	square/Tickets					
16. Bridge over Rail	Bridge over rail	Erf area	4,464.78			
	Building foot print/Gross Building area		2245.09	2245.09	50%	50%
17. Parking	Parking	Erf area	3,300.00			
18. Retail	Retail	Erf area	1,207.36			
19. High Density Housing	High Density Housing	Erf area	67,719.91			
	Building foot print/Gross Building area		11994.22	26987	40%	18%
20. Municipal	Municipal	Erf area	5,364.26			
	Building foot print/Gross Building area		1908.59	1908.59	36%	36%

8.2 Alternative Concepts

Urban Design specialist, Mr Pege Illinge from Sweden (Sweco) spent some time with the consortium team and Buffalo City Municipality and developed some ideas for the Mount Ruth Nodal Precinct.

Diagrams of these concepts are attached in Appendix 6.

9. ENVIRONMENTAL IMPLICATIONS

"In terms of the draft layout and consolidated concept plan for the Mount Ruth Nodal Precinct, proposed activities range from high density housing to playing fields to a light industrial park. Existing land uses are either undetermined or land administered by the Department of Land Affairs. In both instances, rezoning to any other usage will require an Environmental Impact Assessment consisting of at least a Scoping Report. A full public participation exercise is envisaged in terms of the Environmental Impact Assessment requirements.

Although no fatal flaws are anticipated with respect to environmental management issues, (refer to Appendix 7: Pre-Application Environment Screening Report) the following higher priority issues will need to be considered:-

- Identifying alternative recreational areas or incorporating these into the development plan (as is currently proposed);
- There could be existing contamination of ground in the vicinity of the station resulting from years of oil, diesel and other spillages along the rail tracks;
- Appropriate measures must be taken to manage storm water run-off and potential flooding;
- The provision of adequate water supply and sewage infrastructure;
- Existing water resources (streams and dams) could be incorporated into the design of the project);
- Construction building debris and any resultant hazardous waste will need to be properly disposed of in a licensed landfill;
- During the operational phase, hazardous waste generated by light industry and other non-hazardous waste will need to be properly disposed of in a licensed landfill; and
- Consideration should also be given to:-
  - Opportunities for recycling;

- Green procurement policy; and
- Reducing energy consumption.

An Environmental Management Plan (EMP) should be developed to mitigate the potential generic and site specific environmental risks associated with the Mount Ruth development. The EMP(s) should cover design, construction, operational and site closure phases.

In terms of overall sustainability, it is also **critical** that the financial and social sustainability of the projects are determined before the project is initiated."

10. DETAILED LAYOUT PLAN

10.1 Overview

The detailed layout plan shows the layout for the area between the N2 and the R102, proposed development over the railway station and on the Mdantsane side of the station in the area known as Masibulele (refer to the detailed Layout Plan No. 13).

The important feature of the layout plan is the proposal to link Mdantsane with the land situated north of the R102 by constructing a pedestrian bridge over the railway line, linking public squares and a fresh produce market. There would be a taxi rank and parking facility in the southern sector across the road from clusters of high density housing, community facilities and a playing field.

The land available between the R102 and the N2 would be developed around the station and linked in an east/west direction along a pedestrian spine. This would allow people to walk from Mdantsane across the railway and roads to the mixed development situated in the nodal area.

Important features will include a municipal community support centre, markets, parks, retail/office and medical suites, a cultural heritage centre, a light industrial park and high density housing. Travelling public would have access to a petrol filling station and info centre opposite the cultural/heritage tourism centre. This may assist in achieving a tourism hub for Mdantsane and Newlands in an effort to open up the tourism routes and products in this area of the city.

