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In conjunction with

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

LAND DELIVERY FOR LOW COST HOUSING IN ZIMBABWE
EXECUTIVE SUMMARY AND DETAILED RECOMENDATIONS
(December 1989)

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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
PPD	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

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 Executive Summary refers to a Report which 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 1969

EXECUTIVE SUMMARY

1. INTRODUCTION

Zimbabwe is currently facing a national housing shortage. Various estimates have concluded that the demand for urban housing units during the period 1986 - 2000 is between 270 000 units to 167 000 units.

A major constraint currently facing housing delivery is the inadequate provision of surveyed and serviced land as a result of a number of bottlenecks in the administration of the land delivery system. These bottlenecks not only reduce the rate at which serviced land becomes available for development by households but also results in higher eventual costs of high density (low income) housing.

2. THE LAND DELIVERY SYSTEM

At present land for high density housing in urban areas is acquired and serviced primarily by two means:-

(a) The 11 Municipalities of cities and large towns have statutory powers to acquire the necessary land and service it using revenues from land sales or with loans raised from Central Government.

Municipalities may also borrow from Building Societies to service land provided this is approved by the Ministry of Local Government, Rural and Urban Development. However the Ministry views borrowing from this source as a last resort because of higher (than Central Government sources) interest rates and applications take a long time for vetting and approval.

(b) In the case of 57 smaller urban areas, land is acquired by the Urban State Land Office in the Ministry of Local Government, Rural and Urban Development using Central Treasury funds which are later recovered through plot sales to individuals. Servicing is then typically carried out by the local authority using funds from the Central Government General Loan Fund. The actual amounts of money granted by Treasury for land acquisition vary from year to year depending on the state of the national economy and on the degree of urgency for which the land is required. The Ministry of Finance, Economic Planning and Development does not support land banking. Carefully administered land banking (i.e. advance land acquisition) programmes could be a positive policy instrument in keeping land prices down as well as allowing the acquiring authority a degree of control over what is developed, where and when.

The Report recommends that the concept of and need for

medium-term, controlled land banking programmes be further explored with the Ministry of Finance, Economic Planning and Development and that local authorities be exposed to this.

The availability of raw land for urban expansion and in particular for high density residential development generally appears not to be a major inhibiting factor to the land delivery procedures. The policy of willing buyer/willing seller seems to be working smoothly and there are adequate legal statutes (in the Urban Councils Act and the Land Acquisition Act) for the responsible authorities to compulsorily purchase land for urban expansion if necessary.

Nonetheless there seems to be no examples of local authorities having both clear forward planning programmes for high density housing as well as adequate land reserves to meet medium term demands.

On the one hand this is due to the fact that municipalities inherited large commonages from the state and these reserves of land have only recently been depleted. Furthermore there has been a doubling of growth rates of most towns in the post-independence (post - 1960) period. Thus many local authorities have only realised their need for land acquisition at the eleventh hour. This results in *ad hoc* expansion of towns with frequently unnecessarily costly infrastructural growth.

On the other hand, local authorities and the state are charging very low prices for land based on outdated market values. Large bulk users of land (particularly officials) are granted land for free. As a result land is seen by local authorities and Central Treasury as a cheap commodity that does not pay for itself. Therefore once again land acquisition is given a low priority which leads to piecemeal forward planning, unnecessarily high infrastructural development costs and uncertain future financing of land acquisitions.

The Report recommends that plot sales prices be increased to present day market values plus a replacement (future cost) value. Local authorities should be tasked with assessing the likely impact of this on beneficiaries. The Report further recommends that the State should charge land prices at the same unit cost/m² for the first basic 300m² but that a sliding scale be introduced whereby higher prices/m² be charged on larger plots (i.e. a reversal of the present policy which favours larger stands).

It was noted above that the Ministry of Local Government, Rural and Urban Development is reticent in approving applications by local authorities to borrow from Building Societies to service land. 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 higher interest rates (12% p.a. compared to Government's 9,75% p.a.) would still be less than the capital costs of infrastructure at future, higher costs when Government funds eventually become available.

The Report recommends that the impact on beneficiaries of higher interest rates be carefully monitored in recent experiences of local authorities servicing land with Building Society loans and that the Ministry of Local Government, Rural and Urban Development consider reviewing its present reluctance to approve borrowing power applications from this source.

The Report further recommends that the present legal restrictions limiting the role of Building Societies in servicing raw land should be investigated with a view to expanding the role of Building Societies.

