7 ha
Commercial facilities	:	0,3 ha/1000 people
Service (day-to-day needs) industrial	:	0,06 ha/1 000 people
Open space/recreational facilities	:	10% of total land
Beergarden	:	0,3 ha
Public parking	:	1 bay/3m shop frontage
		1 bay/20 hall seats
		1 bay/40m2 beer garden
Sewage treatment works	:	0,4 ha/1 000 people.

5.2. Discussion

5.2.1. Plot Sizes

Minimum plot sizes in Zimbabwe are large by international standards and contribute towards urban sprawl with associated increasing burdens on transportation systems, infrastructural services and agricultural land.

A survey of 80 site and service projects in 27 countries carried out by the World Bank showed that 41% of plots are less than 100m² and 62% are not bigger than 200m². However, plots in Africa do tend to be bigger than in Asia or Latin America.

As discussed in Section 4.3.2. above, efficiency in layout design (for example by increasing densities from 22 du/ha to 25 du/ha by the use of P-loops) and decreasing plot frontages can go some way towards minimising infrastructure

costs even when plots of around 300m² are maintained for political or social reasons.

By establishing a minimum plot size, the policy is fairly inflexible with respect to beneficiary needs and aspirations. For example it may be that a household is willing to forego private space (within the plot) for larger (and perhaps more useful) public open space.

This is particularly relevant in light of the MPCNH's recent acceptance of 1 - and 2 - roomed dwellings to cater for smaller families. The Ministry has suggested that blocks of 8 or so single rooms might be constructed on a 300m² plot. However this will potentially lead to monotonous development patterns and expensive servicing costs (water and sewer lines would have to run the entire length of the long row of rooms).

In practice it may be more visually pleasing, socially flexible and economic to cluster 12 - 20 single and double roomed units around a large semi-private open space (ie the equivalent of 2 X 300m² plots. Furthermore it may be socially and economically beneficial to build low-rise "garden flat" type accommodation with two storeys of rooms clustered around an open space and each room with an individual entrance.

These design principles are shown schematically in Figure 12.

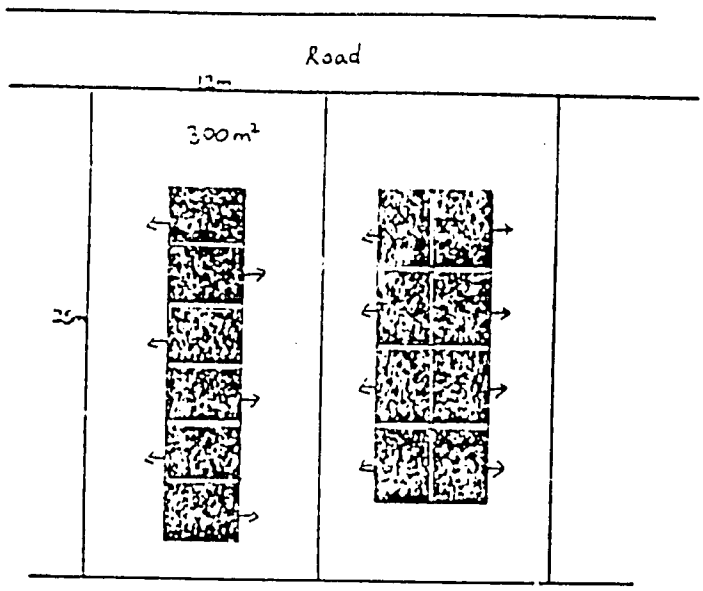
There is therefore need for the policy to address itself to gross densities of development rather than nett densities (plot sizes). For example, by calling for a maximum gross density of 28 d.u.s/ha rather than plot sizes of 300m², the onus would be placed on planners to seek user participation and tradeoffs in public or private spaces. It would also allow for the mixing of different plot sizes and housing types which would make for a less monotonous urban fabric than at present and be in line with government policy to encourage the integration of different socio-economic groups.