The detailed layout proposes the following land uses and associated land use areas. Refer to Table 9 below:-

Table No. 9: Land Use

Land Use	No. Of Erven	Erf No.s	Area M²	%
Public Open Space	4	1, 3, 9, 12	23076.28	6.45
High Density Housing	3	1, 11, 19	125228.94	35.01
Light Industry/SMME's	2	4, 13	40196.21	11.23
Petrol Filling Station	1	5	8387.29	2.40
Cultural Heritage & Retail	1	6	12333.50	3.44
Municipal	3	7, 10, 20	25997.26	7.26

Retail/Offices/Medical & Entertainment	1	8	39191.50	10.96
Transport Facilities	1	14	3300.00	0.92
Public Square & Ticket Office	1	15	2200.00	0.62
Parking	1	17	3300.00	0.92
Retail	1	18	1207.40	0.33
Bridge over Rail	1	16	4491.00	1.25
Road Reserve			68706.57	19.21
TOTAL			**357615.95**	**100**

The proposals could generate development of some 550 housing units (at a density of 50 dwellings per hectare) and approximately 10 000 square metres of retail space (at a ground floor coverage of 50%).

10.2 Associated High Density Housing Properties

Located in the secondary planning area, the two associated high density housing properties are erf 1689 located in Thembelihle and erf 1691 located in Illinge (see Locality Plan). The following details pertain:-

10.2.1 Erf 1689 - Thembelihle

- **Physical Characteristics**

  This property measures approximately 3,2 hectares and is situated immediately south of the railway in the Bufferstrip between Mount Ruth and Egerton Station. A site inspection revealed that at least 30% of the site is a quarry which fills with water in the rainy season. The remainder of the site is uneven because it appears that large areas of rubble, soil and rock have been deposited there (refer to Plan 14).

- **Infrastructure**

  The portion of land to be developed is approximately 3ha. At a density of 50 units per ha, Thembelihle will have 150 units.

  Thembelihle already has potable water. The anticipated flow is 4.2 l/s. This is an increase of 2.1 l/s when compared to the surrounding densities. This is not considered significant although minor augmentation of local reticulation may be required.

  Even if the existing sewers in both areas have been laid to the minimum permissible gradients, there is spare capacity to drain both areas.

- **Development Potential**

  This site needs to be rehabilitated and the quarry filled in. A managed development programme could yield a total of between 150 and 200 dwelling units depending on the choice of high density housing and the market demand.

  The cost of quarry rehabilitation would probably not be accrued from the subsidy funding high density housing and accordingly Buffalo City Municipality would need to consider the opportunity cost of such

development. The municipality would probably need to secure its own funding for the rehabilitation work. The large number of potential sites could justify the indirect costs to the city but this will need to be investigated by interested social housing institutions and the housing division.

10.2.2 Erf 1691 - Illinge

- **Physical Characteristics**
  This property is situated to the south of the Mount Ruth Node in Illinge village within the bufferstrip. It has an area of some 8 250 square metres and has steep gradients in excess of 1 in 5 through the central portion (refer to Plan 15). There are developable areas to the north and south.

- **Infrastructure**
  The portion of land to be developed at Illinge is 1 ha. At a density of 50 units per ha, Illinge would have 50 units.

  Illinge has potable water, with an anticipated flow of 1.4 l/s. This is an increase of 0.7 l/s when compared to surrounding densities.

  Even if the existing sewers have been laid to the minimum permissible gradients, there is spare capacity to drain both areas.

- **Development Potential**
  At a density of 50 dwellings per hectare, some 40 high density housing units could be located here. However, a co-operative model may be more viable because conventional rental stock on such a small site may not be sustainable.

11. PHASING

It is envisaged that the Mount Ruth Nodal Precinct will be developed over a period of eight to ten years. The three phases of development are depicted on the Phasing Plan (refer to Plan 16).

