

Urban Design

Johannesburg Inner City Strategic Framework

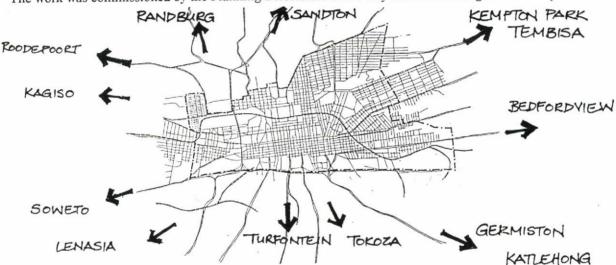
Remit (extract):

"to prepare an urban design framework in the context of the Inner City Strategic Framework....

"the work encompasses...

an urban design analysis of relevant existing urban elements at a city scale; a contextual urban design framework for the city and neighbourhoods."

The work was commissioned by the Planning Directorate of the City of Johannesburg on 19th May 1994



The first objective of the Reconstruction and Development Programme:

"...to meet the basic needs of all our people ..."

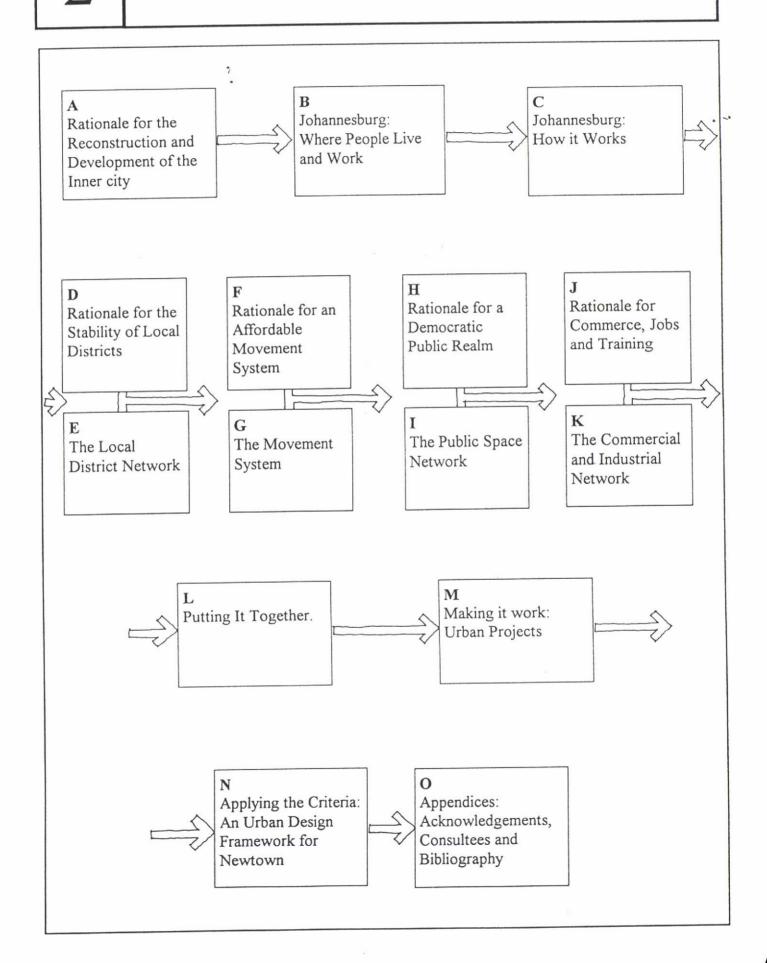
This report is a statement of the urban design criteria identified as being relevant to the future growth of the city of Johannesburg. It is a redraft and development of a number of studies presented to a wide spectrum of interests in the city and beyond. This resulting document therefore begins the reconstruction and development process with a degree of consensus and provides a well-founded basis for the popular consultation that must lead the renewal process. The challenge of making sustainable mixed-use city - of housing, public spaces, transport, industry and commerce is the very essence of the RDP.

Stephen Thorne and Gordon L Gibson Urban Design - Architecture - Quantity Surveying

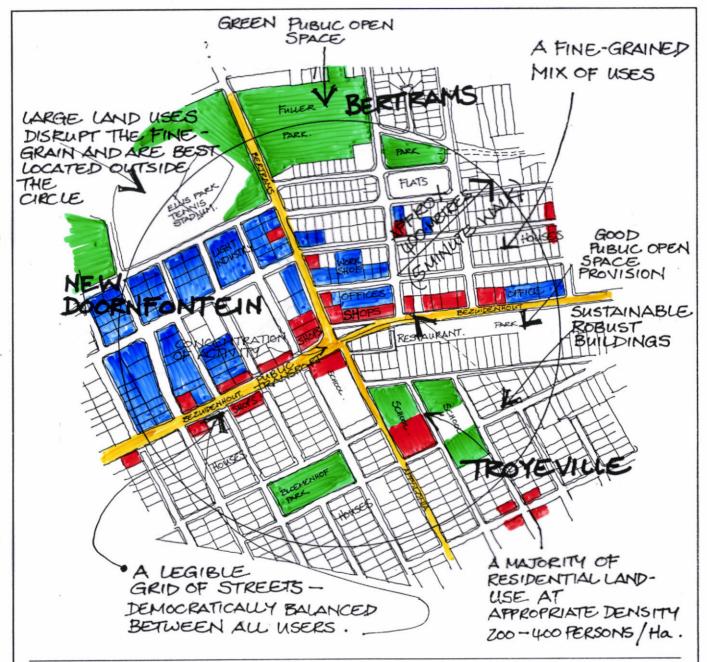
68 Clovelly Road, Greenside, Johannesburg 2193. Tel and Fax (011) 646 3446 158 Terrace Road, Swansea, SA1 6HX, Wales, G.B. Tel and Fax 0792 460086

August 1994

The Structure of the Presentation.



Johannesburg: How the City Works.



People tend to gather for their daily activity, for employment, shopping, transport, schools, surgeries, recreation. Our survey identifies existing centres of local activity; they are coloured red on Drawing B. Almost invariably, they occur at convergence points on major movement lines. Around these centres are grouped residential areas, commercial and industrial activities, recreation and greenspaces. Despite the distorted evolution of many of these communities - a result of apartheid and, it must be said, planning policies of the 1960s and 70s - active communities exist at vibrant, if somewhat neglected, centres all over the city - at Mayfair, Fordsburg, Hillbrow, Yeoville, Bertrams, Troyeville, Malvern, Jeppestown, Vrededorp, Fairview and many others. They offer many good characteristics of fine-grain "compact city" that will be so necessary to sustain Johannesburg's rapidly expanding urban population. Drawing C highlights the centres of local activity to discover how neighbourhoods and the whole city organism work.

Making Democratic City.

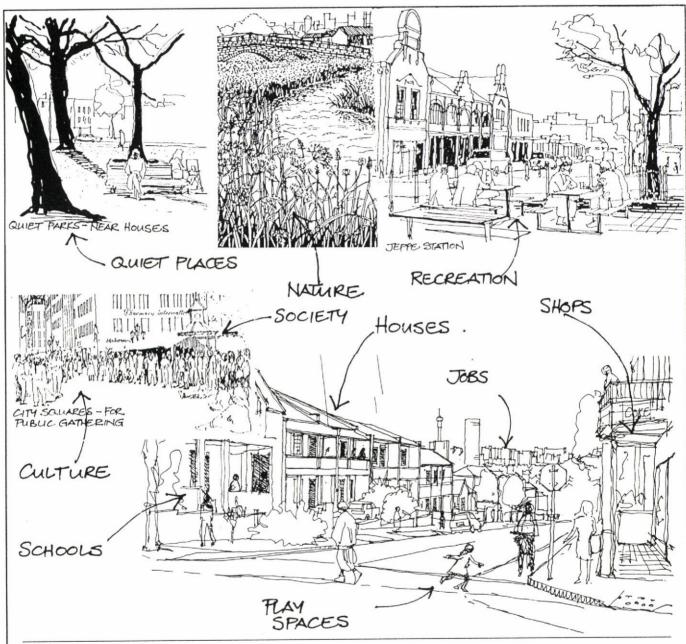


* REINFORCE THE STRUCTURE OF THE CITY SO THAT PEDESTRIANS HAVE ACCESS TO ALL BASIC NEEDS VIA STREETS THAT BALANCE THE NEEDS OF ALL USERS.



Affordable access to basic daily needs should be achievable within 5 minutes walking distance of every home. It is expressed by circles of a notional 400 metre radius. With remarkable consistency, these circles step through the city. As the edge of one district becomes too far from the local centre, a new circle begins. As population densities increase towards the city centre, so the circles overlap more. The converse happens in sprawling suburbia and car-dependence results. Larger land uses: Ellis Park, Wits, large green-spaces, industrial and large commercial sites occur at the edges of districts where they do not disrupt the fine-grain mix of uses. There, they are "shared" by a number of districts.

Integrating the Urban Mix.



The centres of local districts occur on city-wide movement lines. Around these centres, an infrastructure of movement, housing, employment, commerce, education, recreation and transport exists. In this report, we demonstrate how these local centres can be consolidated and integrated to form democratic and sustainable city. Regeneration of the existing city has social and cost benefits that will soon repay the economy. The cost is lower than in green-field single-use (residential) developments that require major infrastructure and locate the lowest income groups far from access to their basic daily needs.

Existing inner suburbs at (e.g.) Jeppe Station, Westgate, Faraday, City and Suburban, Doornfontein and others can become residential centres again by new build on vacant sites and conversion of many vacant commercial premises on the tried and tested city block structure. The good elements of urban composition that are evident in the city should be used for the repair of townships and applied to all green-field housing projects between the townships and the city.

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Developing the Qualities of the Urban Environment.



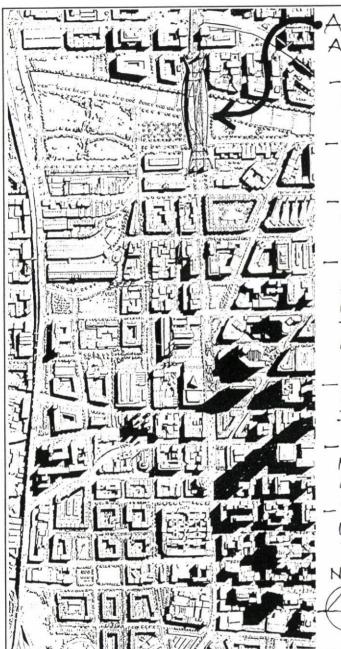
The desirable qualities of urban composition are considered in four elements.

Stable Local Districts. More than any other factor, residential stability will determine the future of the city. Drawings D and E examine the provision of a range of housing, not least affordable housing, population densities and the urban infrastructure that make local districts work.

The Movement System. Accessibility and affordability demand a revision of the city's public transport system. The rationale is on Drawings F and G, which also make proposals for pedestrian and cycle movement, for a major landmark bridge and for numerous connecting routes.

Public Space. The democratisation of the public domain, the achievement of a balance between users, and the variety of safe and healthy outdoor spaces, including the streets, is the task of Drawings G and H.

The Provision of an economic rationale for investment, both public and private, in new business activity, jobs and skills training is addressed on Drawings J and K, Commerce, Jobs and Training.

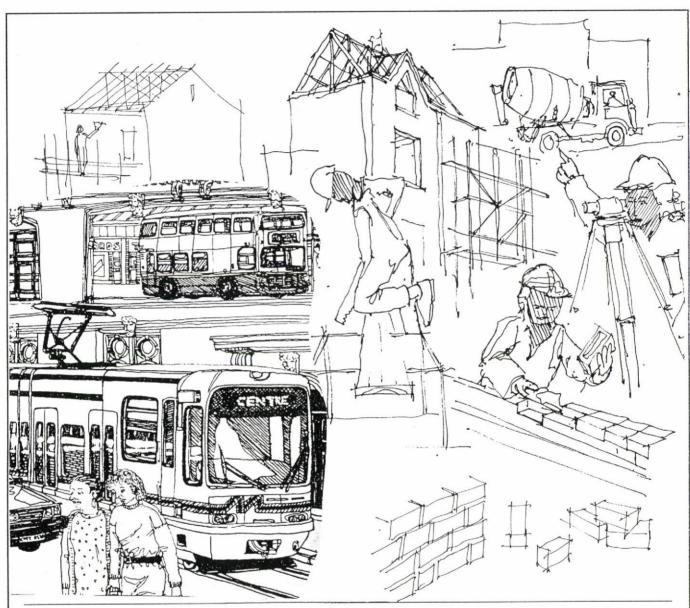


A BRIDGE CONNECTING JAN SMUTS AVENUE TO WEST STREET WILL:-

- PROVIDE THE LONG SOUGHT AFTER
 ROUTE INTO THE WESTERN SECTOR
 OF THE OBD.
- CREATE A NEW LOCAL CENTRE AT THE JUNCTION OF BREE AND WEST STREETS.
- INCREASE THE COMMERCIAL VIABILITY OF NEWTOWN, WESTGATE AND BRAAMFONTEIN.
- PROVIDE JOHANNESBURG WITH AN ICONOGRAPHIC LANDMARK (SYDNEY HARBOUR BRIDGE, LONDON'S TOWER BRIDGE, SAN FRANCISCO'S GOLDEN GATE, NEW YORK'S BROOKLYN BRIDGE, FLORENCES PONTE VECCHO)
- -GIVE ECONOMIC RATIONALE TO DEVELOPMENTS SUCH AS METROMALL, TIRISAND VILLAGE, WESTGATE.
- IMPROVE THE VIABILITY OF THE NEWTOWN CULTURAL PRECINCY AND UNK IT TO WITS UNINERSITY CAMPUS.
- PROVIDE DECENT PEDESTRIAN UNKS FROM BRAAMFONTEIN TO THE CITY.