5.2.2. Efficiency of Layout Design and Standards

However even if, for the present, the 300m² plot size is maintained, an analysis of typical high density housing layouts in different centres around Zimbabwe shows that on average only 40% of the total estate areas are actually used for house plots.

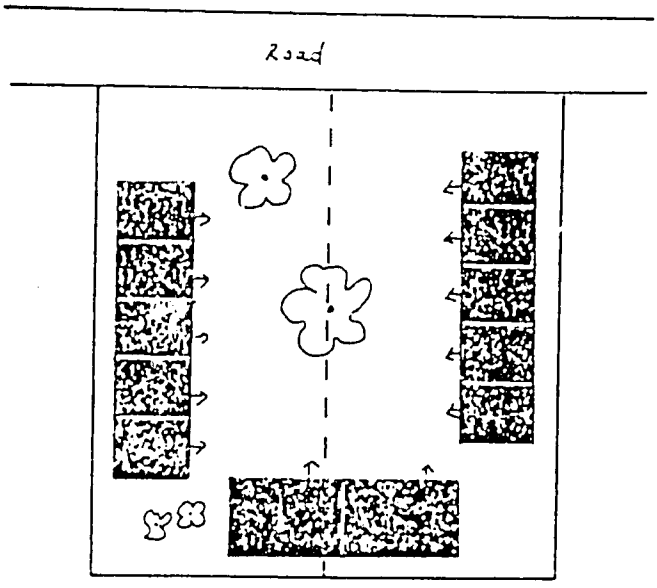
A case in point is the recent plan drawn up by the City of Gweru for its high density residential expansion in Mkoba

FIGURE 12 : SITE PLANS FOR LOCATING SINGLE AND DOUBLE ROOMS



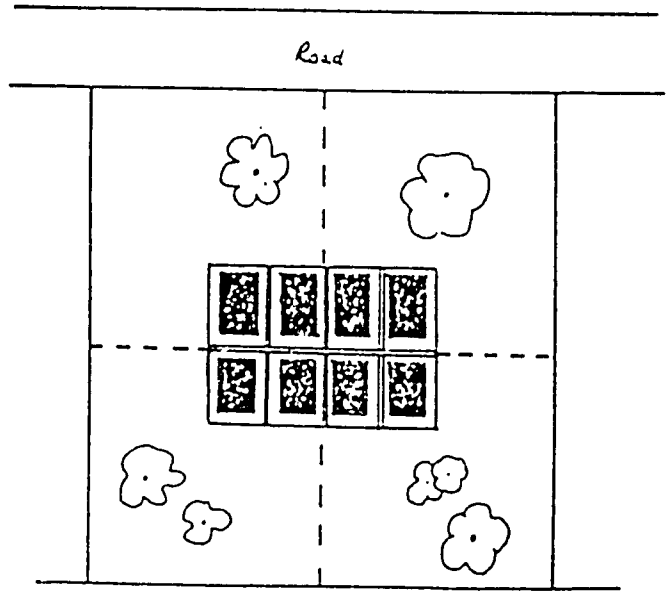
INDIVIDUAL PLOTS

1. "Blockhouse"; monotonous view from the road.
2. Space about rooms small and scattered - not very useful.



CLUSTER UNITS

1. Rooms clustered around semi-private open space.
2. Eliminates wasteful side spaces and organises garden space into usable area.
3. Affords residents some security and safe children's play area.



LOW RISE CLUSTER (FLATS)

1. Double storey; either single rooms or bedrooms on top floor, living/cooking/ablutions on ground floor.
2. Individual access to each unit.
3. Garden space can be shared or also screened for security and privacy.

18, 19 and 20. An analysis of the land use shows the following:-

Total area of estate:	160,08 ha
Area suitable for built development:	109,46 ha
Percentage of different land Uses:	
Residential	44,4%
Community facilities	38,5%
Roads	17,1%

Density of development 16 du/ha.