Of critical importance in Phase 1 will be certain critical actions as follows:-

- An application to SANRAL for the proposed intersection with Billie Road extension and the N2;
- An application to SANRAL for relaxation of the building restriction along the N2;
- Application for donation of the land situated between the R102 and the N2, owned by Department of Land Affairs;
- Provision of adequate water, sewerage and electricity bulk infrastructure to support the development.
- An application to Propnet and Department of Transport for permission to build the pedestrian bridge over the Mount Ruth Station and the road bridge from R102 to Toyana Street;
- Satisfactory arrangements to accommodate the affected families living in Masibulele where high density housing is proposed; and

- ❖ Satisfactory arrangements being made to accommodate the affected families residing in the area where the proposed Billie Road/N2 junction is proposed to be constructed.

12. IMPLEMENTATION

The seven strategies explained in section 6.5.3 and the Phasing (section 11) form the management framework for implementation. The activities, budgets and timeframes are described below:-

It is important to emphasise that successful development at Mount Ruth is dependant upon a substantial public investment programme over the first three to five years. This investment needs to ensure adequate water, sewerage, roads, electricity and communications capacity are in place to support the node. Further, the transportation systems, facilities and operational arrangements are needed to change Mount Ruth from a small suburban station to an inter modal transport hub.

Having achieved this, the community and private business sector will be able to invest in the high density housing, commercial and industrial development so urgently needed in Mdantsane and Newlands. Mount Ruth will be able to play an effective role as a transportation hub and gateway to the area after having achieved these investments over the next eight to ten years.

12.1 Recommended Projects and Activities

12.1.1 Institutional Arrangements

The Mount Ruth Project Steering Committee proposed that when once the Mount Ruth Nodal Plan has been completed and Council approval obtained by the City Planning Department, the implementation process of the project be conducted by the Mdantsane Urban Renewal Programme Unit (MURP). This is because Mount Ruth is one of the Mdantsane Urban Renewal Anchor Projects and the MURP Unit is best placed to manage and co-ordinate the development process.

12.1.2 Economic

As part of the economic component, the following implementation actions in Phase 1B and 2 of the Mount Ruth Nodal Precinct project are recommended to ensure sustainable local economic development:-

- ❖ Identify core (i.e. catalytic) activities for each component of the proposed development concept;
- ❖ Compile bankable business plans for the core activities;
- ❖ Develop a marketing strategy to attract appropriate private investment;
- ❖ Access funding and develop activities according to PPP principles;
- ❖ Establish linkages between MURP and Buffalo City and the Eastern Cape Tourism Board;
- ❖ Compile an entrepreneurial strategy to identify Mdantsane residents to participate in the development;
- ❖ Establish partnerships with existing textile/clothing companies and investigate in more detail, the potential for sub-contracting partnerships; and

- ❖ Identify training requirements focusing on the three components of the proposed development concept, compile a training strategy and programme for implementation.

12.1.3 Land Use Planning

Having obtained Council approval of the Development Plan, it will be necessary that the subdivision and rezoning of the various land parcels be undertaken. The detailed Layout Plan (Plan 13) and the urban design concepts are to form the basis of this activity.

12.1.4 Infrastructure

The various works and investments required to cater for the bulk infrastructure needs are described in section 4.4.1.7. The southern area of the node bellow the station could be developed earlier due to the proximity of infrastructure. However, the vast bulk of the node requires infrastructure investment.

12.1.5 Transportation

The required implementation of transportation infrastructure and facilities are described in section 6.4 and Table 7. The highest priorities relate to creating a safe and accessible public transport hub at the station and associated taxi/bus ranks and, linking the area to the N2 so that Mdantsane and Newlands become an integral part of the city transport system and road network.

12.1.6 High Density Housing

It is of crucial importance that a market survey and analysis be conducted in the Mdantsane and Newlands areas to confirm the needs and aspirations of the market. The results of the survey will shape the nature of the pilot high density housing project which needs to be built in the node. This pilot scheme will assist in testing different housing options and enable the market to achieve greater awareness of the high density housing opportunities.

The housing initiative will also require the re-housing of some 25 families affected by the proposed N2 interchange on the Newlands side of the freeway. Land will need to be secured and new housing developed for them as soon as possible.

