

CHAPTER SIX

LOCAL URBAN PLANNING AND HOUSING



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LOCAL URBAN PLANNING AND HOUSING LAND

6.1 INTRODUCTION

The purpose of this Chapter is to examine how the aims of the regional plan could be fulfilled in the various towns in the 'PodShkod' urban region where growth is proposed. These studies have been done for seven localities: Shkoder, Shkoder Corridor, Lezhe, Velipoje, Shengjin, Bushat and Vau i Dejes.

However, the studies are not intended to be proper 'local plans' (which municipalities would prepare.) They are less than that. They answer the question: if the regional plan were carried out, what would have to be done in the urban areas which are designated for growth?

The plans presented here need more detailed study before they can be used practically. For example, in the case of Lezhe city (figure 6.3) the 'business land' contains already extensive building development. The municipal authority should prepare a much more detailed plan which shows proposals for each part. This may include areas for rehabilitated sites and buildings; land for new commercial buildings of various types; public projects such as sports fields and landscape along the banks of the river etc. This detailed plan should also show road and infrastructure projects within the area.

In other words, **this regional plan is not a sufficiently detailed basis for carrying out the project on the ground.** In Chapter 11, we have proposed funding to allow this local planning work to be prepared, and also to support the creation of competent institutions for managing its implementation. *This document is only a regional plan.* More preparation is needed immediately, plus continuous management thereafter, in order to ensure the achievement in reality.

Chapter 3 (the 'Concept Plan') presented the rationale for the seven growth points, and described their economic role and purpose. Chapter 4 estimated the population growth up to year 2020. Chapter 5 estimated the amount of land needed to accommodate that population, (including land for business purposes and social infrastructure.)

As Chapter 2 explains, this regional plan aims firstly to bring building development under control; and secondly, to ensure buildings are provided with roads and infrastructure.

In order to achieve this, it is necessary to ensure that (with minimal specific exceptions,) all building occurs within the boundaries of the growth areas described in this chapter. Such building activity should be given 'automatic permission' subject to specific criteria. The exceptions to this general rule are as follows.

- Rural development
Farmers' houses, animal stalls, barns for storage of crops and feed (plus other similar uses) will be needed in the countryside to facilitate the growth of agriculture. We would not expect density of such houses to exceed one dwelling per ten hectares. Such houses should not be utilized by people who depend on the urban economy, and so a strict development control system is necessary for land outside the defined urban growth areas.
- Urban regeneration
New building activity will be needed to repair or rebuild derelict sites and to 'infill' or densify vacant (or partly vacant) land in existing villages and towns. These projects should also be subject to development control.