In Section 2.2.3. it was noted that the land prices charged in plot sales (by local authorities and central government alike) are very low in comparison to the true market value of land and that these prices are often not adjusted for three or four years at a time. Therefore it may well be that if plot charges were more reflective of current market values it might become economically feasible to build houses with deeper trench or even pile foundations on poor soils. Alternatively it might become economically feasible to build garden flats/terrace accommodation rather than the land hungry and monotonous single detached dwelling units and thus make better use of all available land in new housing estates. Almost by default, the state and local authorities are currently supporting urban sprawl.

A further analysis of the Mkoba (or many other) layouts shows that up to 56% of the total developable land is given over to community facilities and roads.

The need for reduced road hierarchies and road access to all stands has been discussed in Section 4.2.3. above.

As far as community facilities are concerned, there is a contradiction in objectives facing planners. On the one hand there is political and social pressure to provide an abundance of educational, health, recreational and administrative facilities. On the other hand, the land provisions for these uses is over-generous. Nor do these uses pay for land (part of the endowment), or services; nor do they pay rates to the local authority.

One of the most obviously over-provided for uses is that of schools: 6 ha for primary schools and 12 ha for secondary schools. These large plot sizes are requested by the Ministry of Education to support its national policy of education with production. Originally this policy was conceived of as attempting to provide sophisticated technical educational to scholars to complement their academic subjects. However since most schools do not have

finances to equip high tech workshops, machine rooms or similar, the policy has degenerated into promoting agriculture at schools - even those located in high density urban centres.

Admittedly only 1 - 2 ha need be on buildable soils and schools are often given poor land for their production activities. However schools should ideally be located centrally with respect to residential stands and these large plots have wasteful lengths of road, water and sewer pipes traversing their perimeters. One might draw a comparison with, for example, neighbouring Botswana where primary and secondary schools take up a mere 5% of developable land.

5.3. Recommendations

5.3.1. Densities

5.3.1.1. Noting that there are strong political and social pressures to have a minimum plot size of greater than 200m² but that substantial savings in infrastructure can be effected through reduced plot frontages, it is **recommended that a minimum plot frontage of 11 m (275m² plot size if plot depth is maintained at 25m) be adopted and that eventually a minimum plot frontage of 10m be adopted in estates where single-detached houses are to be developed.** These frontages should be constantly reviewed by the Ministries of PCNH and LGRUD and local authorities with a view to reducing them further over time to 8 metres. This reducued frontage would be particularly appropriate in the provision of cluster housing or garden flats.

5.3.1.2. Noting that the laying down of a minimum plot size leads to monotonous housing estates, and need not of itself cut down on urban sprawl or infrastructure costs, and noting the MPCNH's recent policy to permit single and double rooms for rental, it is recommended that discussions be undertaken with the MPCNH and MLRUD to promote the notion of a maximum gross density policy. A maximum gross density of 28 d.u./ha is considered an appropriate starting point for discussions.

5.3.2. Efficiency of Layout Design and Standards

5.3.2.1. Noting that infrastructure and transportation costs could be reduced by achieving efficient layout design, it is recommended that one of the criterion for layouts for high density residential areas being approved in terms of Section 44 (of the Regional, Town and Country Planning Act) or Section 160 (of the Urban Councils Act) is that gross densities of at least 22 du/ha be achieved.

5.3.2.2. Noting that the state and local authorities are supporting urban sprawl by their unreaslistically low plot sale charges, it is recommended that plot prices be set at

the current market value of the land plus a factor for future replacement costs.