12.1.7 Environment

Section 9 sets out the environmental implications associated with the nodal development plan. Of highest priority is the environment impact of the development proposals and an environmental management plan (EMP) for the implementation process. The EMP should cover design, construction, operational and site closure phases. In addition, the financial and social sustainability of the project need to be determined.

12.1.8 Land Assembly

The Department of Land Administration has commenced the process of land assembly for the node. Applications have been made to Department of Land Affairs to arrange for the donation of a large portion of the land constituting the node. Table 2 in Section 4.2 sets out the land ownership details. It is anticipated that land assembly will involve the acquisition or donation of several properties (refer to Table 10 below).

Table 10: Land Assembly

Erf No.	Owner	Deed of Transfer	Area (ha)
303/13	S. A. Development Trust	T34/1990	2,3934
303/15	S. A. Development Trust	T1201/1990	21,2633
616	S. A. Development Trust	T3338/1988	18,8964
619	S. A. Development Trust	T3338/1988	0,8570
620	S. A. Development Trust	T3338/1988	3,1401
1404 (2 portions)	Buffalo City Municipality		2,8100
		Total	**49.3602**

Note *: Propnet have queried the ownership of this land, indicating that in terms of their records 1404 is owned by Propnet.

12.2 Budget Programme

Implementation of the Mount Ruth Development Plan will require investment in a wide range of projects as discussed above (refer to section 12.1). The budget required and the timeframes associated with the implementation programme are set out in Table 11 below:-

Table 11: Mount Ruth Implementation Programme and Budget

Item	Project	Project Description	Budget Total	Phase 1 2006-2008	Phase 2 2008-2010	Phase 3 2010-2012
1	Land Use Planning	Subdivision and Rezoning	100 000	100 000		
2	Land Assembly	Acquisition of land by donation/grant	20 000	20 000		
3	Environmental Impact Assessment	EIA of all proposed developments	175 000	100 000	50 000	25 000
4	Environmental Management Plan	EMP to manage the implementation process	50 000	50 000		
5	High Density Housing	Market Survey	120 000	120 000		
6	High Density Housing	Pilot Housing (10 units)	300 000		300 000	
7	RDP Housing	Rehousing of 25 Newlands families	1000 000	250 000	750 000	
8.	Infrastructure	**Water Supply**				
		▪ Augmented Storage (1.44 Ml)	4 320 000	4 320 000		
		▪ Pumpstation	300 000	300 000		
		▪ Additional Ground Storage (3Ml)	2 500 000	2 500 000		
		▪ Reticulation Mains	778 250	778 250		
		Wastewater				
		▪ Pumpstation	300 000	300 000		
		▪ Reticulation Mains	904 800	904 800		
		▪ Pumping Main	126 000	126 000		
		▪ Outfall Sewer	510 000	510 000		
		▪ Contribution to upgrade of WWTW	1 650 000	1 650 000		
		▪ Pipeline crossings (2 No) jacked under railway line	250 000	250 000		
		Sub Total	**11 639 050**	11 639 050		
9	Transportation	▪ N2 Interchange	20 000 000		20 000 000	
		▪ Extension of Toyana Street	8 000 000			8 000 000
		▪ R102 (Voortrekker Road)	2 800 000	5 000 000		
		▪ Realignment of Newlands Road	1 000 000			
		▪ Internal Streets	1 125 000		562 500	562 500
		▪ Pedestrial Bridge over N2	1 500 000		1 500 000	
		▪ New Taxi Ranks	5 000 000	8 800 000		

		▪ New Bus Terminal	3 500 000		3 500 000	
		▪ Toyana Street	8 700 000			8 700 000
		▪ Section of Newlands	1 400 000			1 400 000
		Sub Total	**53 025 000**		25 562 500	18 662 500
		Total Phase 1		**21 079 050**		
		Total Phase 2			**26 662 500**	
		Total Phase 3				**18 687 500**
		Grand Total	**66 429 050**			