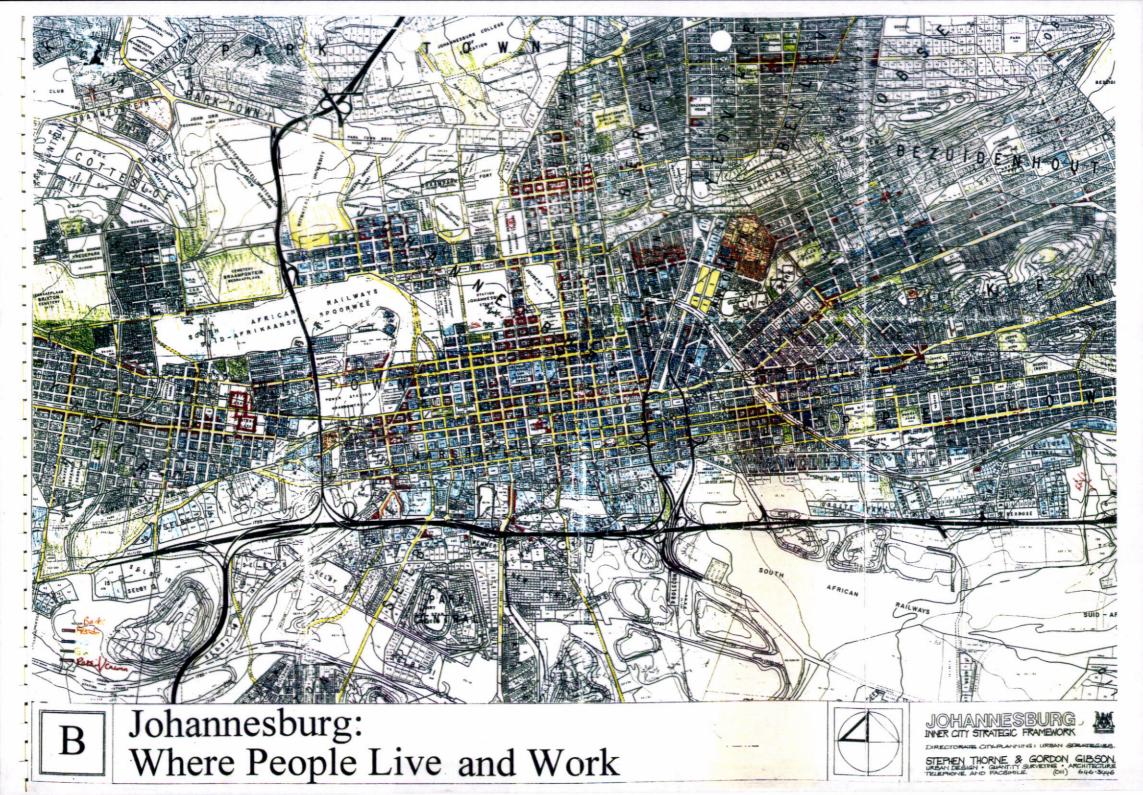
The consolidation of the stability of local districts is the most vital intervention the city can give to future social, economic and political stability - this can be undertaken in consultation with and with the support of a variety of stakeholders at relatively low cost to the city. More substantial capital investment, with assistance from other public and private bodies, will be required for major education and training centres, for industrial and business starter units and for the movement connectors that will engender social and economic integration. The landmark bridge connecting Jan Smuts to West St will have a dramatic effect on the social and commercial vitality of the whole of the inner city. In the first instance it will bring Wits and Braamfontein into the city, consolidate the Cultural Precinct project and make Bree and West a major city node. In the long run, it will enlarge the city centre to the area bounded by West, Wolmarans, Von Wielligh and Anderson: good for the city and good for business!

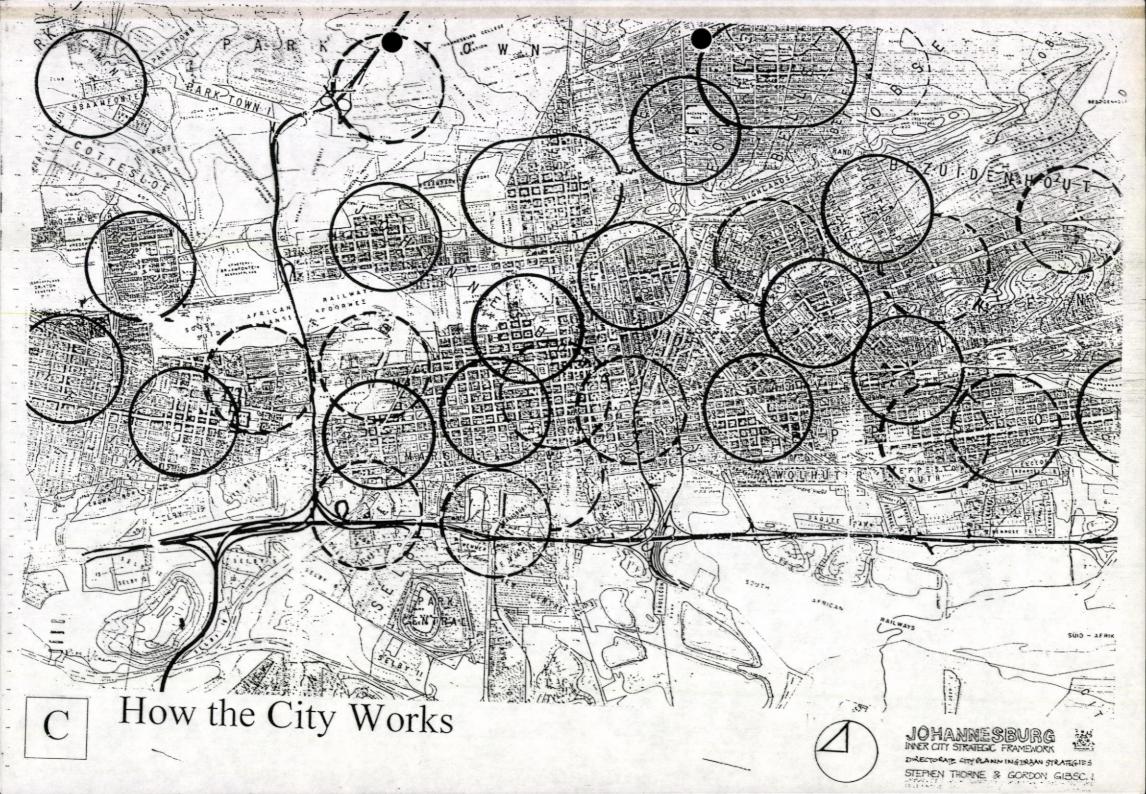


Economic and political feasibility are considered under each of the detailed rationales. Policy recommendations are itemised. On Housing we recommend a quick start process to commence housebuilding that will properly serve the city and its people. Similarly on the Movement System, urgent decisions on current roads spending, qualities of major roads and critical planning matters (bridges) are stressed. The nature and location of a wide range of urban projects are described on Drawing M.

This report is a *framework* for urban growth. It is presented in a form that we trust is accessible to the many and diverse interests in the future of the city. It is offered not as a blueprint but as a rational (and, given our time constraints, widely discussed) basis on which to start building. When the people see the houses going up, the public transport serving their communities, safe and healthy streets and public places, and jobs and training, they will soon let us know if we are doing the right thing or not.

The identification of local districts is precisely where the consultative process should take place. Let housebuilding begin!





D

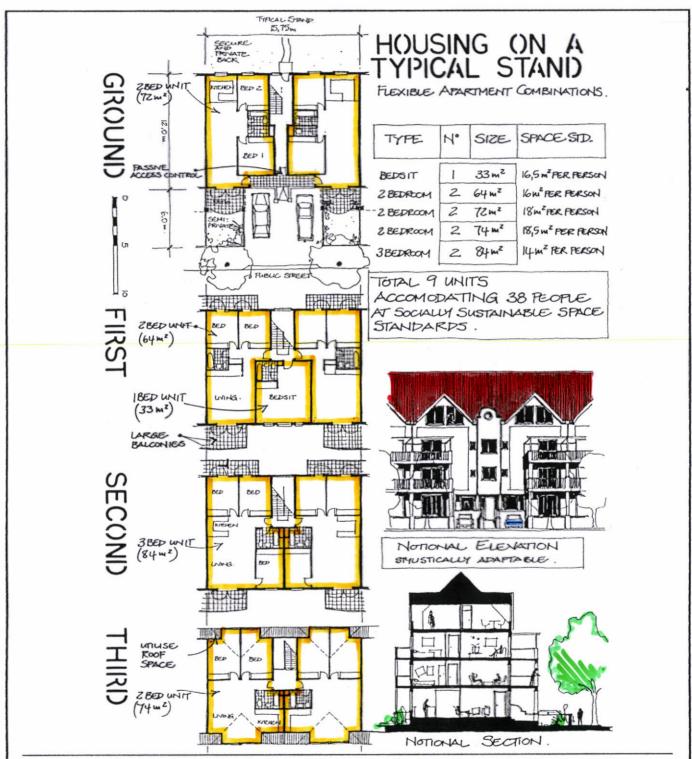
Rationale for Stable Local Districts



People make cities. The most successful parts of the city are where people are active in their daily lives: where they live and work. The more local people that inhabit the streets, that look out to the streets from their windows, that access local streets from their front doors, that talk to thier neighbours and support local traders, the greater will be the vitality and safety of local districts and of the city itself. The stability of local neighbourhoods provides an environment visitors and passers-by are embraced by the city's people.

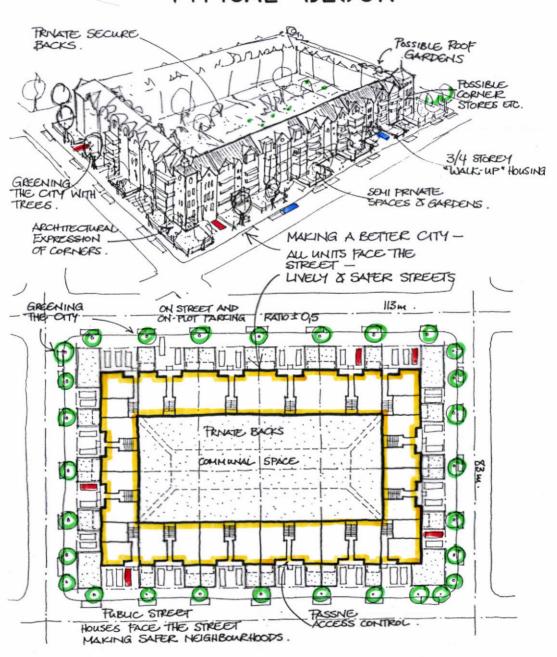
Such city - world city - requires good standards of affordable housing in districts with sufficient density to sustain social and commercial services, jobs and access to the rest of the city.

Homes: the building blocks of a "world city".



The drawing shows a design for a range of household sizes with reasonable space standards on a typical city "stand". Larger household units can be accommodated as can combinations of units (for extended families). Housing typologies of the city, conventional building technology and design to a human scale permit the construction industry (big and small) to quickly build good standard housing in large numbers. Use of traditional city form generates socially sustainable residential densities and an economically feasible nine units of mixed size per stand.

TYPICAL BLOCK



Virtually the whole of the existing inner city comprises "perimeter blocks". Frontages face streets; private space is clearly defined. Generally two to four storeys high, blocks that are 9-12 metres deep maximise potential floor area. On-plot and street parking can meet the standards, but high parking criteria prejudice the feasibility package (and are socially inappropriate). Blocks with front garden areas, homes looking at streets, entrances on to streets and private (or communal) internal spaces, encourage the vitality and security of the streets.

Matching Housing Density with Social and Economic Infrastructure.

Analysis of population density per hectare by comparing housing space standards against household size demand and block floor area potential. The figures are based on a typical city block of 113x83m (gross, centre of street dimensions) using the housing typologies on the previous sheets.

The target net residential floor area for a block of this size is approximately (m2): 8000

1. Number of units in a typical city block in proportion of household distribution in social survey and by floor area per person.

Space standard per person (m2) Total Nr of Units>			10 205	11 186	12 171	13 158	14 147	15 137	16 128	17 121	18 114	19 108	20 103	21 98	22 93	23 89	24 85	25 82
Househld o		f people		100.00														
3b 6pers	20%	6	41	37	34	32	29	27	26	24	23	22	21	20	19	18	17	16
3b 5pers	20%	5	41	37	34	32	29	27	26	24	23	22	21	20	19	18	17	16
2b 4pers	20%	4	41	37	34	32	29	27	26	24	23	22	21	20	19	18	17	16
2b 3pers	20%	3	41	37	34	32	29	27	26	24	23	22	21	20	19	18	17	16
1b 2pers 1b 1pers	10% 10%	- 2	21 21	19 19	17 17	16 16	15 15	14 14	13 13	12 12	11 11	11 11	10	10 10	9	9	9	8
																(4		

2. Number of units and number of people per hectare

Calculated by converting figures per block (above) to per hectare.

Block multiplier = 1.07

Number of units per hectare

219 198 182 168 157 146 136 129 122 115 110 104 99 95 91 87

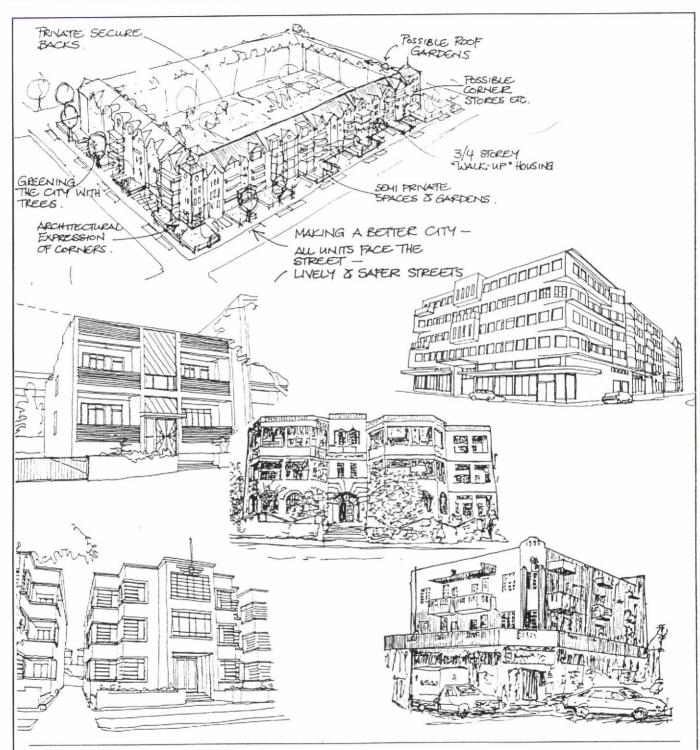
At a residential (land-use) density of x% the following population densities would accrue (nr of people per hectare)

20%	262	238	219	202	188	175	154	155	146	138	132	130	7	THE	PER.	
30%	393	357	328	303	282	263	246	232	219							
40%	335	476	438	404	376	351	328	310	292			100000000000000000000000000000000000000			218	100000000000000000000000000000000000000
50%	555	395	248	1505	1350	438	409	387	365	345	329	313	297	285	272	262
60%	787	Тоо	95	269	554	326	334	144	438	415	395	376	357	342	326	315
70%	918	180		CAN	658	1513	273	244	271	484	1461	439	416	399	381	367
80%	1049	393	875	808	753	1300	655	613	1683	\$53	25.5	502	476	¥55	435	420

Residential densities of over 50% are desirable for inner city areas. These figures indicate that floor areas of around 15m2 per person begin to optimise the potential space. At 10m2 floor area per person, the densities (over 400–450) are exceptionally high and become socially unsustainable. Conversely, densities of under 200 people per hectare make the social and economic infrastructure problematic.

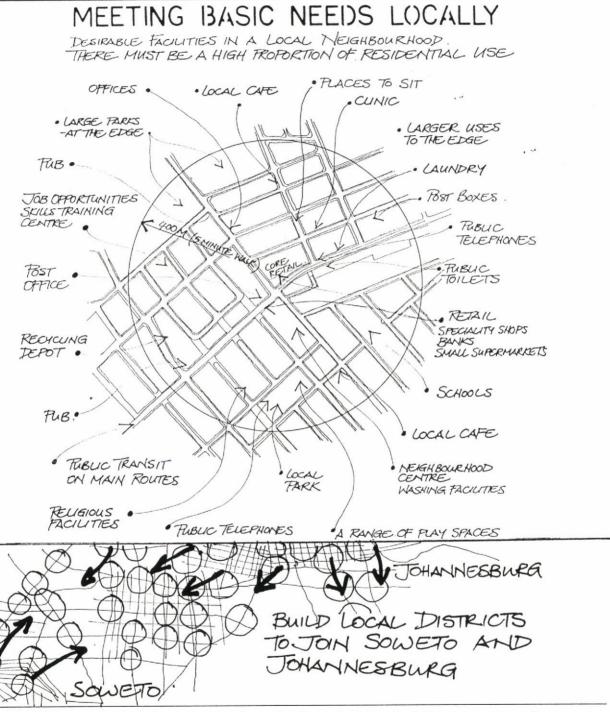
Cramming houses into infill sites is economically understandable. But, when these figures are projected to the district and city scale, other social factors become relevant. The above tables take a typical block of three or four storey walk-ups and consider a range of space standards per person across a spread of household sizes. Such housebuilding will generate population densities that should be greater than those at the west end of Derby Road in Bertrams and virtually the whole of Soweto (where the density is not sufficient to support commercial activity) and less than in the likes of Hillbrow, where the over-densification puts excessive strain on the social and economic infrastructure, resulting in various symptoms of social breakdown. The recommended target is 200-450 people per hectare

Building Homes: What and Where.