5.3.2.3. Noting that alternative building designs and technologies (such as garden flats and deeper foundations) may be economically feasible if the true market value of land were taken into account when costing single detached dwelling units on 300m² plots, **it is recommended that MPCNH take the lead in designing and costing alternative building types for implementation by local authorities.**

5.3.2.4. Noting that approximately 40% of most layouts for high density residential areas are reserved for community facilities but that there is a need to provide a range of community facilities, **it is recommended that the Department of Physical Planning review its "Amended Planning Standards for High Density Low Income Housing Areas" of 1980 in the light of how efficiently existing large community facility plots are being utilised and in relation to standards adopted elsewhere in the region.**

6. CROSS SUBSIDIES

6.1. Existing Conditions

In Section 4.1. data was presented on the plot servicing charges incurred in 5 different local authorities and the monthly charges made to beneficiaries. It can be seen from the figures that the plot servicing costs do not have a direct relationship to the monthly charges. For example the capital cost of servicing a high density plot in Harare is approximately Z$3 285 and monthly charges are around Z$19. Yet the capital cost of servicing a plot in Bindura is Z$3 550 but the monthly charges are Z$49,69. (12)

. This is so because the capital costs of some services are recouped at different tariff levels by different local authorities. In line with MLGRUD policy, all urban local authorities recoup their costs in the following way:-

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(12) The monthly repayments in the case of Bindura are substantially higher than Harare because of recent major augmentation works to trunk sewers and maturation ponds and water mains. The monthly charges cover capital costs as well as operation and maintenance charges of these works spread over a much smaller beneficiary group of high density residents. By comparison, in Harare for example, capital costs of these works would be spread over all residents and land users in the city as a whole. To some extent therefore the low density and older high density areas are subsidising the newer high density housing estates. This subsidy, although not fully quantified, is thought to be in the order of Z$3million per annum.

(i) The capital costs of the house (which include the costs of the dwelling unit itself, road access and stormwater drain, the plot price and survey fee, water and sewerage connection fees and capitalised interest) are recovered direct from the individual beneficiary through a purchase agreement. The cost laid down in a purchase agreement can only be increased if there is a general rise in interest levels.

(ii) The capital costs of water and sewerage reticulation within the estate are recovered from tariffs charged across all high density suburbs, or, as in the case of Harare (from 1 January 1990) across the city as a whole. In Mutare only 80% of the costs are recouped directly; 20% are recouped by general tariff increases across the city as a whole.

(iii) Operation and maintenance costs (as well as administrative costs are recovered from fixed monthly supplementary charges (or, in the case of Harare, rates).

Increases in tariffs and supplementary charges in the high density areas must be approved by the Minister of LGRUD. (However, increases in rates in the low density areas can be adopted by the local authority itself after advertising the increases).

The exception to the above system of charges is the City of Harare which has fully adopted the "one - city" concept. As from 1 January 1990 all supplementary charges will be done away with and the water and sewerage capital costs and all operation and maintenance costs are to be recovered through a single city-wide rating system. Every residential stand and non-residential stand will be charged a basic rate of Z$6,78 plus the rateable value of improvements on the land where these exceed 80m² floor area. (13)

Other exceptions have been in the case of recent joint-venture schemes between the MPCNH and Harare, Bulawayo, Mutare and Gweru City Councils. These schemes couple the local authorities' contributions (surveyed land on an approved layout) with the MPCNH's resources (finances for servicing land and building the houses). Under joint-venture schemes the serviced plots with houses are sold on a cash basis with no long term amortisation of costs; local authorities do not borrown any money for the schemes and the MPCNH gets its money back as soon as the houses are sold.

Under joint-venture schemes, if a city wishes to offset

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(13) With the exception of Council constructed garden flats which will be charged a basic rate of Z$3,75.

certain costs over a longer period of time (eg Harare offsets capital costs of water and sewerage over the city as a whole over a number of years) the city must repay the MPCNH the full amount and bear this amortisation itself.

6.2. Discussion

6.2.1. One-City Concept

Donors have recommended that all capital (and O & M) costs of infrastructure be recouped directly from the beneficiary through the plot sale prices in new housing projects. This recommendation is made so that beneficiaries would pay in accordance with the size of their plot. It is also a relatively simple system to administer.