The present procedures by which local authorities apply to borrow from the General Loan Fund in the Ministry of Local Government, Rural and Urban Development and the National Housing Fund in the Ministry of Public Construction and National Housing are seriously in need of revision.

There is inadequate liaison between the two Ministries prior to individual Ministry bids being made to the Ministry of Finance, Economic Planning and Development. Consequently there is the time consuming exercise of trying to marry the two votes after allocations have been made by Treasury. Local authorities then face the threat of having to send unspent funds back to Treasury at the end of the financial year.

An additional source of delay in the draw down of funds from the National Housing Fund is that the Minister of Local Government Rural and Urban Development does not delegate his powers to approve applications by local authorities for borrowing powers. The Report recommends that applications for £200 000 or less be approved at Deputy Secretary level in the Ministry with only the larger applications being referred to the Minister's personal attention.

Figure 1 overleaf recommends amendments to the current procedures showing these two changes.

density residential areas alike, in keeping with the con-
city concept.

3. LAND ACQUISITION

The onus is on local authorities 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 they do not give due recognition to the lengthy lead times involved. The lead times involved in acquiring, surveying and servicing land vary from as little as one to one and a half years by private developers to two years by Municipalities and three years by the State. Furthermore local authorities are not very au fait with the procedures to be followed for land acquisition.

The Report recommends that local authorities be trained in the need for preparing medium term land use and service infrastructure expansion plans as a framework for identifying suitable land for future acquisition. It also recommends that they receive training in land identification, land banking acquisition procedures.

Amongst the most frequent bottlenecks occurring in the land acquisition/servicing procedures are:-

- land valuations being undertaken by the Regional Valuation Office (used as the basis of the purchase price offered by the State as buyer);
- Ministry of Finance, Economic Planning and Development waiting until a centre is critically short of land before allocating funds for land purchase;
- lack of adequate consultation between local authorities and the Department of Physical Planning and lack of detail being forwarded by local authorities when submitting plans to the Department of Physical Planning for approval;
- lengthy time delays between a plan being approved by the Department of Physical Planning and a surveyor actually being commissioned to undertake the survey of the plan;
- anomalies between approved plans and actual detail on the ground which hinders survey work.

In response to these bottlenecks, the Report recommends that:-

- (i) a separate, supplementary professional services vote to

opened in the Urban State Land Office to pay for the services of private valuers and that the Regional Valuation Office assume a "watchdog" role in much the same way as the Surveyor General currently approves the work of private land surveyors or the Director of Physical Planning approves the plans prepared by Municipalities;

(ii) discussions be opened with Ministry of Finance, Economic Planning and Development on the concept of and need for medium-term, controlled land banking programmes;

(iii) consultations between local authorities and the Department of Physical Planning during the plan preparation period be improved (the Report recommends detailed steps on this);

(iv) Department of Physical Planning submit copies of approved plans simultaneously to Urban State Land Office and the Surveyor General's office so that the latter may prepare the brief to commission a private land surveyor whilst awaiting confirmation from Urban State Land Office that the necessary funds are available;

(v) surveyors liaise directly with Provincial Planning Officers when querying layout details, (instead of the current practice of raising queries through the S.G., U.S.L.O, and then D.P.P. Head Office);

(vi) Department of Physical Planning (with USAID salary adjustment assistance) fill its existing vacant post of Chief Technician (Survey) with an experienced, registered land surveyor who would be responsible for improving the accuracy of the base-mapping provided to the Town Planners.

4. BUILDING AND INFRASTRUCTURAL STANDARDS

When local authorities borrow funds for housing construction through the NHF they are constrained by national minimum standards with respect to the sizes of the building and plot and to minimum levels of infrastructure. In summary, these national minimum standards are a four roomed core house plus ablution facilities of minimum plinth of 50m²; a minimum plot size of 300m²; individual road access to all plots and reticulated water and sewerage to all plots. The four roomed core house should be completed within a period of 24 months (with a further 12 month grace period being granted if necessary).

The Ministry of Public Construction and National Housing has however recently approved the construction of single and double rooms (with internal sanitation and cooking facilities) for rental purposes to cater for the needs of small and single-person headed households.

Recognising the prohibitive cost of the national building standards, some local authorities have begun to experiment with alternatives; a recently developed alternative being the four-roomed "shell" house with much reduced standard of finish (approximately Z\$125/m²). The Report recommends that the experiences of local authorities developing these shell-houses be carefully monitored with respect to building costs and acceptability of beneficiaries and that technical and institutional support be given to local authorities to develop the use and testing of local building materials.