With financial support and some limited guidelines, the private sector can quickly start the housebuilding programme. Numerous infill sites and vacant blocks are available in the city (Vrededdorp, Jeppestown, Troyeville). Large numbers of vacant commercial premises can be converted to apartments in several areas (City and Suburban, around Jeppe Station, etc). "Greenfield" developments should use the same model of the best parts of the existing city to build new local centres on the intersections of existing movement lines (eg, Vickers Road at City Deep, Church Street at Crown Mines, and on the highway lines to and from Soweto).

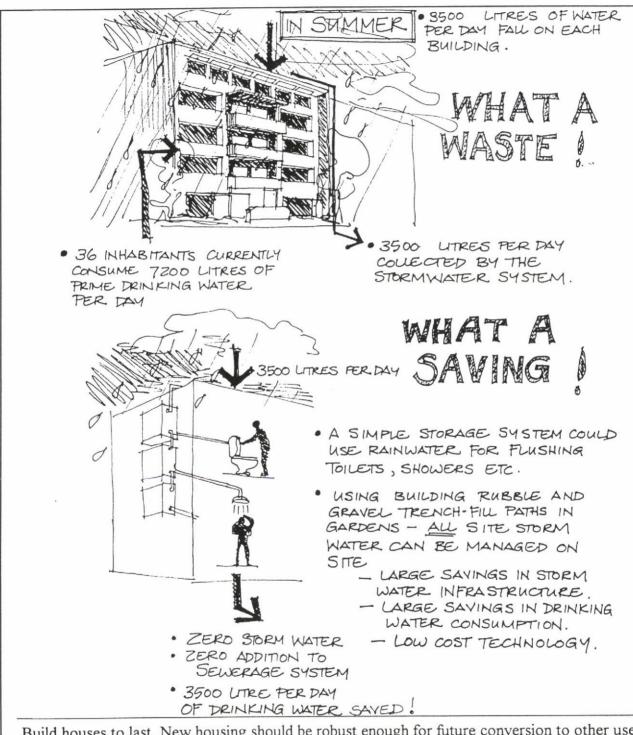
Making Local Districts into City.



The role of local and national government is to facilitate the housebuilding programme by allowing developments to take place, on the one hand, and by ensuring that they happen on the other. In overseeing the process, a definition of the essential, and of the the desirable ingredients of a district should be made policy to ensure a sustainable future for the city's people. Recommendations for development criteria are summarised on the final sheet of this section. Using these criteria, local districts, with a high residential composition, should be consolidated in the existing city (and township) infrastructure. They also provide the design guidelines for new settlements edging out on the main movement lines to and from the townships.

7

Sustainability: "world cities" last for centuries.



Build houses to last. New housing should be robust enough for future conversion to other uses - small shops, offices, even workshops, particularly on greenfield sites. New communities must be located with easy (and cheap) access to the city-wide movement system. Energy and water saving techniques should be incorporated into all new housing developments (dual-flush toilets, water saving schemes etc.). In larger developments jobs can be created by training block caretakers to carry out the routine maintainance of buildings and their adjoining spaces. Private block interiors can be used for a variety of communal functions including recreation or vegetable gardens.

Making it work.

There is an urgent need for a "fast-track" start to the regeneration of the city. To begin the process, we suggest a reliance on existing city form, existing communities and their social and economic patterns. This will minimise themistakes that will inevitably be made in the understandable haste with which we embark on the housebuilding programme. With such guidelines, the private sector can start work immediately. The various proposals for land-uses and development controls are indicative; local communities should oversee the qualities of their environments as the process gets underway.

Housebuilding:

- Simplify Development Controls in favour of:
- Respect for block structure
- Building frontages to face streets
- House entrances on to streets, at ground floor level
- Building height limits
- Reasonable space standards (min, circa 15m² per person)
- Provision of outdoor space in the form of private gardens, patios, verandahs, and balconies
- Distances between backs of houses to be enforced (minimum 22m)
- Developments to provide a mix of units in line with household composition and over a range of income groups
- Relaxation of "zoning" classification in favour of mixed-use residential areas
- Use existing building regulations to control building quality
- Letting policy to include for block caretakers to manage maintainance of blocks and environs.

Parking

- Review parking standards: reduce for social housing and include "on-street" parking in calculation.
- On-site parking must not be required to disrupt block form.

Homelessness

- Facilities for homeless (e.g. hostels and washing facilities) to be provided in local districts.
- A number of new central hostels should be urgently opened, using vacant city centre buildings (e.g. the Drill Hall in Twist)

Fiscal Matters

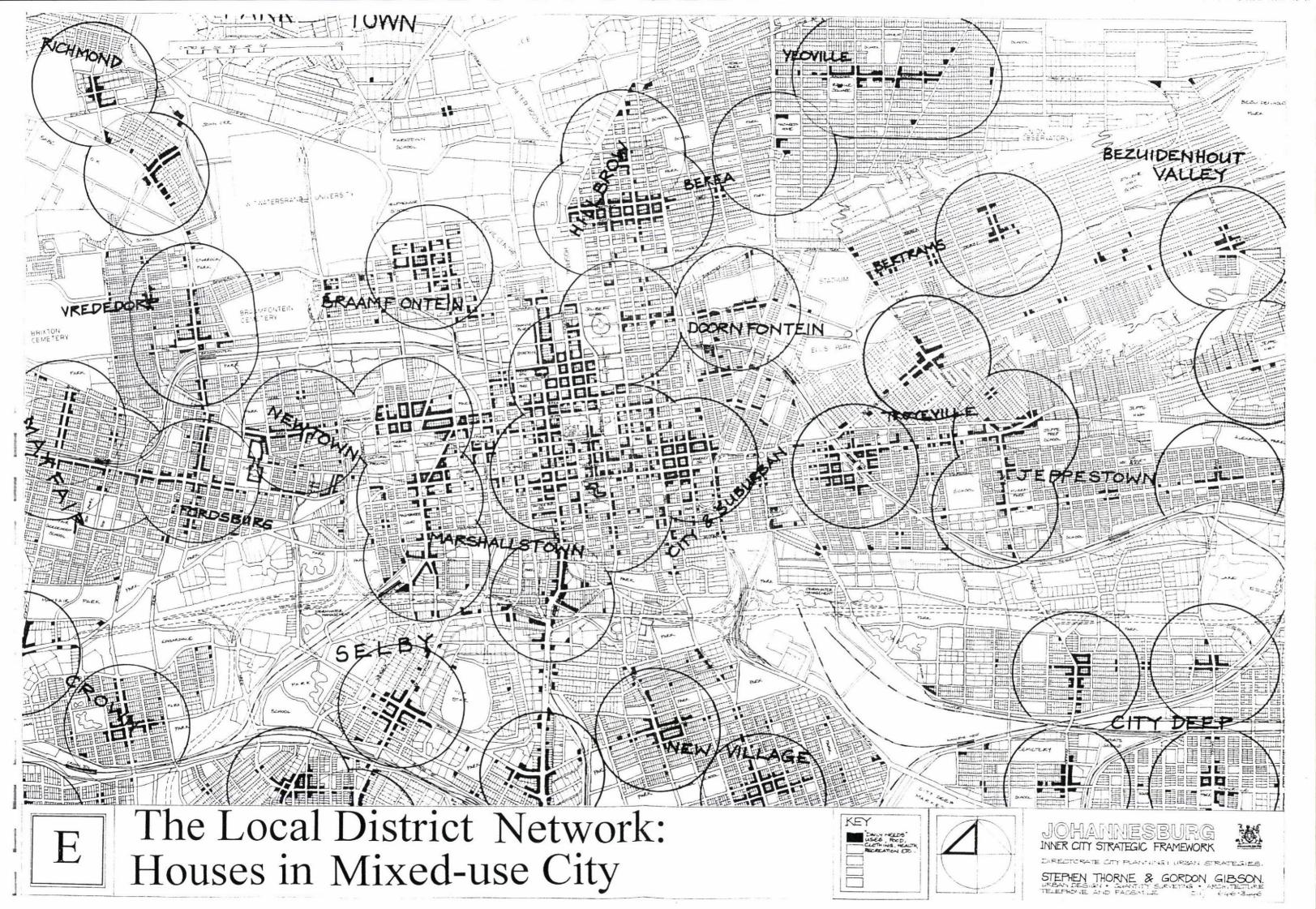
- Rigorous control over public sector land holdings; land value management is vital to the viability of the housing programme.
- Revision of the subsidy system (and "top-up" provisions) to accommodate larger housing units; subsidy to be weighted towards housing production; separate provision for consumer end subsidies
- Investment support for major housebuilding initiatives (including minimal-cost use of city land)

Supporting Local Stability

- Policy to identify essential provisions for local districts
- Local consultative machinery to amend and develop local development criteria
- Development control to create conditions (densities) for viable commercial activities and social facilities in localities

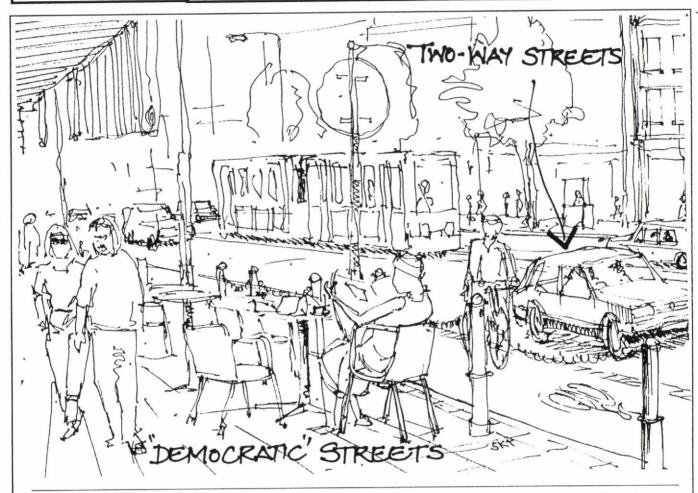
The ecology

- Local bye-laws to encourage and require water saving practices.
- Requirement of robust building typologies.
- Public Space and street-scape policies to support local districts (see sheets on Public Realm)



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Rationale for The Movement System



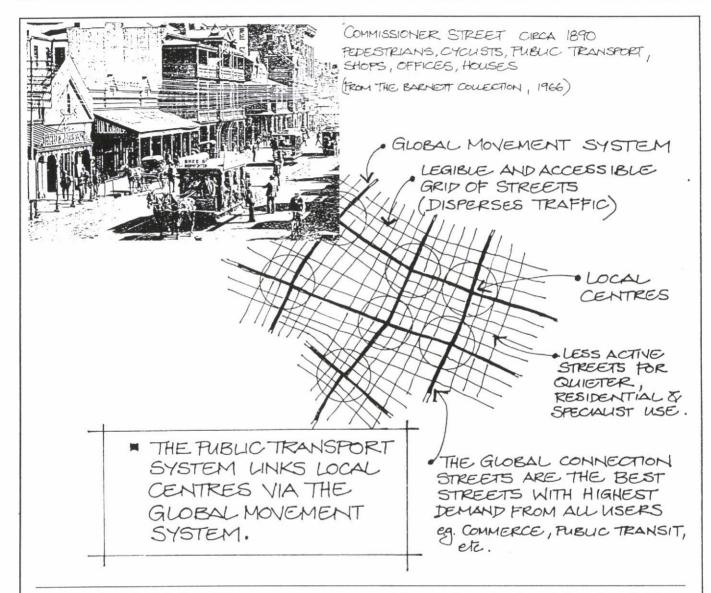
The long queues of commuters waiting, in the cold winter's darkness, for taxis to take them back to their homes in Soweto are a dreadful testimony to the impoverishment of the city's movement system.

This proposal seeks an equitable street-form that permits pedestrians to walk the streets safely, allows cyclist to cycle the city streets, encourages a public transport network and allows cars to continue to move efficiently through the city.

There is a desperate need for an integrated public transport system. The present bus system is woefully inadequate, the taxi system anarchic. Provisions for automobiles have created dangerous conditions for pedestrians and virtually excluded cyclists. The overwhelming presence of cars and taxis, their noise, speed and exhaust fumes, pollute the city.

Ongoing capital investment in road systems whose very scale destroys great swathes of prime inner city land should be stopped immediately in favour of street building to expand the city grid and prepare an environment in which the new expanding world city can be built. In this time of mass housebuilding, the connectivity - and the street-scape quality - of the movement grid links to new residential areas is critical to the long term cost benefit analysis of future urban settlements.

Making Connections



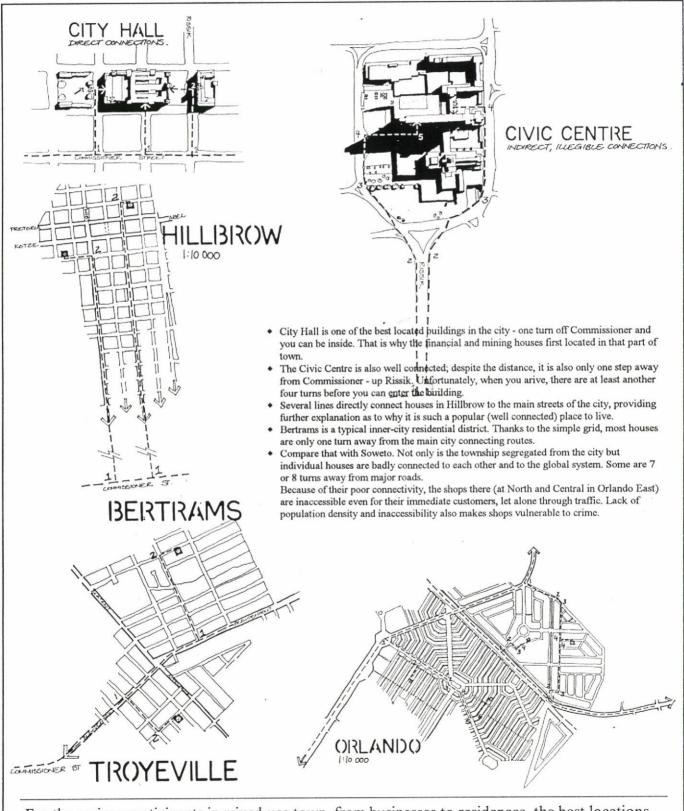
Connecting the Circles. The movement system - and future urban planning - is based on linking these urban centres along the natural lines of movment. The relationship between local centres and movement is fundamental to city form.

The Public Transport System. Joining together the local circles and the mass transport terminals provides the rationale for the public transport system. On Drawing G, we make recommendations for the movement system. Integration with the regional road and rail links is also shown on that drawing.

The Grid. Detailed design simplifies the grid and makes connections wherever possible: re-opening roads, bridges over rail lines including a landmark bridge from Jan Smuts on a straight line to West Street (this requires rapid long term decisions, particularly regarding the part-built rail museum) and numerous links under the M2 to existing and future southern districts.