However, this policy is not popular with either MLGRUD or local authorities in Zimbabwe for the following reasons:-

(i) It effectively means that beneficiaries in new housing estates will pay more per month than those in older estates for the same level of infrastructure (because of inflationary price increases in infrastructure);

(ii) Interest on infrastructure loans becomes payable after 6 months of using the funds. Therefore a beneficiary would have to start paying monthly charges whether or not s/he had yet built a house and moved onto the plot and were using water and sewerage. (Although the same might be said of the beneficiary having to pay for survey fees and road access prior to moving onto the plot).

(iii) The total amount of rates charged in the low density suburbs plus tariffs in the high density suburbs is calculated as being more than the amount which would be recouped through direct user payments. In other words the low density and older high density suburbs are subsidising the new areas (to the benefit of city wide revenues).

The City of Harare is the only Council to date that has fully adopted a uniform rating system (to replace the tariffs) across the whole city. The setting of rates as a basic minimum plus rate on the size of property plus value of improvements will mean that the donors criterion that people are charged according to the size of their plots will be met. Most other Municipalities are slowly but surely increasing the tariffs in high density areas at a faster rate than those in the low density areas so as to narrow the gap between the areas and achieve unified rating systems within 5 years, without losing overall revenues.

6.2.2. Amalgamation of Rural District Councils

As long as separate accounts are kept for high and low density areas, the rates from the central business districts in urban centres are paid into the same account as the low density residential areas and the high density accounts are comparatively poorer. The smaller towns (with small CBDs) rely on revenues raised from the commercial farms. With amalgamation of Rural and District Councils the town Boards will be very under-represented on the amalgamated Councils and urban issues will likely receive low priority.

6.2.3. Tariff Increases

Prior to independence the high density areas were administered by appointed public administrators with no economic background. The housing areas had no political representation on the local councils. At the end of the financial year end, when the books did not balance, the administrators would often unilaterally increase the beer prices (paid into the housing account) and increase the supplementary charges. To counteract the obvious social and political displeasure with these increases, it became legislated that the Minister must approve increases in the tariffs and supplementary charges in the high density areas. (Prior to independence the Minister delegated this authority to a middle - manager, Assistant Secretary level).

In the case of low density areas, the locally elected Council had (and still has) the authority to advertise its intention to increase rates, hear any public objections, and then increase the rates without having to refer the matter to the Minister.

After independence the Minister took a firmer view that proper financial statements be kept for the high density housing areas and he now personally approves any tariff increases. As a result there are some delays in approving tariff increases which exacerbates the viability problems of Councils soaring Borrowing Powers. Today, some time after independence, the high density areas are well represented on the local authorities and the Minister's role as public guardian seems to have fallen away.

6.2.3. Private Developers

Private developers who service raw land do not currently enjoy the benefit of having their water and sewerage capital costs spread across area-wide tariffs. These costs have to be directly recouped from the beneficiaries through the plot sales.

However in a recent example, CABS has serviced raw land for 220 plots in Hatcliffe, Harare and has subsequently handed over the services and a loan (repayable over 11 years) to cover their capital costs to the City of Harare. In this way, the City will now recover the capital costs of the servicing from city-wide tariffs rather than from individual beneficiaries.

6.3. Recommendations

6.3.1. One-City Concept

6.3.1.1. Noting that all local authorities are moving toward a one-city concept for political reasons and as a means of maintaining revenues, it is recommended that the current system of recouping water and sewerage capital costs across the city as a whole be maintained and be extended to include servicing of raw land by private developers.

6.3.2. Amalgamation of Rural District Councils

6.3.2.1. Noting that the smaller towns will be very poorly represented on the amalgamated Rural District Councils and that as such urban issues and housing in particular will receive very low priority, it is recommended that this potential problem be raised for specific discussion with the MLGRUD and that an investigation of smaller towns be initiated with a view to compiling a list of those centres which would warrant forming their own seperate local authorities in their own right together with training of the amalgamated Councils in areas of urban development and housing policy and finance.