By the year 2000, Zimbabwe's urban centres will have doubled in population from the present 2 million to 4 million people. There are direct costs to be borne as a consequence of urban sprawl, including longer home to work journeys and therefore more costly transport systems, continuous extensions to primary infrastructure services and similar. There are therefore strong reasons to consider higher densities of development than at present or at least, reduced plot frontages. For example by reducing plot frontages from the present minimum 12,5m to 10,3m (i.e. maintaining one 3,3m side boundary but having a 0 building line on the second side boundary) it would be possible to reduce plot servicing costs by 18%.

The Report therefore recommends that a minimum plot frontage of 11m be adopted and that in time a minimum plot frontage of 10m be adopted. The topic of housing densities and alternative cluster arrangements are taken up further in Section 5.

Roads and stormwater drains account for between 22% - 44% of plot servicing costs (excluding electricity). This is due to two main factors:

- a) expensive layout designs whereby the maximum number of plots fronting onto roads is not achieved;
- b) high standards of surfacing. (For example in Harare and Gweru's Mkoba 12, all roads are double - seal surfaced).

The Report therefore calls for maximising road frontages in layouts by use of design features such as P-loop roads and panhandles. It further recommends that up to 20% of all plots in new housing layouts should have footpath accesses only (subject to terrain constraints) and that gravel access roads should be provided to the vicinity of groups of houses. It recommends that only bus routes should be tarred in new housing estates with all other roads being gravel surfaced.

5. LAND UTILIZATION

Gross densities in Zimbabwe's residential areas are extremely low in comparison to international densities. This

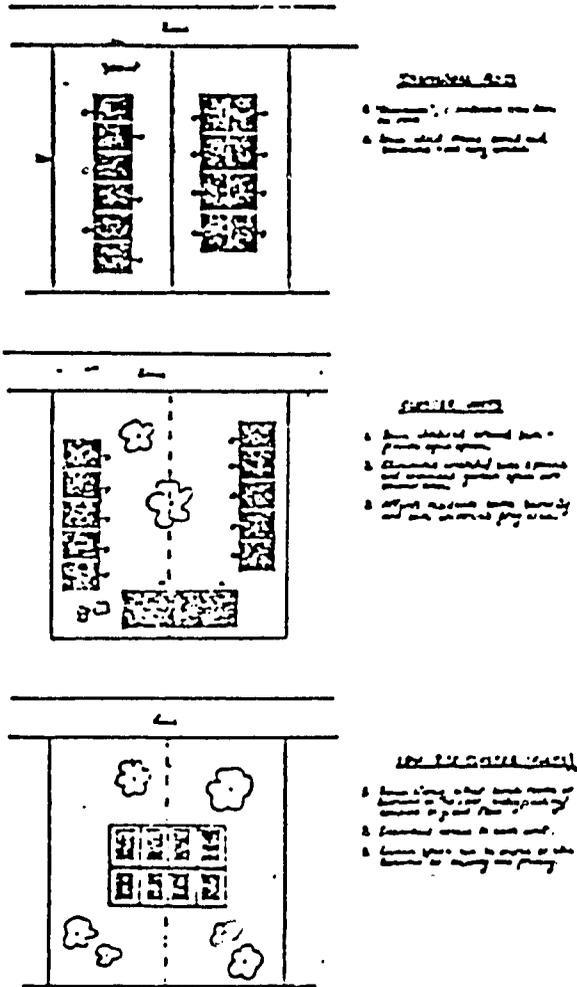
is not only because of the large plot sizes and generous road provisions but also because of the large percentages of land set aside for the provision of community facilities.

Whilst adequate provision of community facilities is a prerequisite for an integrated and adequate housing environment, in the Zimbabwean case, on average only 40% of high density housing estates areas are actually used for residential plots. One of the most obviously over-provided for uses is that of schools: 6ha for primary schools and 12ha for secondary schools. The Report calls for the Department of Physical Planning to review its laid down planning standards in relation to the standards being used elsewhere in the region.

The Report further recommends that in future, one of the criterion for layouts for high density residential areas being approved (in terms of the necessary statutory requirements) should be that gross densities of at least 22du/ha be achieved.