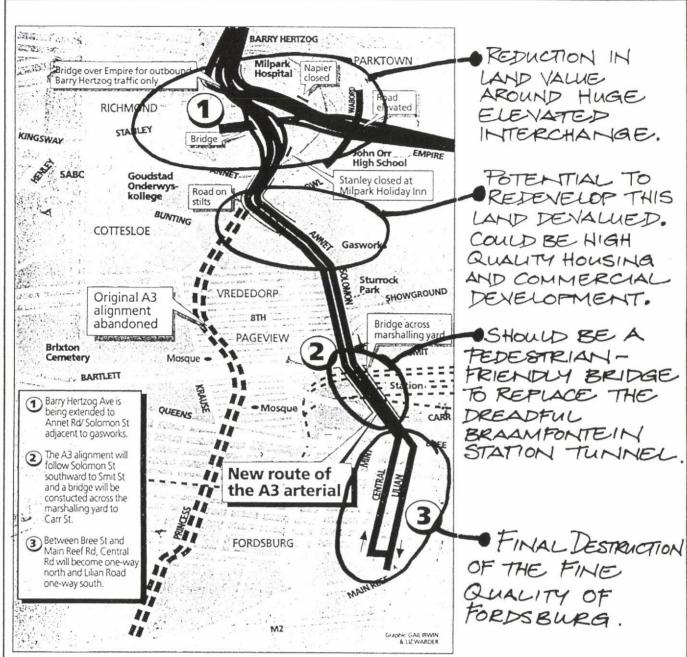
Let Streets Connect! Commissioner is Jo'burg's most significant street. Its power derives from its straight length; Commissioner most easily connects with (has the least number of connecting turns to) every other street in the system. Streets should connect communities. The next sheet considers this further.

Accessibility: From Soweto to City Hall



For the various participants in mixed-use town, from businesses to residences, the best locations are a <u>maximum</u> of TWO turns away from city-wide, or global, connections. This applies to virtually every home within a local district. The consolidation of the grid is the best means to facilitate this principle.

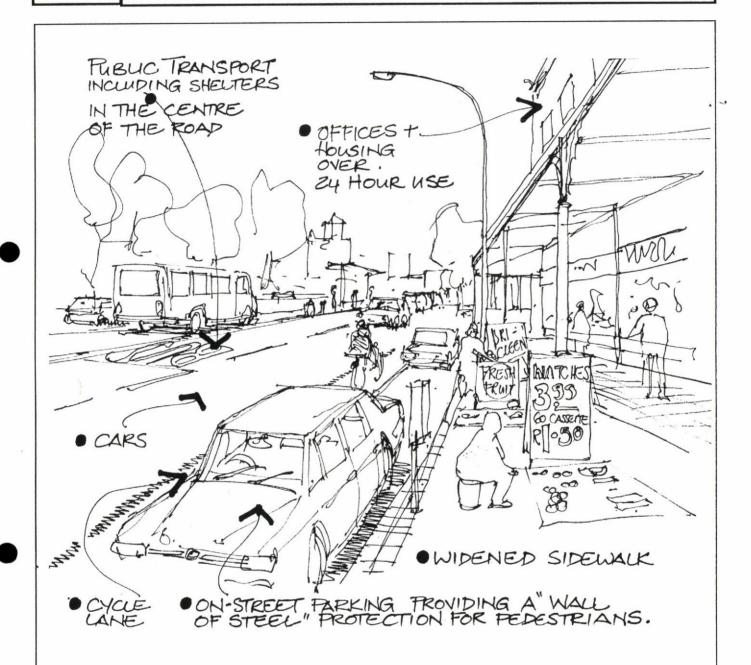
Democratic Streets



DRAWING FROM "THE STAR" 19.7.94.

Streets are for sharing. Design should balance between the needs of various users; from children to the elderly, pedestrians to car drivers, street traders to business and commerce. At present, virtually the whole street system is subordinated to car movement. One-way systems encourage cars and taxis to rush along streets. Open the grid (both ways) and design streets to cater for pedestrians, cyclists and allow through movement of cars travelling at safe speeds (30-50kph) in the city.

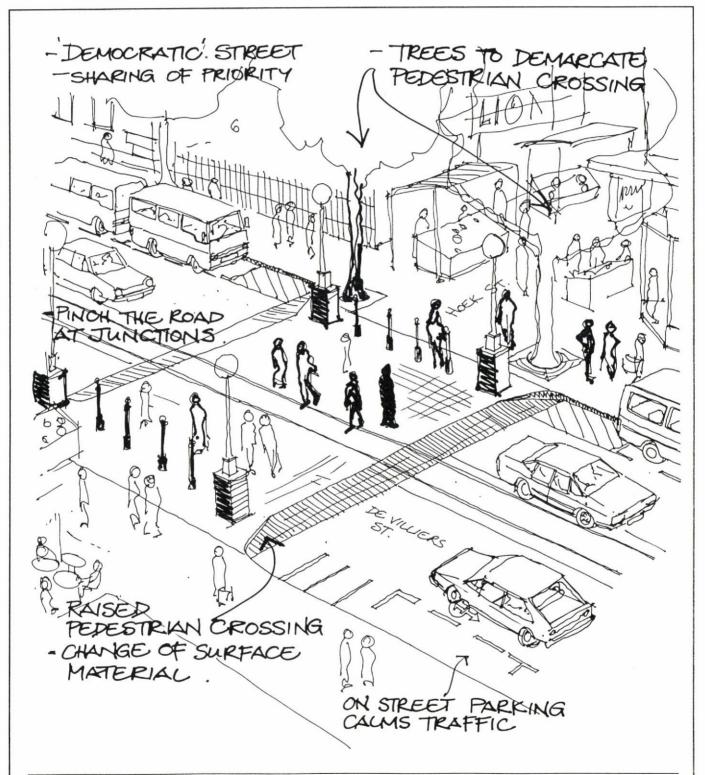
Integrating Street Activities



The more that street users can be kept together, the more viable will be social and commercial activity. The streets will also be safer for longer periods of the day. The best connected streets are those on which the majority of social and commercial activity and movement take place. These are the streets on which the public transport system is most effective. Adjacent streets, one block in, are best for quieter residential and other specialist uses. (See Drawing G)

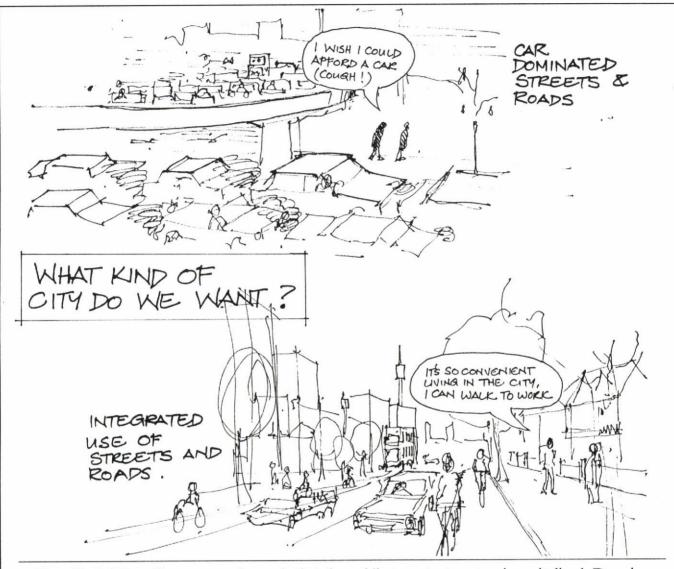
The integration of uses in the street-scape is a matter of design. The drawing illustrates how integrated movement systems complement rather than compete with each other. Pedestrians, parking, taxi and bus stopping points, central-of-road public transport lanes, wide pavements, safe crossings, places for everyone - in short, integrated streets - are the very essence of a "world city".

Calming the Traffic



Traffic must continue to move through the city efficiently ... but at safe speeds. Traffic calming techniques should be incorporated into street-scape planning policy to redress the imbalance between users. We propose that the "development controls" emphasis is shifted to maximise the street level vitality of buildings and the use mixes of developments rather than be on parking and access. A major area for "development gain" is the pedestrian street-scape.

Sustainability: Affordable Movement and a Healthy Environment



- The affordability of movement demands that the public transport system is revitalised. Drawing G proposes an integrated system balancing commuter trains, a new tram system, buses, taxis, and private cars. No single mode should dominate the consultative process.
- Equally, provision for the lowest cost forms of movement the forms used by the overwhelming majority of people must be given high priority. These are, pedestrian movement and bicycles. We recommend a major initiative to facilitate the use of cycles in the city cycle lanes and routes, safe parking areas, perhaps even the encouragement of a bicycle industry.
- Major capital expenditure should be directed at initiatives that provide the most benefit to the whole social and economic life of the city major connecting routes (including bridges) and public transport. In combination, these two will guarantee more long term returns than any other intervention ... not that we propose to neglect the others!
- Control over automobile emissions and speed will have a significant impact on health and accident rates. A new public vehicle industry geared to environmentally friendly fuels (eg trains, trams and electric buses) could redirect sections of the military' security industries to manufacture vehicles for the whole of Africa. Most of all it would be a major contributor to street quality.

Making it Work

From this analysis, the following policy areas and initiatives are proposed:

Public Transport

• Priority given to a clear vision for an Integrated Public Transport System. On Drawing G, we make initial proposals for such a network.

• New, secure Park and Ride sites should be located on major traffic arteries in conjunction with

public transport routes. (Taxi franchises may be appropriate.)

• Incentive schemes for environmentally friendly transport vehicles, eg reduced rate taxi licences, and environmental restrictions (over and above the normal safety requirements) on the ability of taxis to tender for city routes; stricter and more commuter oriented regulation of private sector transport modes including safety and visible identification labels for registered vehicles, their routes and destinations.

Regulated pick up points for combi-taxis on inner city streets.

The Road Network

• Planning Policy to consolidate and extend the historical street grid of the city (including an end to the selling of ownership and management rights to city streets).

• Development Policy to require that new area developments and individual buildings respect the block and grid structure of the city, to maintain the accessibility and legibility of the city form.

• Proceed with the Braamfontein Station Bridge - to be 'pedestrian-friendly' and kept as short as the rail system can accommodate); make an in principle decision for a landmark bridge for a north-south connection from Jan Smuts to West Street and Booysens; begin a feasibility study of a bridge from Quinn St towards Yale, and of a series of connections under the M2.

• No new inner-city highways; in the surrounding areas (into which the city will soon expand)

build a grid of streets, like Commissioner Street, not motorways.

Pedestrians and Cyclists

• Prioritise the strengthening of pedestrian space and street activities in planning controls.

• Enforce speed restrictions on all inner city streets and develop a long term strategy to create

more equitable streets.

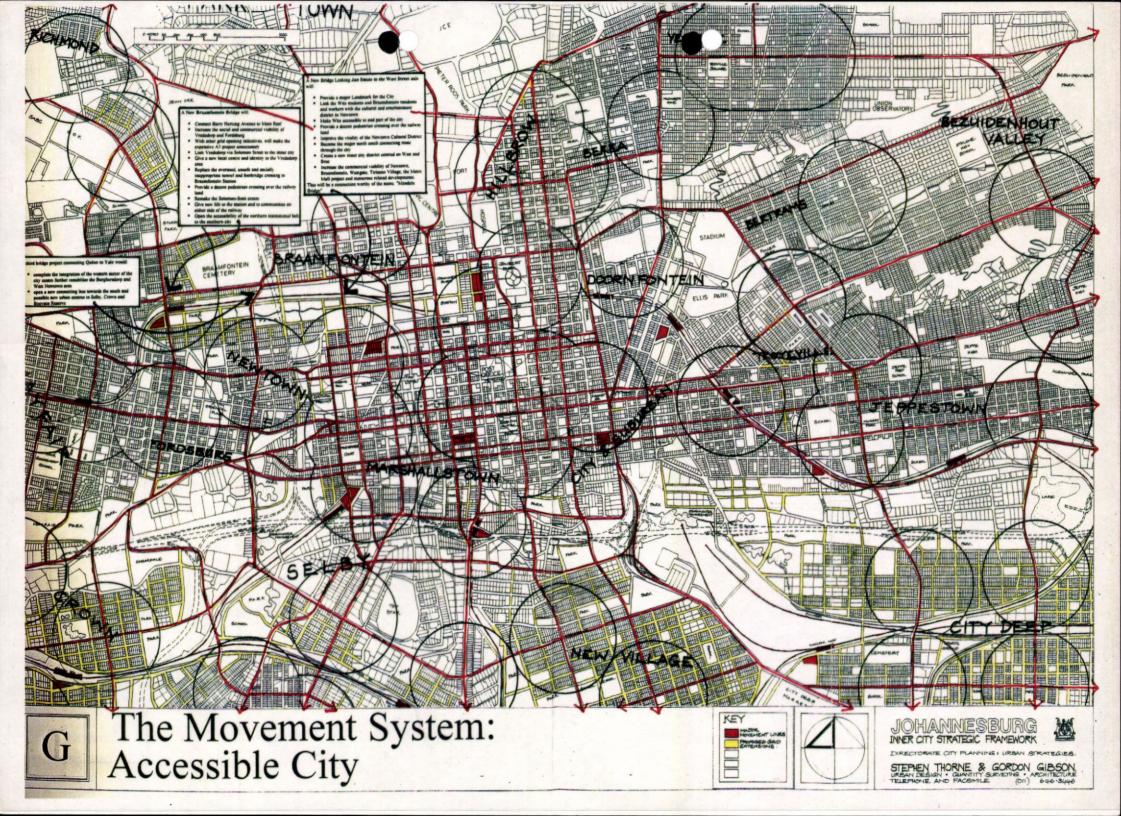
- Instigate a revision of traffic calming techniques. Many of the techniques and framework policies in this report point to traffic calming methods that contribute to a better balanced environment. This revision should also include a public education programme on street safety and car and taxi speeds.
- Development controls requiring new buildings to contribute to adjoining streetscapes.
- Plan a cycle route network; all new street designs to incorporate safe cycle lanes.

Public Affordability and Commercial Viability

• Prioritise the integration of a variety of social and commercial uses on the city's major streets and service them with public transport and other support systems

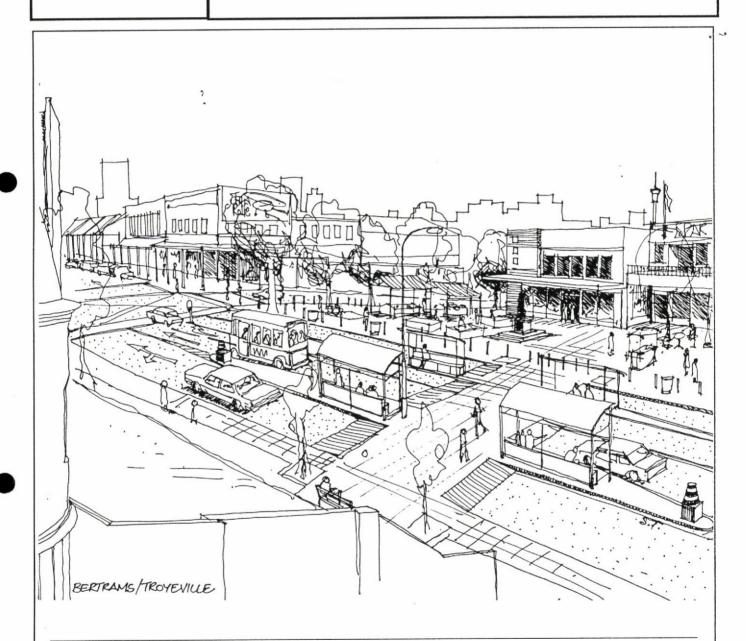
• Prioritise facilities for low-cost movement in the CBD and local neighbourhoods: affirmative action and intervention for pedestrians and cyclists; democratise the street-scape.