6.3.3. Tariff Increases

Noting that urban local authorities are empowered to approve rates increases by themselves but that they must gain Ministerial approval for increasing tariffs which in turn causes delays in approval of borrowing powers and is not in keeping with the one-city policy it is recommended that the need for Ministerial approval for increases in tariffs and supplementary charges be abolished.

7. SURVEYING

7.1. Existing Conditions

Zimbabwe is covered by an extremely comprehensive land cadastre system comprising:

(i) Information filed in the offices of the Registrar of Deeds which contains information on
- the unique name and locality of the property;

- its extent;
- the name of the owner and all former owners;
- the conditions of title attached to the property and any additional real rights enjoyed by the property or to which it is subject.

(ii) A survey diagram/general plan filed in the offices of the Surveyor General which gives a mathematical definition of the limits of the property in relation to its corner points which are defined by beacons and which in turn bear a fixed relationship to the national trigonometrical system. This definition can only be determined by a detailed field survey.

In terms of the Land Survey Act (Cap 147) only legally registered land surveyors may undertake title survey work. At present there are only 17 registered land surveyors (plus 2 retired) in the country of whom 11 are based in Harare.

7.2. Discussion

7.2.1. Alternatives to the Present Cadastre

The consultant briefly investigated the feasibility of other, less rigorous cadastre systems which might be used in high density housing areas so as to speed up survey work. For example, in Botswana some use has been made of air-marking stand boundaries and then flying aerial photographs as cadastral records. Similarly, satellite imagery has been used in Angola. In the past only block boundaries of high density areas were surveyed by registered land surveyors. Survey/engineering technicians then pegged individual plot boundaries.

Given the small plot sizes (and the recommendation of this report to reduce frontages still further) it is not considered that adequate air-marking would be any more expeditious an undertaking than the existing ground surveys which place steel pins in concrete beds. Similarly, the block boundary surveys carried out in the early 1980's have been abandoned because they led to problems in laying out of services (which follows survey). In many cases survey had to be redone after the services were in place.

The comprehensive system in place in Zimbabwe has been successful in so far as that there has never been an land dispute in the cadastre history of the country which has not eventually been successfully resolved in the courts.

7.2.2. Number of Land Surveyors

Although there are extremely few registered land surveyors in the country, the University of Zimbabwe will be producing

4 graduates at the end of 1989 and 12 in 1990.

The training of a surveyor consists of a four year academic course plus one year articles followed by a trial survey for registration purposes. The course requirements are on a par with most other professional training courses offered in the country. The course is not considered to be so onerous as to be prohibitive to prospective students.

However to be effective on the ground, each surveyor needs equipment and a vehicle to the cost of approximately US$100 000. USAID has recently made available a loan to import much needed equipment; the effects of this have yet to be felt.

7.2.3. Survey Delays

In spite of the positive conclusions reached in the above two points, the consultant found that surveyors are held responsible by local authorities for lengthy delays in the land delivery system. On the whole, the consultant reached the following conclusions:

- Despite the overall shortage of surveyors, the surveyors are able to respond fairly rapidly to requests for surveys and can survey 100 stands per 2 weeks on relatively sparsely vegetated sites.

- Delays are often caused prior to the work being actually commissioned of a surveyor. An obvious example of this is the time it takes for a surveyor to be commissioned on state land. This is discussed in detail in Section 3.2.6 above. It takes at least 6 weeks once a layout plan has been approved by the DPP to be sent through USLO to the Surveyor General's office and thence on to a surveyor.

- Further delays are caused by anomolies in approved plans which have to be returned to the planners for amendments before the survey work can be finalised. (This point is also discussed in detail in Section 3.2.6. above.)