Further consideration needs to be made of the national policy which sets down minimum plot sizes. Such a policy is fairly inflexible with respect to beneficiary needs and aspirations. For example, a household may be willing to forego private space within the plot for larger, and perhaps more useful, public open space. The recent policy change by the Ministry of Public Construction and National Housing to permit the construction of single and double rooms lends itself to the clustering of rooms around a semi-private open space (rather than as a "block house" in the middle of a plot) and to the construction of two-storey units as low-rise garden flats. Design principles showing how rooms might be clustered or arranged in low-rise flats are illustrated in the figure below.

FIGURE 12.1 SITE PLANS FOR LOCATING SINGLE AND DOUBLE ROOMS



Policy might therefore be more effective if it is able to address itself to the issue of establishing a maximum gross density rather than a minimum plot size (the latter effectively being a maximum nett density). The Report recommends that a maximum gross density of 2800/ha be taken up within the relevant Ministries for further discussion.

6. CROSS SUBSIDIES

In line with MLGRUD policy, all urban local authorities

currently recoup their costs in the housing sector in the following way:-

- (i) The capital costs of the house (which include the costs of the dwelling unit itself, road access and stormwater drains, the plot price and survey fee, water and sewerage connection fees and capitalised interest) are recovered direct from the individual beneficiary.
- (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, across the city as a whole.
- (iii) Operation and maintenance costs are recovered from fixed monthly supplementary charges.

Under this system the total amount of rates charged in the low density suburbs plus the tariffs in the high density suburbs has been 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. This policy is defended primarily on the grounds that if it were not used, beneficiaries in new housing estates would pay more than those in older estates although the same level of service were provided because of inflationary increases over time).

The Report recommends that this current system of recouping costs be maintained, (so as to retain existing levels of revenue and in line with the national "one-city" concept) and also be extended to the servicing of raw land by private developers.

Increases in tariffs and supplementary charges in the high density areas must be approved by the Minister of Local Government, Rural and Urban Development, which in turn leads to delays in the approval of borrowing powers. In the post-independence era, when high density areas now enjoy political representation on local authorities, it is felt that the need for the Minister himself to personally approve tariffs has fallen away.

The Report recommends that urban local authorities be empowered to approve their own tariff and supplementary charge increases (subject to the conditions of advertising their intentions to the public).

With amalgamation of Rural and District Councils in the near future, the Town Boards responsible for administering smaller urban centres in the country will be under-represented and urban issues are likely to receive low priority in the new Councils activities. The Report highlights this problem and recommends that some centres

warrant the establishment of separate urban local authorities.

SURVEYING

The existing cadastre system in Zimbabwe is extremely comprehensive and rigorously maintained. However there is a shortage of qualified and experienced land surveyors in the country (only 17) and therefore survey is often singled out as a major bottleneck in the preparation of raw land for built development.

However less rigorous cadastre systems (for example the use of aerial photography of boundaries or block pegging rather than individual plot pegging) would still be slow to use in the case of high density areas with small (from a cadastral point of view) plot sizes and lead to inaccuracies which later affect the laying out of services.

Despite the overall shortage of land surveyors, the University of Zimbabwe will be producing 4 graduates at the end of 1989 and 12 in 1990. Furthermore the surveyors are able to respond quite rapidly to requests for survey. Delays are often caused prior to the work actually being commissioned of the surveyor (as discussed in Section 3.2.6 of the main Report) and due to anomalies in approved plans which have to be returned to planners for amendments before survey work can be finalised.

The Report therefore recommends that the present delay caused by the need for cadastral survey be weathered and makes various recommendations concerning the need for improved base-mapping to assist planners at the time of plan preparation as well as procedural adjustments to shorten the time taken to commission survey work.

SUMMARY OF DETAILED RECOMMENDATIONS

Availability of Land

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 appropriation of land where necessary, it is recommended that no further action or policy review be called for.
2. 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. 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 forums 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.

Land Banking

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 land banking.
2. Noting that most urban local authorities are dependant on the Central Treasury for funds to purchase land (either themselves or through the USLO) and that the MPEPD only

allocates funds when land acquisition is critically needed, it is recommended that the concept of and need for land banking be further explored with officials within the MFEFD.

3. Noting that the MFEFD is reluctant to allocate funds for land banking, it is recommended that the concept of and need for land banking be further explored with officials within the MFEFD.

Private Sector Development

1. Noting the shortage of public sector funds for servicing new high density residential areas, it is recommended that the recent experiences of Harare and Redcliff which have borrowed funds from Building Societies to service raw land be carefully monitored and evaluated with respect to the possible negative consequences of higher interest rates being passed on to beneficiaries.

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 MLGFUD for its consideration when approving borrowing powers from this source.