• Demonstrate that healthy and active streets are of benefit to business and commercial activity and to safety and security. Police foot patrols in the busiest streets will also reduce street crime.



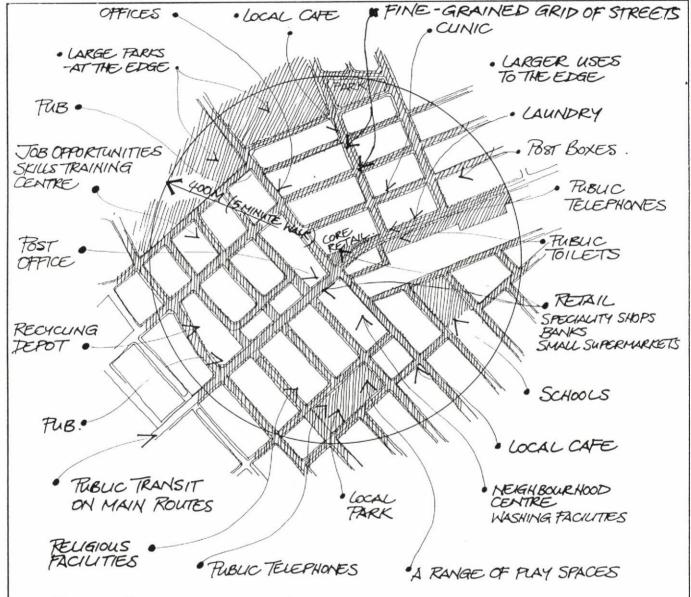
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Towards a Democratic Public Realm



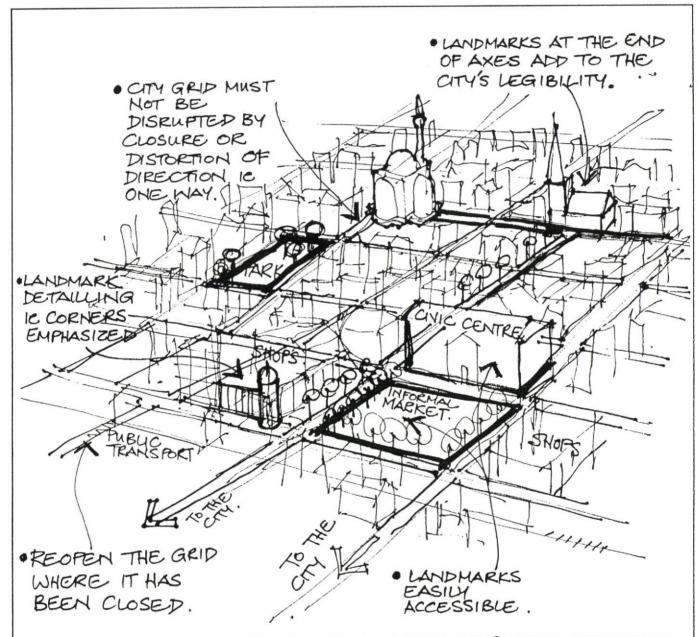
The accessibility, legibility, variety and safety of the public realm make city that entertains social, commercial and recreational vitality. Each city street and each development proposal should be judged by the criterion, "Would I like to step out of my door on to this street?" The range and detail of how buildings interact with streets through to major urban ecology projects and industrial developments are at a scale that only the City authorities are capable of coordinating. A balance of uses and resources, natural and interventionist, will enable local districts, and the whole city, to provide the basic needs - and the pleasures - of all the people. Let a good mix of urban activity replace the costly legacy of single interests dominating urban clearance and development.

An Accessible Public Space Network.



- *5 to 10% OF A LOCAL DISTRICT LAND AREA SHOULD BE PUBLIC OPEN SPACE.
- STRUCTURE THE CITY AROUND WALKABLE LOCAL DISTRICTS WHERE BASIC NEEDS CAN BE MET WITHIN 5 MINUTES WALKING DISTANCE.

The accessibility of public resources is a measure of the empowerment of the people. Access to basic daily needs should be achieved within five minutes walking distance from every urban home. Pedestrian proximity is a function of accessibility; it applies to lower income groups being able to readily access daily needs, to the elderly accessing a quiet park or nearby library, to those with disabilities being able to circulate without difficulty, to those in employment being able to access work-places in reasonable travelling times and at low cost, and to those who wish to safely enjoy a leisurely stroll on their local streets.



- * A CONTINUITY OF SPATIAL SEQUENCES INCREASES LEGIBILITY
- * A VARIETY OF SPACES GIVES RICHNESS AND TEXTURE TO THE CITY.

Landmarks and streets, or cross-streets, along which activity can be seen, give a spatial logic to the city. Visual re-assurance and evidence of accessibility are best achieved using the existing excellent grid pattern of the city. This also allows a choice of routes and permits a variety of uses (parks, libraries, places of worship, child-care facilities, etc.) to be easily accessible at dispersed locations in neighbourhoods. Development controls should ensure the retention of the city grid and its extension to new settlements. Developers of new buildings, particularly on corner sites and other prominent locations, should be encouraged (and, in some cases, required) to incorporate "landmark" detailing into the architecture.

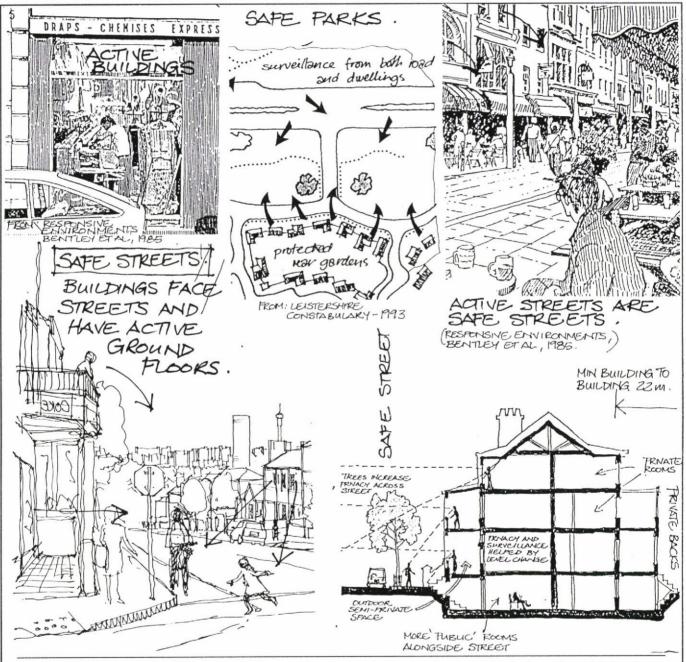
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A Variety of Urban Spaces, Recreation Areas and Habitats



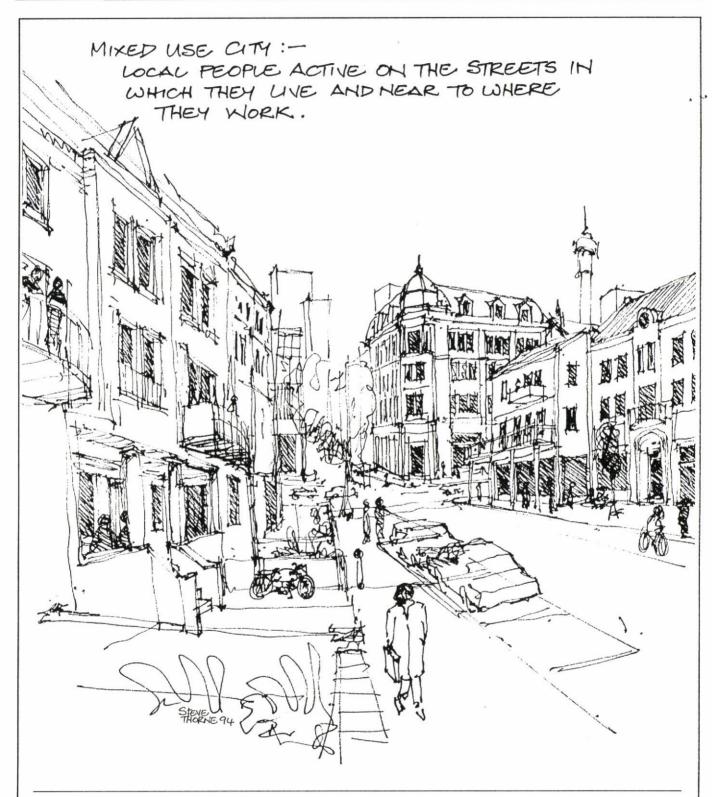
The city, with its overall vision and land-holdings, should elaborate its public space programme to introduce different public facilites throughout the city; from formal civic spaces to quiet gardens, a variety of play spaces for different age groups, mixed habitats of woodland, wetland and meadow, various organised recreation spaces. Drawing I indicates a proposed public space network, including, improvement of existing green spaces (eg at Jeppe, Joubert and Union Grounds), reclaiming blocks for public squares (City and Suburban), new park and recreation spaces (behind the Octavia Hill flats in Fordsburg), various scales of market facilities at Bertrams, Turbine Square and Hoek Street extension, and major woodland and wetland iniatives around the city motorways.

Safe Streets and Buildings.



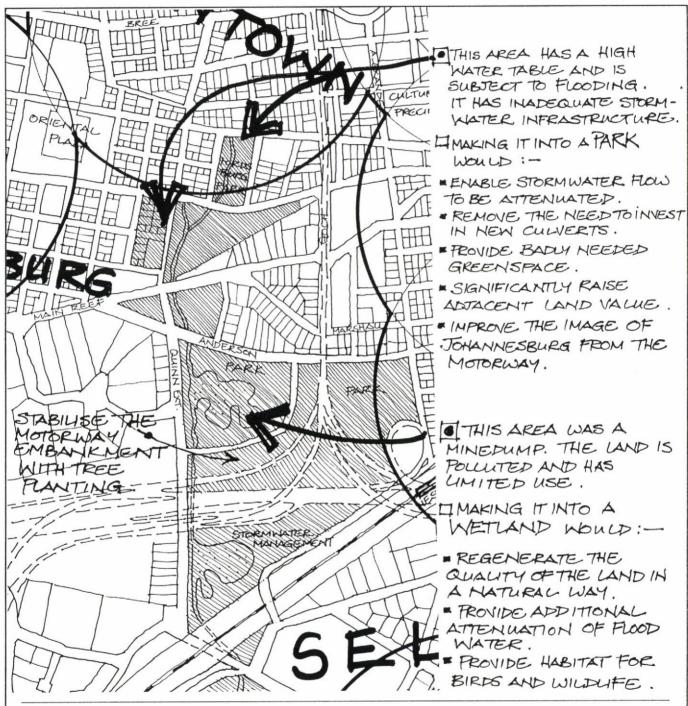
Democratic space means safe space. Public safety is a key criterion by which the urban fabric, its street-scapes and its buildings, must be evaluated. Buildings, respecting the city block structure, should look outwards at streets (through the windows) and talk to streets (through doors, and through the facial expressions!). Rigorous distinction between public and private space of all building uses should be maintained. Long blank walls, razor wire, windowless ground floor architecture, and inward looking buildings should be restricted in both commercial developments and in residential areas. Visible building activity at ground floor level is vital for public security. Similarly, all public spaces - play areas, squares, parks, car-parks, should be subject to surveillance from roads and local buildings. Where this is impossible, street lighting, escape routes and safe edge designs (prickly shrubs) avoiding hidden corners should be incorporated.

Mixed-use City.



Affordable accessibility to a variety of urban activities demands that the urban fabric accommodates a diversity of types and sizes of at least two primary land uses such as housing and workplaces. Residences should dominate a fine-grained balance between uses. A diverse range of other secondary activities and uses should be closely interspersed - all within a convenient walking distance of the majority of homes.

7 Sustainability:
The Urban Ecology and Land Value



The quality of the urban environment has a direct bearing on land value. Street management, from waste removal to tree planting, provides returns at the social and commercial level. Similarly, the enormous cost of storm-water management and land pollution can be offset by innovative storm water schemes, such as we propose for council owned land in Newtown-Fordsburg (see above and Drawing I), which use the great richness of water to provide green-spaces, wetlands, and water and land purification. This will significantly raise land value and improve land-use potential in east Fordsburg and south of the M2, enhance the Cultural Precint project and resolve flooding and capacity problems in lower Newtown. Similar opportunities exist on the eastern outfall.

Making It Work

Investment in the management of public space is a measure of commitment to the city. When the servicing of the city, its streets and its people breaks down then private investors, and the ordinary person in the street, can see no reason to support the environment. We propose that the city is seen to invest in its own future through a major commitment to its public image.

Land Holdings

- The value of land will be critical to the future development of the city. The land holdings of the city and other public bodies must be rigorously controlled if affordable housing and urban quality are to be achieved. We cannot overstress the importance of retaining the city's most valuable asset land: derelict plots, surplus provision, road reserves, former parks, streets, railway land, post office land, gas sites. These holdings will be vital in negotiations with the private sector.
- The practice of giving ever increasing amounts of public space to the taxi industry must end; the solution begins with policy for an integrated public transport system. (Proposals are made on Drawings F and G.)
- Similarly, the land blight resulting from major highway developments should be evaluated with particular reference to adjoining communities and land values (e.g the A3 proposals).
- Adopt policy to reclaim city blocks for public open space (Drawing I identifies such a site in City and Suburban- we have notionally named it "Market Square".)
- Adopt a target of 5-10% of local district blocks for public spaces (in addition to larger parks on the edges of districts)

Managing Public Space

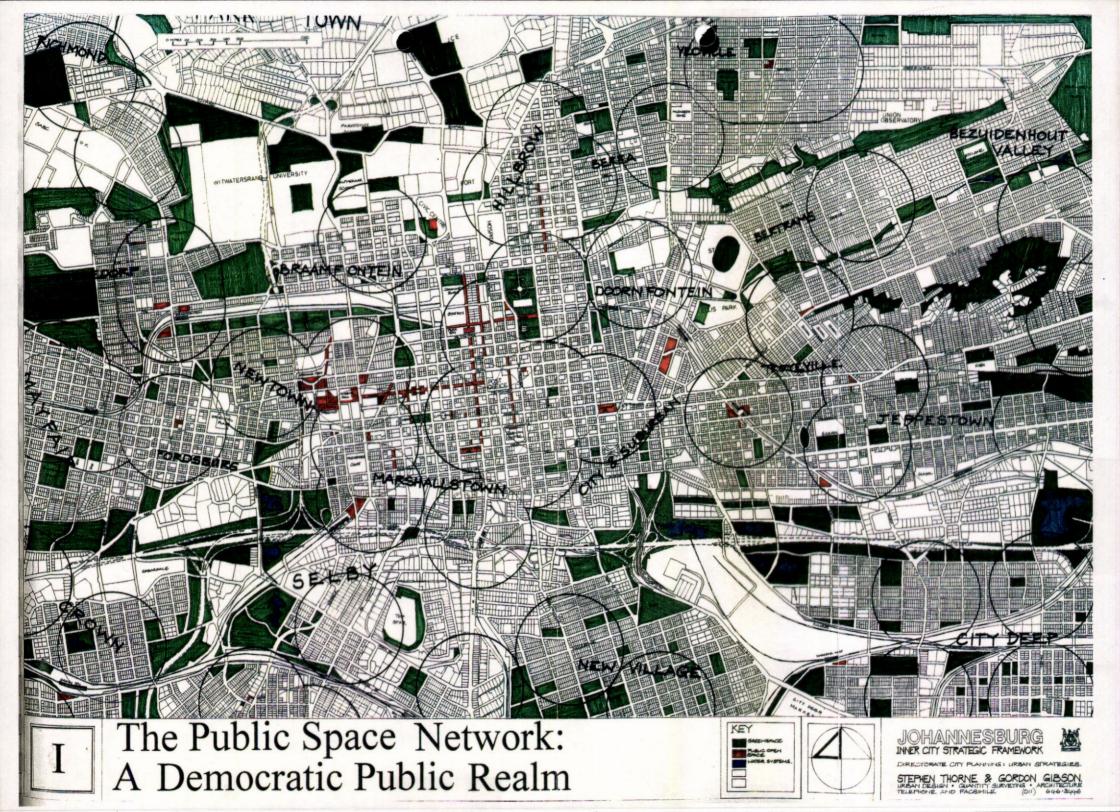
- The quality of public space will enhance the social and commercial viability of the city
- We propose a jobs and training programme for a city environment department to extend the maintainance and management of city spaces to include, for example, a major tree nursery/ tree planting project and to a variety of water management schemes including a series of inner-city mixed habitat projects for woodland, wetlands and meadows.