7.3. Recommendations

7.3.1. Noting that Zimbabwe has a history of never having had an unresolved land dispute, that less rigorous cadastre methods of establishing stand boundaries are not possible given the small stand frontage dimensions and the need for accuracy when laying out services, and that the University of Zimbabwe is training an increasing number of land surveyors per annum, **it is recommended that the present delays caused by the need for cadastral survey be weathered.**

7.3.2. Noting that the survey profession is poorly equipped which exacerbates its present problems of meeting demand, it is recommended that USAID continue its support to the profession by way of short-term loan financing for the importation of equipment and vehicles.

Annex A. Terms of Reference

Land Delivery for Low Cost Housing in Zimbabwe

1 Background

USAID is exploring the possibility of a new loan with the Government of Zimbabwe (GOZ) in the housing and urbanization sector. One area of interest is the land delivery system. There are certain delays and bottlenecks which impede the development of low cost shelter. This study hopes to identify these bottlenecks and suggest possible solutions.

The system by which land is acquired, subdivided and serviced for low income or high density housing works relatively well in Zimbabwe. Furthermore, the cost of serviced land is relatively affordable. There are several concerns however, which may require action in the near future in order to continue to keep solutions affordable to both the public sector and the beneficiaries. In addition, there are bottlenecks in the administration of the land delivery system which result in higher costs.

11 Scope of Work

A. Phase 1

1. The land delivery System

There are several different agencies involved in the provision of land for high density shelter. In addition, there are different requirements for public and private sector developers.

1.1 Identify the various agencies and their roles in the provision of land.

1.2 Identify possible constraints and solutions related to each of these agencies.

1.3 Highlight differences between the requirements for public and private developers of high density shelter.

2. Building Standards

Presently building costs are rising more rapidly than incomes in Zimbabwe. This means that there will be an increasing need for solutions that are lower cost, in real terms, than those being offered today. The existing strategy for developing low cost shelter assumes that the beneficiaries want and deserve certain minimum standards such as paved roads, large plots, etc. However, it is possible that the beneficiaries' desires may differ from existing standards and/or overall costs can be reduced.

2.1 Describe and compare the actual standards utilized by selected local authorities.

2.2 Determine the actual cost of infrastructure, and the cost to the beneficiary of alternative plot sizes, in three Urban and two Rural Councils.

2.3 Examine the arguments used by the MPCNH/MLGRUD and

local authorities for the retention of present standard, particularly in terms of development and maintenance costs.

3. The Cross Subsidy

Currently there is a cross subsidy between upper and lower income groups. On-site water and sewerage reticulation, i.e., water and sewerage pipework, when developed by the local Authorities in high density areas, is not paid for by the occupants, but is recovered through the utility tariffs. On the other hand, if a private developer wishes to develop high density housing, he must charge the full cost to the purchaser. In this connection the consultant should:

3.1 Determine whether all Local Authorities charge on-site reticulation of water and sewerage to the utilities, or whether some charge the individual standholder.

3.2 Determine the attitude of MFCNH/MLGRUD and local authorities to changing the current system by:

3.3.1 Charging the beneficiaries in low and high density housing schemes alike for the cost of on-site services.

3.3.2 Charging the reticulation in privately developed high density housing schemes (which would include cooperatives, employer assisted schemes etc) to the utility funds, just in the same way as is now done for publicly finances projects or, vice versa, charging beneficiaries in LA projects on the same base as those in private projects or vice versa, charging beneficiaries in LA projects on the same base as those in private projects.

4. Land Utilization

Land utilization for low income housing is very considerable due to high land use standards for plots, road access, and community facilities. As a result, low cost subdivisions are being forced further and further from town centres and the journey to work for low income groups has become very long. This has been highlighted by the current crisis in the public transport sector. Furthermore, valuable agricultural property is being used for shelter and some local authorities are running out of land.

4.1 Examine current land use, and compare it with acceptable solutions for plot sizes which may be suggested by potential beneficiaries in Part 1 of the study, together with internationally accepted land use standards for community facilities, where these are lower than those in use in Zimbabwe.