2. Noting that a limiting factor faced by local authorities in servicing land is lack of finance and noting the interest by Building Societies in the possibility of developing estates from the raw land stage, 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.

3. 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.

4. 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.

Public Sector Development

1. Noting that there is very poor liason between the Ministries of LGRUD and PCNH in the annual bidding for funds from the MPCNH, in the subsequent allocation of funds from the GLF and the NMF 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 prior to and after bidding for funds on behalf of local authorities so as to provide more integrated and expeditious financing to local authorities.

2. Noting that the Minister of Local Government, Rural and Urban Development does not presently delegate his powers of approval of borrowing powers applications and that this causes considerable delays in the drawing down of funds from the National Housing Fund, it is recommended that powers of approval of all applications for borrowing powers for amounts equal to or less than Z\$200 000 be delegated to Deputy Secretary level in the MLGRUD.

3. Noting that the construction schemes by the MPCNH 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 the 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 1. and 2. above have had a chance of being implemented.

4. Noting that the valuation of properties for acquisition takes many months, it is recommended that a separate, small supplementary professional services vote be opened in USLO to pay for the services of private valuers when the RVO has a backlog of work. Valuations carried out by private valuers would be subject to checking by the RVO in much the same way as the SG currently approves the work of private land surveyors or the Director of Physical Planning approves the work of municipal or private planners.

5. 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, the following procedures are recommended:

- (i) In the case of layouts prepared by the Provincial

Planning Offices for Section 4+ 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 Offices' 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 financial report;
 - (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.

Tariff Increases

1. 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.

Land Prices

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 states' RVO do not update land values on a regular basis, it is recommended that discussions be raised within the MPCNH (RVO), the MLGRUD (USLO) and the MFEPD on the need to both charge market value prices for land sales (see Section 2.2.3.2.) and to expect to pay present market value prices when

acquiring land.

2. Noting that municipalities, with few exceptions, are charging extremely 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.

3. Noting that the prices charged by the RVD 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 cost value into land sales so as to generate necessary funds for future land acquisitions and to support the case for land banking.

4. Noting that the RVD charges for plot sales on a sliding scale which favours large plots to the detriment of national revenues, whereas high density stands are charged higher (albeit still low) charges, it is recommended that the state charge land prices for all plot sales at the same unit cost/m² irrespective of size of plot and the proposed use.

Survey

1. Noting that time is lost from the time at which a plan is approved by DPP with 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 sending the brief on as soon as USLO confirms that it has sufficient funds to pay for the survey.

2. Noting that plan anomalies 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 liaise 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. Noting that plan anomalies cause considerable delays and that these plan anomalies 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.

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 posts' salary to a competitive scale.
5. Noting that Zimbabwe has a history of never having had an unresolved land dispute, that less rigorous cadastre methods of establishing stand boundaries is 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.
6. 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.

Building Standards

1. Noting that present national policy is for 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 materials including Terrablocks and sisal-cement roofing sheets.

Plot sizes and Densities

1. Noting the increasing costs of urban sprawl, that land is finite, that there is no qualitative reason for stand frontages to measure 12,5 and that infrastructural costs are directly tied to frontages, it is recommended that a minimum stand frontage of 11m be adopted and that in time a minimum stand frontage of 10m be adopted.
2. Noting that there are strong political and social pressures to have a minimum plot size of greater than 200 m² but that substantial savings in infrastructure can be effected through reduced plot frontages, it is recommended that a minimum plot frontage of 11 m (275 m² plot size of 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 built. 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 reduced frontage would be particularly appropriate in the provision of attached housing such as cluster housing or garden flats.

3. 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.

Infrastructure Standards

1. Noting that roads and stormwater drains cost from 22 - 44% of total plot servicing costs, it is recommended that, terrain permitting, 20% of all stands in new housing layouts do not have individual stand access roads designed or formed and that only bus routes be tarred, all other roads gravel surfaced or formed depending on the level of private vehicle ownership.

2. 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.

3. Noting that the state and local authorities are supporting urban sprawl by their unrealistically 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.

4. 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. 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 1960 in the light of how efficiently existing large community facility plots are being utilised and in relation to standards adopted elsewhere in the region.

Amalgamation of Rural District Councils

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 Ministry of Local Government, Rural and Urban Development and that an investigation of smaller towns be initiated with a view to compiling a list which should become separate local authorities in their own right together with training of the amalgamated Councils in areas of urban development and housing policy and finance.