The Natural Environment

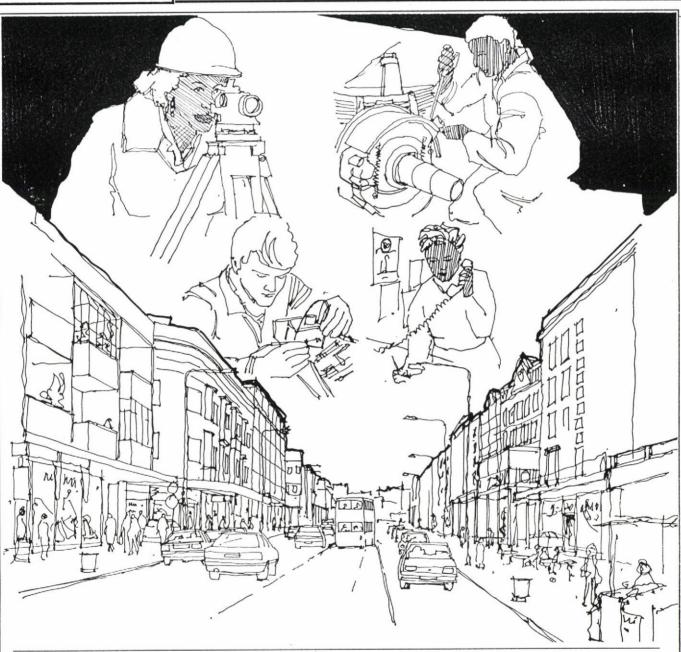
- The city's few remaining vestiges of natural environment particularly the ridges should be protected from development by declaring them areas of natural beauty.
- Existing movement lines and paths through these should be formalised.
- Water courses should be reclaimed, cleaned and weired for urban greenspace.

Development Controls

- Maintain and develop the integrity of the city grid pattern
- Pedestrian considerations should become the first criterion for all public space schemes (including streets).
- Development Controls to be amended to maximise building activity towards the streets at ground floor level.
- Restrictions on high wall boundaries, use of razor wire in public areas, ground floor car-parking designs, blank wall ground floor architecture: buildings to be required to demonstrate their contribution to the public realm.
- Planning criteria to clarify a list of essential resources to be provided in each neighbourhood.
- Affordable accessibility to be used as a measure of development quality for public resources and all buildings intended for public activity.



Commerce, Jobs and Training



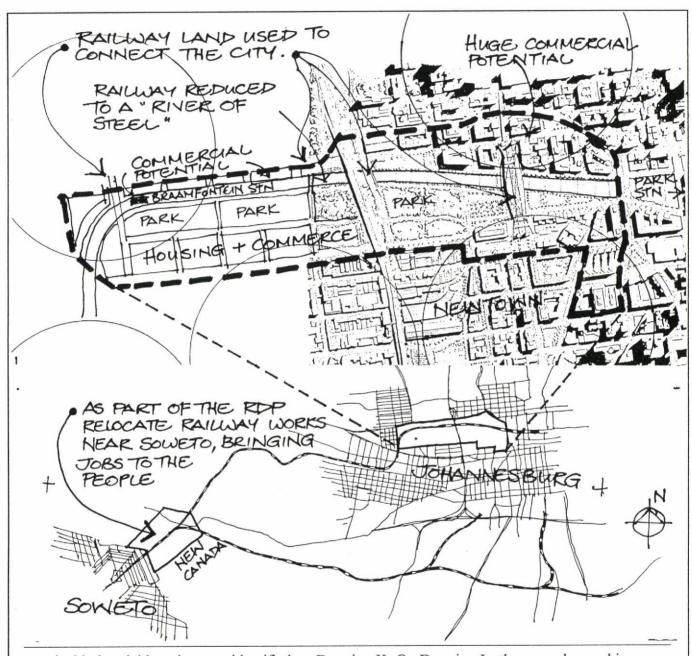
Stable local districts provide an environment within which the business sector can function profitably. The variety and range of commercial and social activity in areas like Bertrams (on the Bezuidenhout junction) and Fordsburg are the result of their relatively stable residential base and their place on the city-wide movement system. The commercial sector has the assurance of a reliable local market and the opportunity to reinforce its activity in the city network. The stability of these areas should be consolidated and the model used in other districts to provide a city-wide economic stability of commerce and industry into which the more substantial industrial and commercial operations can be integrated.

Providing for the Commercial Sector.



Drawing K identifies locations for a variety of commercial and industrial operations. Small "starter" industrial and business units are part of local district composition. They should also be encouraged in conjunction with larger scale industrial sites on the edges of residential areas. Similarly, public contact retail and commercial activities should be housed close to the centres of local districts and on the main movement lines in the inner city. Businesses whose primary function is not in direct contact with the public should be encouraged towards streets off the main movement lines and to upper floors. Virtually all areas of town should retain a residentially dominated mix of uses to provide safe and secure, 24-hour, seven-days-a-week vitality. This is the best environment to meet the various daily needs of employees and provide them - and the business - with a secure working environment.

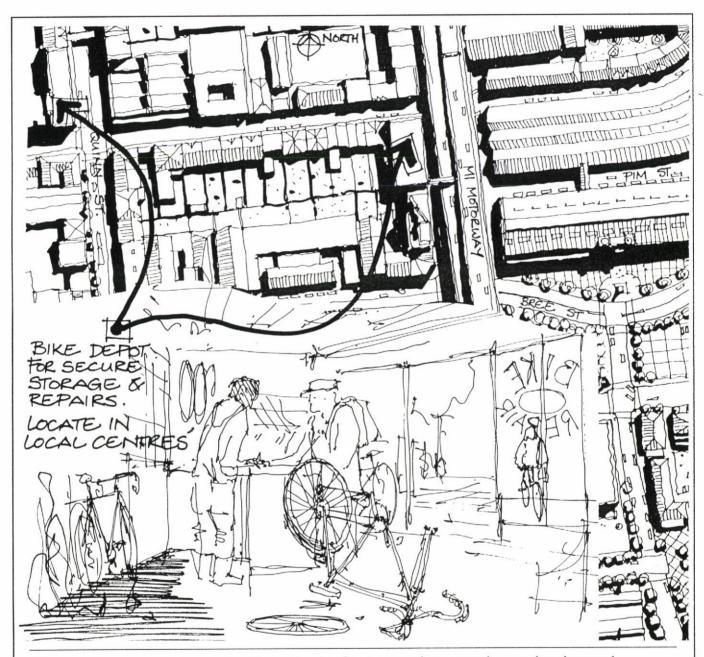
Locating the Larger Land Users and Employers



Typical industrial locations are identified on Drawing K. On Drawing L, these can be read in conjunction with other projected urban growth. Expanding the provision of large industrial and commercial locations should be planned in relation to the existing residential areas in the city and the townships and to long-term urban growth of the whole city. Critically, this should be based on residential consolidation patterns using criteria identified elsewhere in this report.

Large inner city land-users (particularly rail-stock maintainance and shunting yards) should be encouraged to move to carefully selected locations nearer to the less mobile labour market in Soweto. This will free valuable land for commerce, housing and greenspace in the inner city. A similar approach should be applied to other zoned areas such as the sprawling car service industry on Marshall and Jules and to industrial areas on (e.g) Vickers Road and Main Reef. Currently, these sites make future urban settlements more problematic and necessitate higher labour costs to accommodate public transport or car purchases.

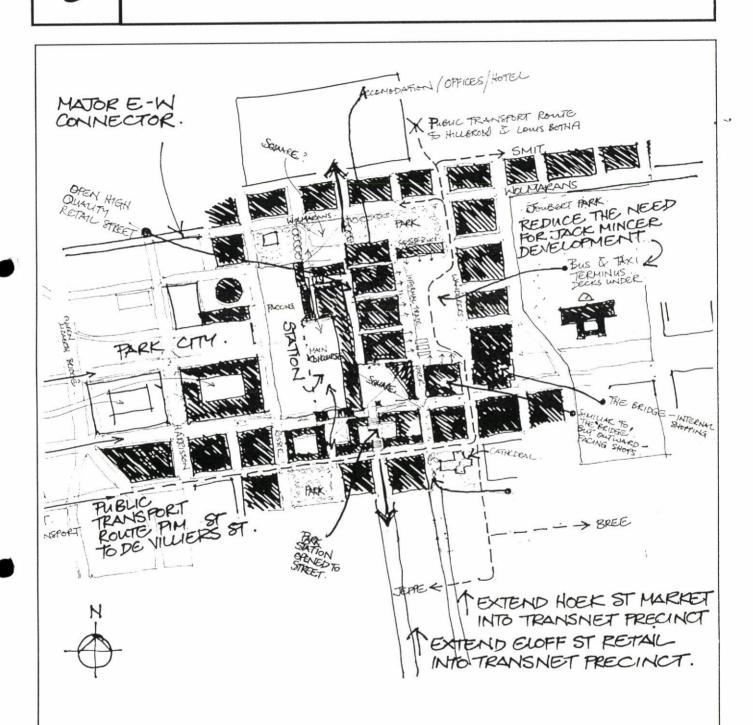
Jobs and Training.



Numerous employment opportunities will arise from new urban growth; a variety is noted.

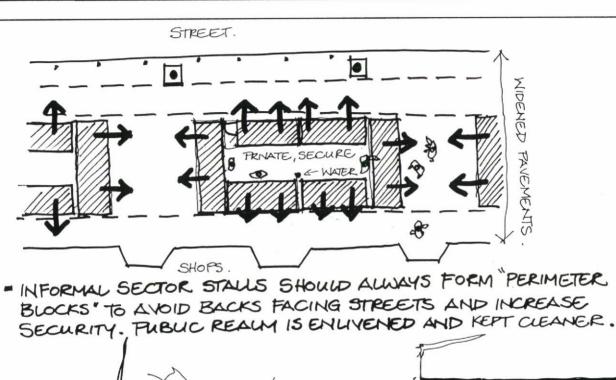
- Training in block caretaking will greatly assist maintainance and management of new housing;
- city-sponsored cycle depot franchises over the city would encourage small businesses and the low-cost movement system; and
- investment in the manufacture of public transport vehicles could draw on existing capacity in the security industry and usefully serve the whole of Africa.

Priority must be given to a central training initiative for building craft (and other industrial) skills, as well as in supervisory, project management and professional skills. Use of the difficult Turbine Building as a beacon of job training for the new South Africa is an ideal; perhaps the adaptation of the flour mills and adjacent warehousing is more realistic. Also, small "starter" workshops and studios will be appropriate in the regeneration of that part of west Newtown.



Drawing D, in identifying existing and likely future centres of local activity, shows where all inner city retail activity takes place. Higher concentrations occur at all centres. Force of will cannot change the impetus of the market; current informal trading shows, as well as any other indicator, where the main retail activity centres are. These should be encouraged and serviced with water, refuse collection, policing, public transport and loading provisions. The major retail streets of Eloff and Hoek should be extended and supported as should existing local centres like Bertrams and Fordsburg. Inner suburban centres at City and Suburban, Jeppe Station, Faraday, Newtown and Westgate should be reconstituted with major residential initiatives (building conversions and new-build) that will provide the basis for significant commercial opportunities.

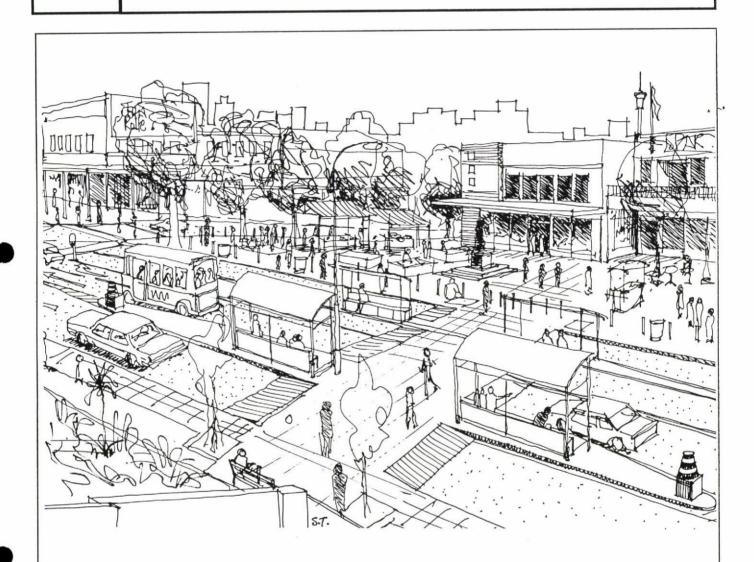
Informal Trading.





Informal Trading is, and should remain, a vital ingredient of the city's character. There is a need for some degree of regulation and servicing. The provision of properly serviced sites in good locations will contain its spread - shoppers will support cleaner, more structured trading. Sites can only be located where current levels of trading are already high, due to popular movement. Design criteria for stalls is the same as is described for housing: wherever possible, stalls should look out to the street and be grouped with controlled (private) inner areas. Linear markets should use back to back stalls wherever possible even if it means narrowing one side of the street in favour of a linear market on the other. Frequent refuse collection and street-scape cleaning is an essential service to be provided by the city.

A Vision for a Sustainable City.



The twin problems of a rapidly expanding population and under-provision in the apartheid townships require far-sighted planning and confidence. Future generations will determine the precise form and detail of the expanding city. On drawing L, we bring together our analyses to indicate rational future urban growth based on existing city and township districts, and movement patterns. The proposals are based on a vision of urban sustainability, as follows.

- ◆ Social sustainability: Housing, health, education and welfare supported by a democratic local and city infrastructure;
- Economic sustainability: A stable environment in which the business sector can have long term confidence in its investment decisions;
- Ecological Sustainability: A city that provides an affordable, safe and healthy environment for its people

With these - and, we argue, only with these - can a fourth category, Political Sustainability, be achieved.

Making it work.

Retail and informal trading

- Support extension of existing retail streets (rather than new streets and malls). Support Intersite extending Eloff and Hoek towards Wolmarans and locating a major bus depot off Wanderers.
- With other agencies, encourage servicing of retail sites (including informal trading) with water, refuse collection, policing, public transport and loading provision. In some more permanent sites, the provision of power will also be appropriate.
- Urban design projects to consolidate the residential base of inner city districts and to develop an
 improved social and commercial environment at the centres of these districts: we recommend
 priority be given to Bertrams, Troyeville, Jeppe Station, City and Suburban, New Doornfontein,
 Newtown (incl the north west), Fordsburg, Pageview and Vrededorp.
- Design criteria for trading stands to face streets and public movement lines wherever possible.