4.2 Determine the extent to which such savings in land use will reduce the area of land urbanized, journeys to work, the long term costs of urbanization etc.

5. Land Acquisition

In cases where local authorities and private developers have to acquire land, there have been considerable delays due to the lack of planners, surveyors, etc. Even the procurement of State Land has been delayed.

5.1 Outline the procedures for land acquisition, and recommend any measures that might expedite it.
5.2 Explain the delays currently facing LAs who acquire State Land through the Urban State Land Office, and recommend measures to reduce these delays.

6. Surveying

The lack of trained surveyors and outdated equipment have effected the delivery of land. Nonetheless, there are other delays in the surveying system which could be resolved relatively easily.

6.1 Does the system by which cadastral survey of high density housing plots is commessioned work smoothly?
6.2 Are there any administrative measures that can be adopted to make it work better?

B. Phase II

If, on analysis and discussion of the report on the above issues, it appears that further evidence may be required regarding current plot utilization and the preferences of the public, the contractor shall undertake a survey of about 120 households of which 60 should be in Harare, and 30 each in two smaller towns to be agreed, to determine the following:

1. Their preferred options in terms of services required, and plot size, and relate these to different levels of affordability.
2. The manner in which beneficiaries put the land within their plots to use, and whether they have plans for the future(e.g. extending their house, subdivioing etc)

Finally, determine the extent to which current solutions match the priorities of beneficiaries.

Annex B: List of Persons Consulted

Ministry of Public Construction and National Housing

Mr. M.A. Ingram	:	Deputy Secretary
Mr. G. Madzonga	:	Under Sec. (Strategic Planning)
Mr. Mbinda	:	Under Sec. (Hsg.Policies)
Mr. Ahmed	:	Dep. Chief Architect (Housing)
Ms. Zinyanga	:	Asst. Sec. (Strategic Planning)
Mr. Baker	:	Regional Valuation Office

Ministry of Local Government, Rural and Urban Development

Mr. G. Katito	:	Under Secretary (Urban Councils
Mr. Chihambakwe	:	Under Secretary (Rural Councils)
Mr. V. Chitando	:	Under Secretary (Urban State Lands Office)
Mr. P.I. Mbiriri	:	Deputy Director (Urban). Dept. of Physical Planning.

City of Harare.

Mr. J.V.Cinamon	:	Deputy City Valuer
Mr. Mkudu	:	City Valuations Offices
Ms. Fologwe	:	Dept. of Housing and Community Services

City of Gweru

Mr. G.G. Nemachena	:	Town Clerk
Mr. D. Matawu	:	Deputy Town Clerk
Mr. M. Kasunzuma	:	Director of Engineering Services (Acting)
Mr. G. Jonga	:	Deputy Director of Engineering Services, Town Planning and Development Control
Ms. Gwisai	:	Assistant City Treasurer
Mr. Z. Chakanya	:	Deputy Director Housing and Community Services (Acting)
Mr. T.N. Tapela	:	Town Planning Officer
Mr. M. Makore	:	Estates and Valuation Officer

City of Mutare

Mr. Matamisa	:	Town Clerk
Mr. Ncube	:	Deputy Town Clerk
Mr. Chitepo	:	City Treasurer

Mr...	:	City Engineer
Mr. H. Maguwaza	:	Town Planning Officer
Mr. Matimba	:	Director, Housing and Community Services

Gwanda Rural Council

Mr. Mlilo	:	Secretary
Mr...	:	Township Superintendent
Mr...	:	Accountant

Bindura Rural Council

Mr. Makoni	:	Secretary
Mr...	:	Accountant

Other Experts

Mr. S. Reeler of	:	President, Surveyors Council Zimbabwe
Mr. M. Beresford	:	Marketing Executive (Housing Projects)Central African Building Society
Mr. D. Frost	:	Old Mutual Properties, President National Property Owners Association
Mr. E. Mhoya	:	Personal Assistant to C.E.O., Mashonaland Holdings.

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