Commerce and industry in the inner city

- Adopt an in principle decision for major north south connecting bridges over the rail "river" at Jan Smuts to West and at Braamfontein Station. Commission a feasibility study to evaluate a landmark "Mandela" Bridge to extend the city centre.
- Consolidate a mix of primary land uses in the inner suburbs; diminish the dominance of single (commercial) uses in inner city districts.
- Locate "starter" units offices, workshops and stores in local districts.
- Offices whose trade is not in direct contact with the public should be encouraged to take (lower cost) locations on upper floors and on streets off the main movement lines in the city centre.
- Business should be encouraged to contribute to the 24-hour vitality of city life.

Large Industrial and Commercial Operations

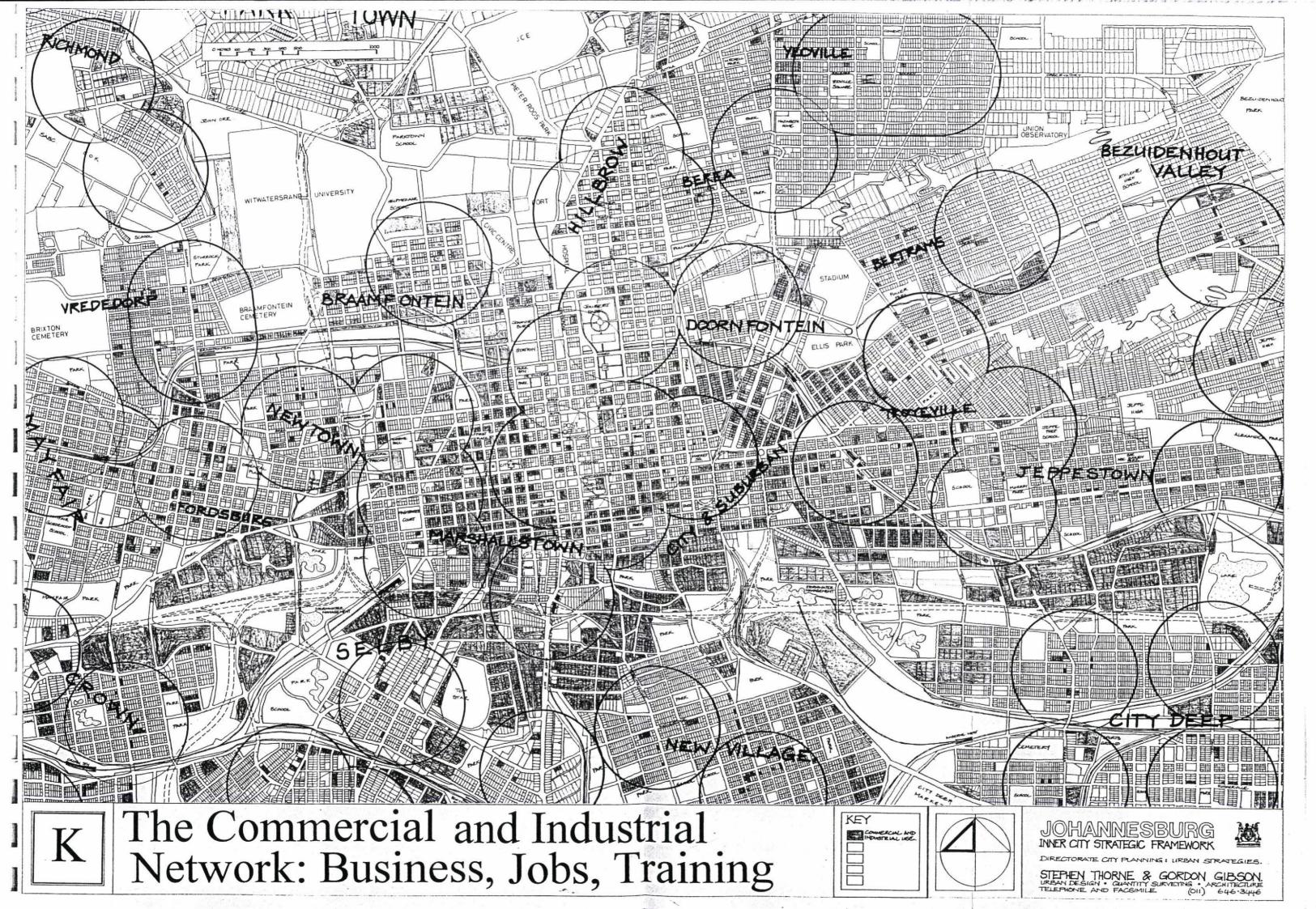
- Encourage large industrial users to take sites at edges of local districts and in locations towards the townships; consolidate public transport system (rail, bus and tram) to these locations
- Initiate planning to re-locate rail maintainance and shunting yards to north of Soweto.
- Plan early closure of rail lines west from the maintainance sheds at Braamfontein to permit an early start to the shortest length of bridge possible. Similarly, if less pressing, there is a need for planning studies to minimise the length of the Jan Smuts to West St Bridge (to circa 100m).

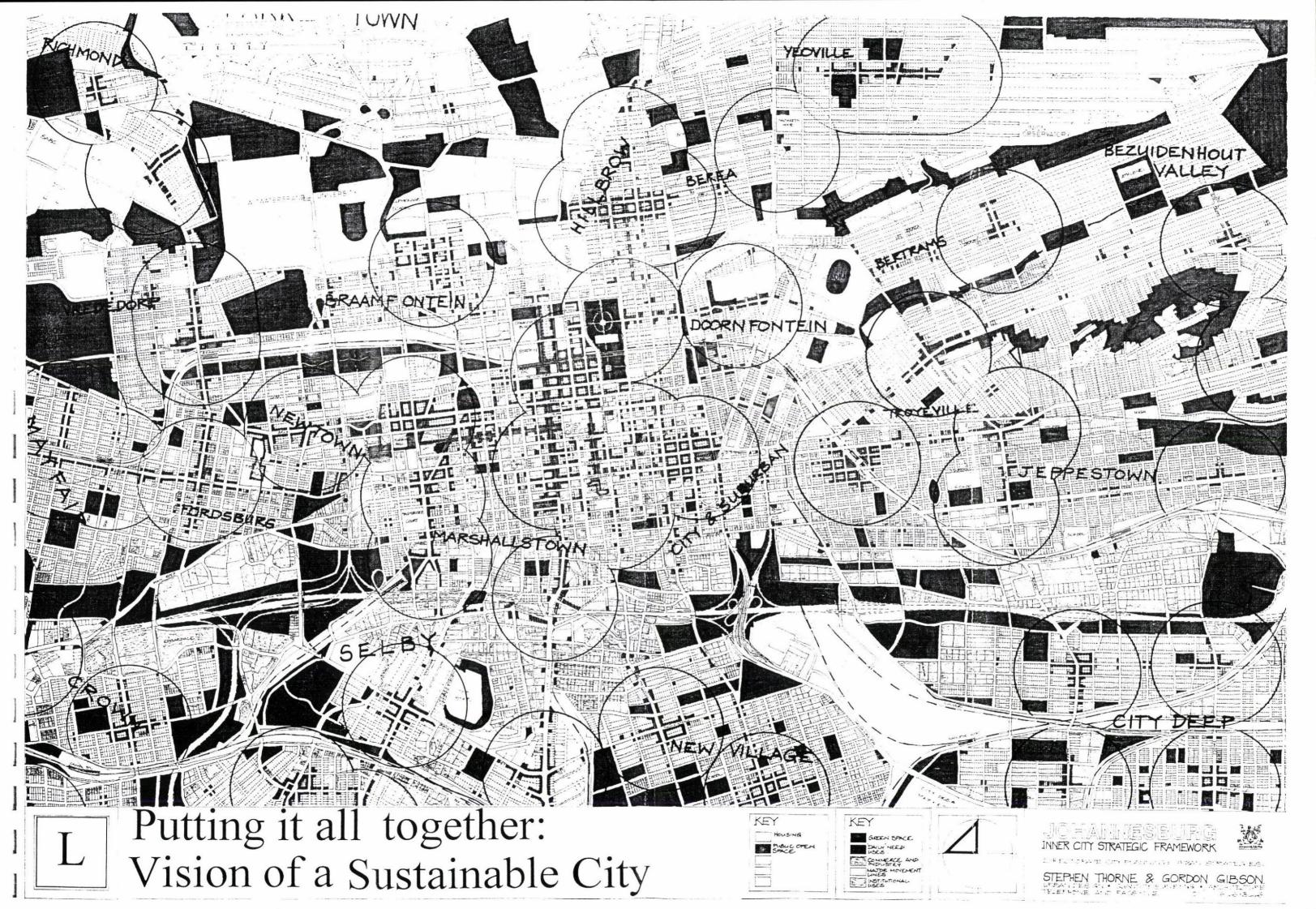
Jobs, training and business opportunities

- Initiate study for city sponsored cycle depot franchises; target self-sufficiency in (say) 5 years
- With other agencies, initiate a project for the early establishment of a major construction skills centre to serve the whole city (and perhaps the PWV).
- Explore mechanisms to incorporate a requirement for recognised training of employees to be a pre-requisite for public sector construction contracts.
- Seek the early establishment of a housing block caretakers training course to give workers the skills necessary to maintain and manage existing and new housing.
- Initiate discussions with the provincial and state governments to explore the expansion of a public service vehicle industry (electric buses, trams and commuter trains) perhaps drawing on existing capacity in the security vehicle industry in the East Rand.
- Extend upgrading of potential starter units, warehouses and workshops in Newtown.

Out of Town

- Long-term urban growth, based on development of primarily residential districts at intersections
 on movement lines should inform decisions as to the location of large out-of-town industrial and
 commercial uses.
- Adopt policy for a mix of primary land uses in new urban settlements.





M

Proposed Urban Design Projects

From Drawing M

The "A3" Project - North.

- To lead the development of the road grid on the A3 route with urban projects to maximise potential of new connecting routes.
- Urban development Project at the Barry Hertzog Empire Road junction to build housing and commercial developments and maintain the park and woodland.
- ◆ Two new and upgraded routes (streets not highways): one on Annet and Solomon bridging over to Mint and through the centre of Fordsburg to Main Reef (the road should be of similar quality to Main in Fordsburg); the other, the original line of the A3 proposal, should join Owl to Krause and follow the existing road system and on to Main Reef (again, this is *street*).
- The Gas Works project: quality residential and commercial development. Land reclamation to begin immediately; adjacent sites developed with housing; assessment of Sturrock Park land use, most to be retained as recreation space; reconstitute the Spruit.
- Project to consolidate the stability of the Showground/ Solomon and the Smit/ Solomon junctions; major housing developments (the Telkom and cemetery sites)
- Densification and consolidation of the Vrededorp and Pageview districts (our study shows the likely pattern of development but a detailed morphological assessment is required)
- · Braamfontein Station Square Project
- Smit Wolmarans commercial and residential belt
- Smit Street Wolmarans connection in conjunction with Transnet

The "A3" Project - South.

- The Braamfontein Bridge Project (including the first phase of removal of rail yards)
- The Carr Street, mixed use area with traffic calming
- Mint Street: major urban renewal and upgrading, including tree-planting
- Oriental Plaza: remaking the Bree Malherbe junction, ie putting back the corner
- A major upgrading of the Octavia Hill Housing Estate the formation of perimeter blocks, front doors at ground level, private internal areas, secure frontages. Some newbuild and demolition will be required to allow the extension of Mint Street. Many more houses here.
- Backs of existing Octavia Hill Flats "blocked" to front on to new park and recreation space on wasteland next to Main Reef.
- The southern extension: new urban settlements in Selby and Crown in conjunction with landowners and PWV government
- The Forsdburg Park and Wetlands Stormwater Management Project.

From Drawing M (contd)

Hillbrow

- The Louis Botha Project: Reduce the car-domination of the streets: first phase - calming from Claim to Cavendish, linking the north to the south, stabilising a centre at Bedford and/or Harrow with Louis Botha.
- The Clarendon Project: Reclaim Clarendon Circle for people (not just cars)
- The Hillbrow "Streets" Project: Two-way streets; open the grid; traffic calming, street activity.
- Opening out the Hillbrow Recreation Centre

Major Inner Urban Renewal Districts - remaking the balance of land use mixes, especially residential densification:

- Faraday
- Westgate
- City and Suburban (including a new square at Commissioner, Market, and Nugget).
- The regeneration of Beit St and Doornfontein: houses, commerce, workshops, industry
- Remake Ferreiras Dorp China Town
- · The Westgate, Anderson, Tramways Centre

Beyond the Inner City

- New urban settlements of housing and jobs to begin the integration of city and townships:
 at
- Riverlea
- New Canada
- Booysens
- · Booysens Reserve
- Vickers Road
- Kazerne West
- · Regents Park
- Village Main
- Turfontein
- Denver
- Selby
- Crown
- The Soweto Urban Design Project to identify local districts and future urban morphological trends

Public Spaces

- A City Greenspaces Project....
 - starting with Joubert Park and Union Grounds complete the Lutyens plan
- Tree-planting and urban "greening" projects throughout the inner city
- The Railway Parks Project
- The Ridges Project proclaim, protect and provide access to natural heritage
- Informal Trading Areas Street Trading and Markets
- The Turbine Hall and West Street Markets
- Public Transport Street-scape Projects
- · The Fordsburg Park Project
- Stormwater management and city greenspace projects
- Parks and woodlands to line the city motorways
- City Rivers Projects, Urban Parks and Waterways

From Drawing M (contd)

Jeppestown

- Housing infill and block newbuild east of Jeppe Station; major building conversions of commercial to residential and rapid densification of area to west of Jeppe station.
- The Jeppe "Streets" project: reopening the streets, traffic calming, identifying the movement routes and the likely new centre (at Berg and Jules?), decanting and re-opening Marshall.
- The Jeppe Station Project: The station as the centre of two "squares" probably of different characters - a new heart for west Jeppestown
- The Mai Mai Market Project: uplifting the surrounding area; give the market its city identity
- The Marshall Street Renewal Project (from Jeppestown to Westgate).
- The Berg Street Connection to Appolonia (likely to be the route of a ring road from Vickers): calming the streets, maintaining the flow, retaining the residential integrity; included is a square at the intersection with Roberts Road.
- The opening out of the Jeppe Park Estate and "perimeter blocking" to increase security and integration with the adjoining town.

and further south ...

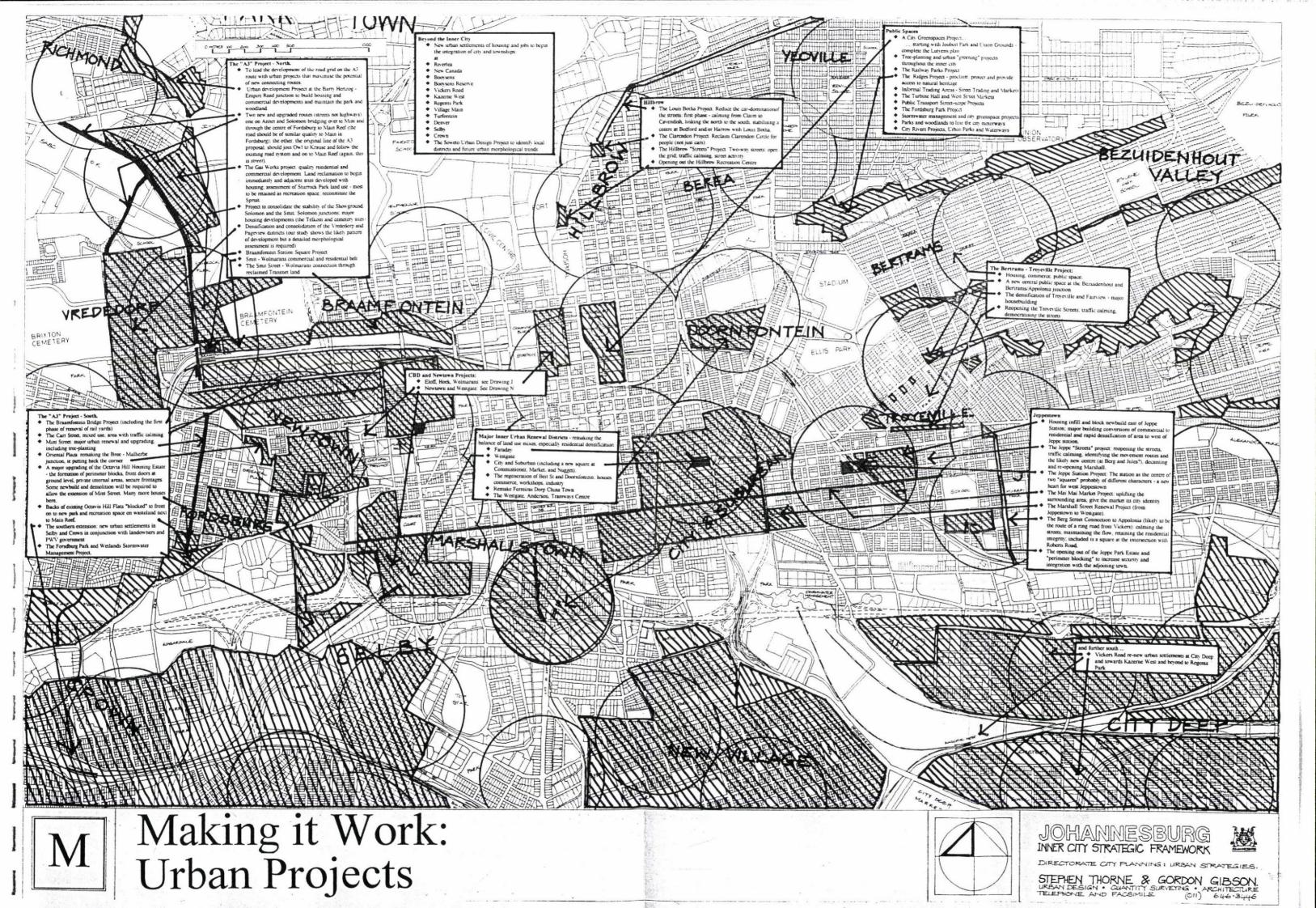
 Vickers Road re-new urban settlements at City Deep and towards Kazerne West and beyond to Regents Park

The Bertrams - Troyeville Project:

- Housing, commerce, public space;
- A new central public space at the Bezuidenhout and Bertrams/Appolonia junction
- The densification of Troyeville and Fairview major housebuilding
- Reopening the Troyeville Streets; traffic calming, democratising the streets

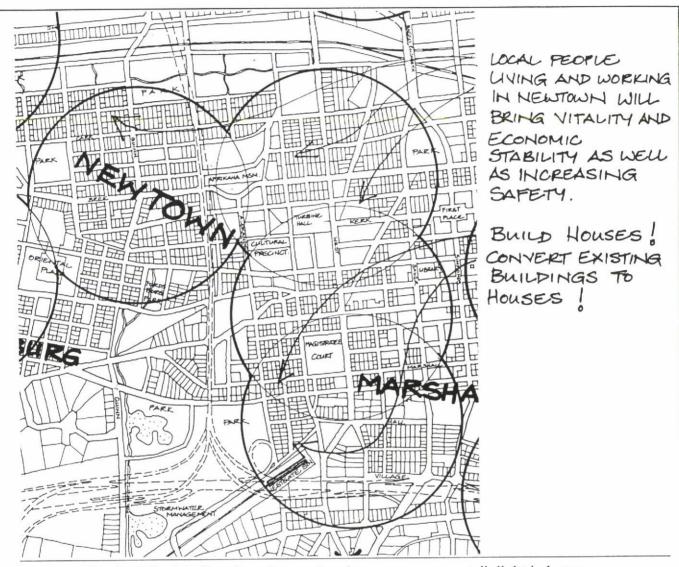
CBD and Newtown Projects:

- · Eloff, Hoek, Wolmarans: see Drawing J
- Newtown and Westgate: See Drawing N





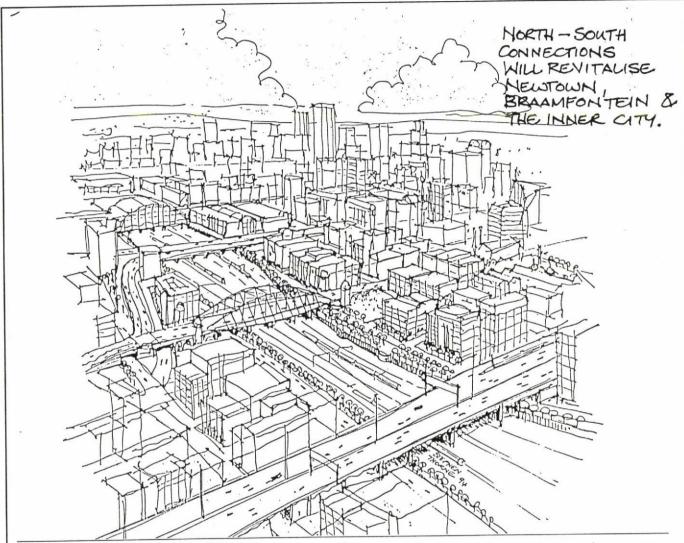
An Urban Design Framework for Newtown



The combination of a rich diversity of uses - housing, commerce, retail, light industry, entertainment, culture, education and recreation - with the some of the most active streets on the city grid - Commissioner, Market, Bree, President, and reinforced by the strengthening of Carr, Anderson, Marshall, Alexander, Wolhuter, Bezuidenhout and the powerful Jan Smuts - West connector, will make Newtown one of the core areas, if not *the* core area, of the city. What will really make it buzz is a high density of housing - around 400 people per hectare. Over 15,000 homes, for a wide variety of income groups can and should be built. Development controls requiring residential development will be necessary to hold land values. The new "centre" will extend from Bree, along West, to Westgate, impeded only by the existing inactive ground floors of the single-use financial institutions.

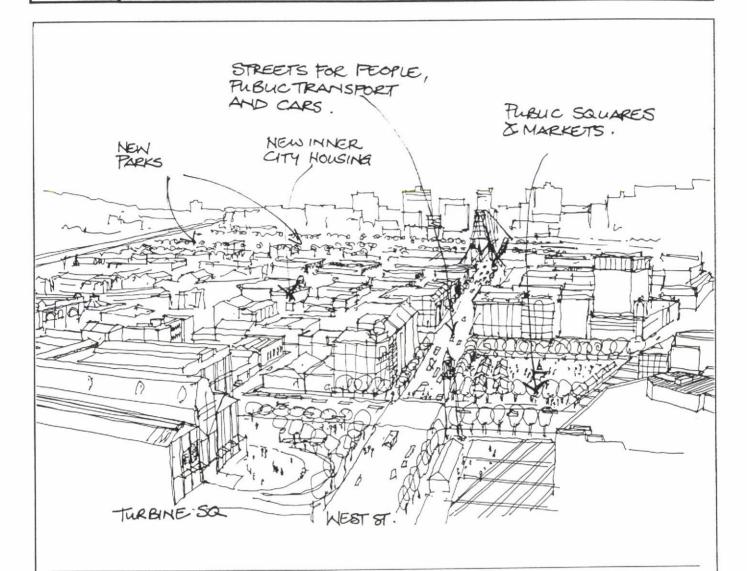
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Movement: Global Connections at the Heart of the City

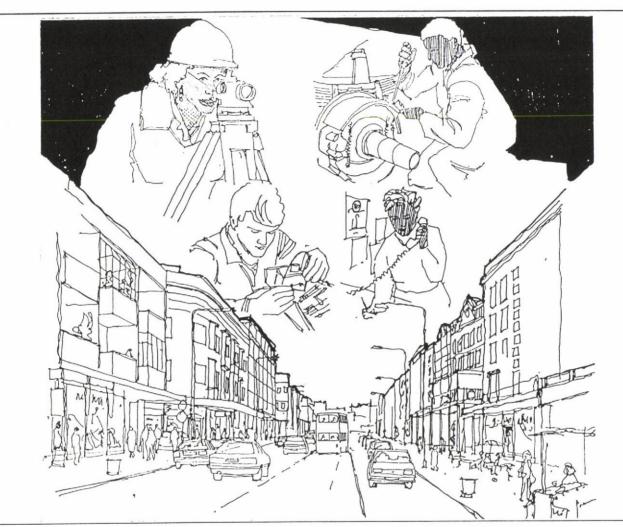


The elaboration of the city grid from Westgate brings movement from the south on various axes and strengthens the existing active east - west connectors through Newtown. New north-south connections at Braamfontein Station, Quinn to Yale and Jan Smuts to West will knit the city together. The direct connection from Smuts, over the railway to the south will prove to be the single most effective intervention in the development of the city for the 21st century. A bridge for all people - not just for cars - will be a landmark in the global movement system, connecting the south to the rest of Africa. It must integrate the movement of all city users. An engineer of the repute of Spain's Santiago Calatrava would make this a worthy "Mandela Bridge". In Newtown it will provide a gateway to a rich network of activity and movement. We urge an early, in principle, planning decision (and a halt to the building of the Rail Museum - some bays must be re-sited).

Opportunities for a diversity of inner city public spaces



There are few other parts of the city capable of responding to the city's acute shortage of accessible public spaces. A diversity of spatial sequences is offered: Traditional park and recreation spaces on the reclaimed railway land leading to historic railway spaces (existing lines left in the street network), to the museum, to public "squares" at "Kippies" old and new!; a studio, market and workshop district in the potato sheds leading to a revitalised west end; the Museum Africa forecourt to Mary Fitzgerald to the Cultural Precinct to "Tramways" Square to Chinatown; or to the M1 gardens to Fordsburg Park and the city wetlands project. From the Cultural Precinct to the Turbine Market, the West/Bree Square and Kerk Street Pedestrian Precinct. From the Westgate market and park to the SAP recreation grounds and the mixed habitats or into the bustle of the city. 'Sounds like good town.



To suggest that the commercial potential for Newtown is "exciting", is an understatement. A bustling Westgate bringing life back to west Marshallstown (dampened by single use commercial activity) feeds light industrial sites to the west and "cultural commerce" towards the precinct. North of the railway, the new Wolmarans - Smit grid will generate valuable and prestigious commercial space at the new bridge. On the south, a node on the junction of the proposed north south connector at West with Bree will remove all doubts about the viability of a revised outward looking Metro Mall project to open the retail route on Bree towards Eloff.

And then there is the new Provincial Government. The urban design challenge is that the new administrative density being (rightly) brought in does not disrupt the commercial and social potential of Newtown and the CBD. The new administration must be integrated, unlike the relative sterility of the CBD, with a high proportion of housing and a variety of other uses into a vibrant, safe and democratic city.

Section O Appendices

- 1. Acknowledgements
- 2. List of Consultees
- 3. Bibliography

1. Acknowledgements

In the time available, we have not been able to pursue copyright of a small number of illustrations and these should not be re-used without the publishers' permission. The Drawing of Commissioner Street in 1890 on Sheet F2 is attributed to the Barnett Collection in Chipkin (1993); the Wetlands drawing on H4 is from Birmingham City Council (1990); the shopfront and the street-scape in H5 are from Bentley et al (1985); also on H5, safe parks is from Leicestershire Constabulary (1993); The A3 Road Plan on F4 is from "The Star" of 19th July, 1994.

All other drawings and illustrations are our own work.

2. List of Consultees

(alphabetical order)

ACSTOP, Zed, George, Sisa

AMPROS, Monty Sack

ANC, Building and Technical Services, Zama Mvusi and Sipho Njobe

Albonica Sack, Architects, Monica Albonica and Nick Sack

Steve Bayliss, Town Planner

Black Management Forum, Lot Ndluvo

Max Bond, Davis Brody and Associates, Architects

Burger and Waluk, Town Planners

CSIR, Water Technology, Allan Batchelor, Ralph Heath

Central Johannesburg Partnership,

Neil Fraser

Housing Task Group

PWV "Capital City" Task Group

Urban Development Group

Civic Association of Johannesburg, Pat Lapunya

DBTM Architects and Planners, Linda Mvusi, Bill HaywardTony Gebhardt, of Hamlyn

Gebhardt, Quantity Surveyors

Gawie Greef, Urban Designer

JH Isaacs, Gavin Taylor

Johannesburg City Council

Town Clerk, Nicky Padayachee

Directorate City Planning Urban Strategies, Morag Gilbert, Arlene Segal, Jane Eagle,

Johan Visser, Gareth Poole, Alan Hackner, Herman Pienaar, Jo Poole, Karen Fortman

Deputy Director Housing, Ian Taitz

Housing Department, Mavella Dlamini,

Housing, Health and Urbanisation, Jenny Rudolph, Sabera Bobat

Consulting Engineers, John Hooper, Tom Efthymiades, Charles Kitay

Planning: Vince Barter

Roads Directorate: Martinus Wilken

Solid Waste: Dave Hutt, Attie Boshof

Water and Gas, Gas Distribution: Barry Bredenkamp

Waste Water: E.R.Bebbington

Electricity Directorate: SJR Farquharson Metropolitan Planning: E. McCormick

Johannesburg Forum

Caswell Mthombeni, Jeppestown Land Use Survey

Hannah Le Roux, Architectural Journalist

Kagiso Trust, Nkululeko Sowazi

Muhammad Mayet, Architect and Urban Designer

Metro Chamber, Planning Task Group, Rob Taylor, Vic Milne, Roger Boden, Glen Mills,

Trevor Pengelly, Abigail Goldberg, Erky Wood, Mark Feldman and others

Metro Planning, Transport, Alistair Burns, Graham Carey

NAFCOC, Max Tlakula

National Housing Forum,

Johan De Ridder, via Kagiso

Kay Brugge

National Institute for Economic Policy, Selby Shezi

NEWHCO, Rod McGillivray

Taffy Adler

Sisa Njikelana, Community Bank

Jean Nuttall, Architectural Journalist

Intersite, Andre Engelbrecht

Propnet, Basil Brink

PWV Government, Minister of Local Government and Housing, Dan Mofokeng Assistant to Minister of Local Government and Housing, Eze Roboroko RDP Commission, Ben Turok

RFB Architects,

Robin Fee

Izzy Martinez (re Tirisano Village)

SABCAP, Conny Petersen

SANCO, Sandi Mgdlana

Senneque Smit and Maughan Brown, Planning Consultants

Settlement Dynamics, Mike Morkel

Rod McKinnon, Sue, and Steve Bayliss

Seagang Sikang, Soweto Retailer, Member of the Soweto Traders' Association

Thebe Properties, Zwelakhe Mankazana (Property Manager), Paul Koloti (Director)

URDEV, Patrick Chan

Wits University, Faculty of Architecture, Glen Mills,

Department of Urban Design, Roger Boden, Ron Kirby, Monica Albonica

Erky Wood, GAPP, Architects and Urban Designers

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