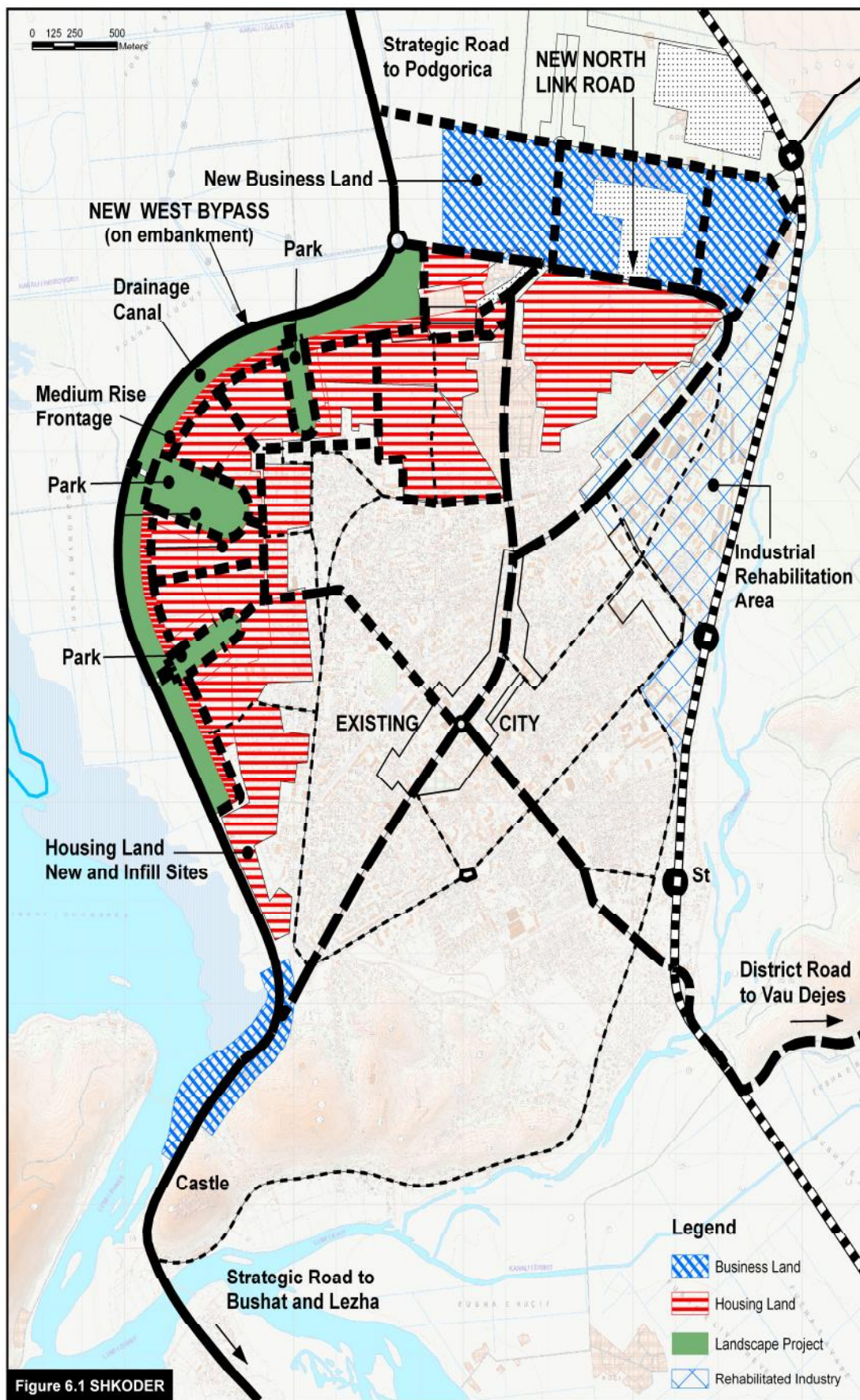


Figure 6.1 SHKODER

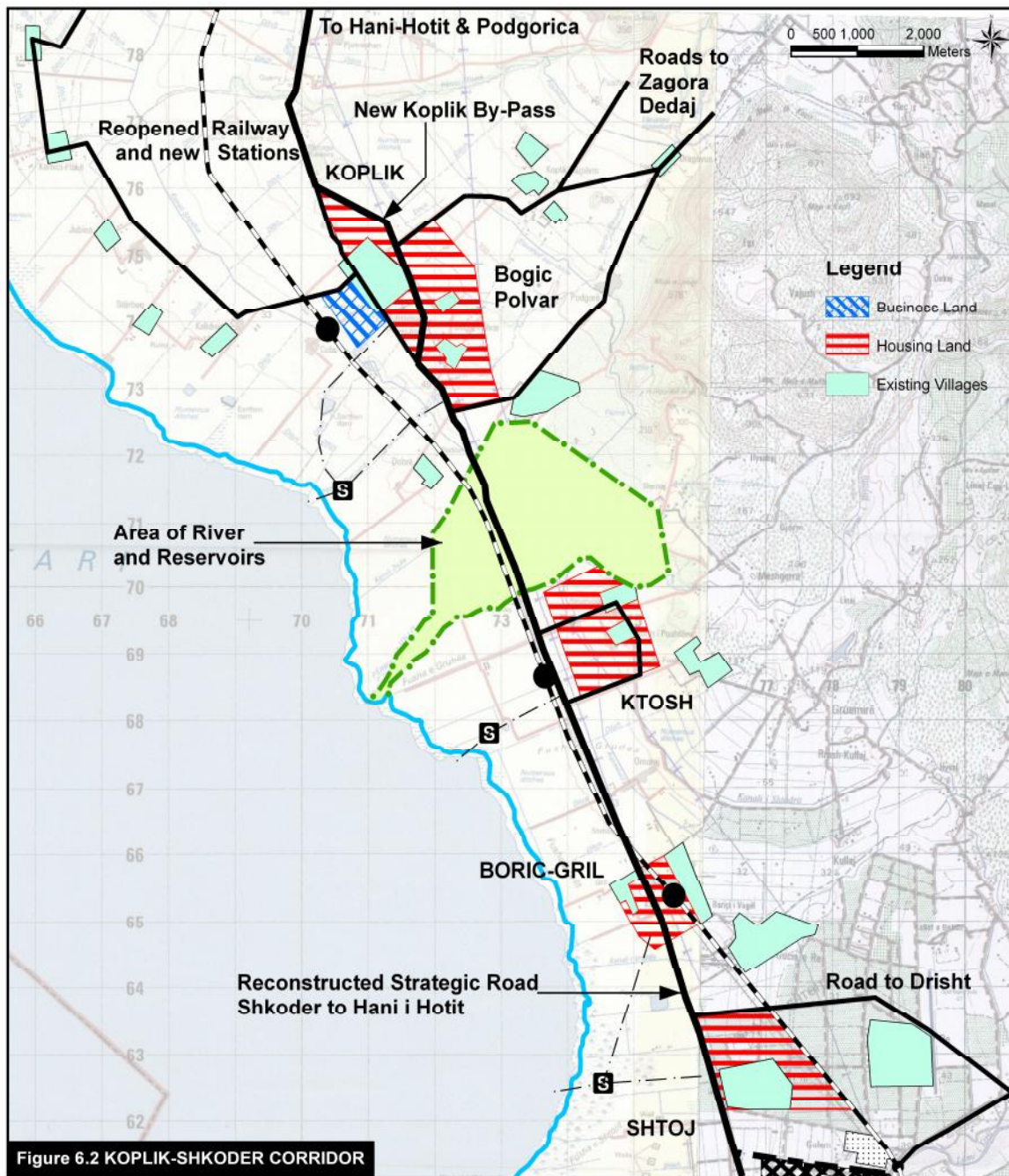


Figure 6.2 KOPLIK-SHKODER CORRIDOR

6.2 URBAN STRATEGIES FOR GROWTH POINTS

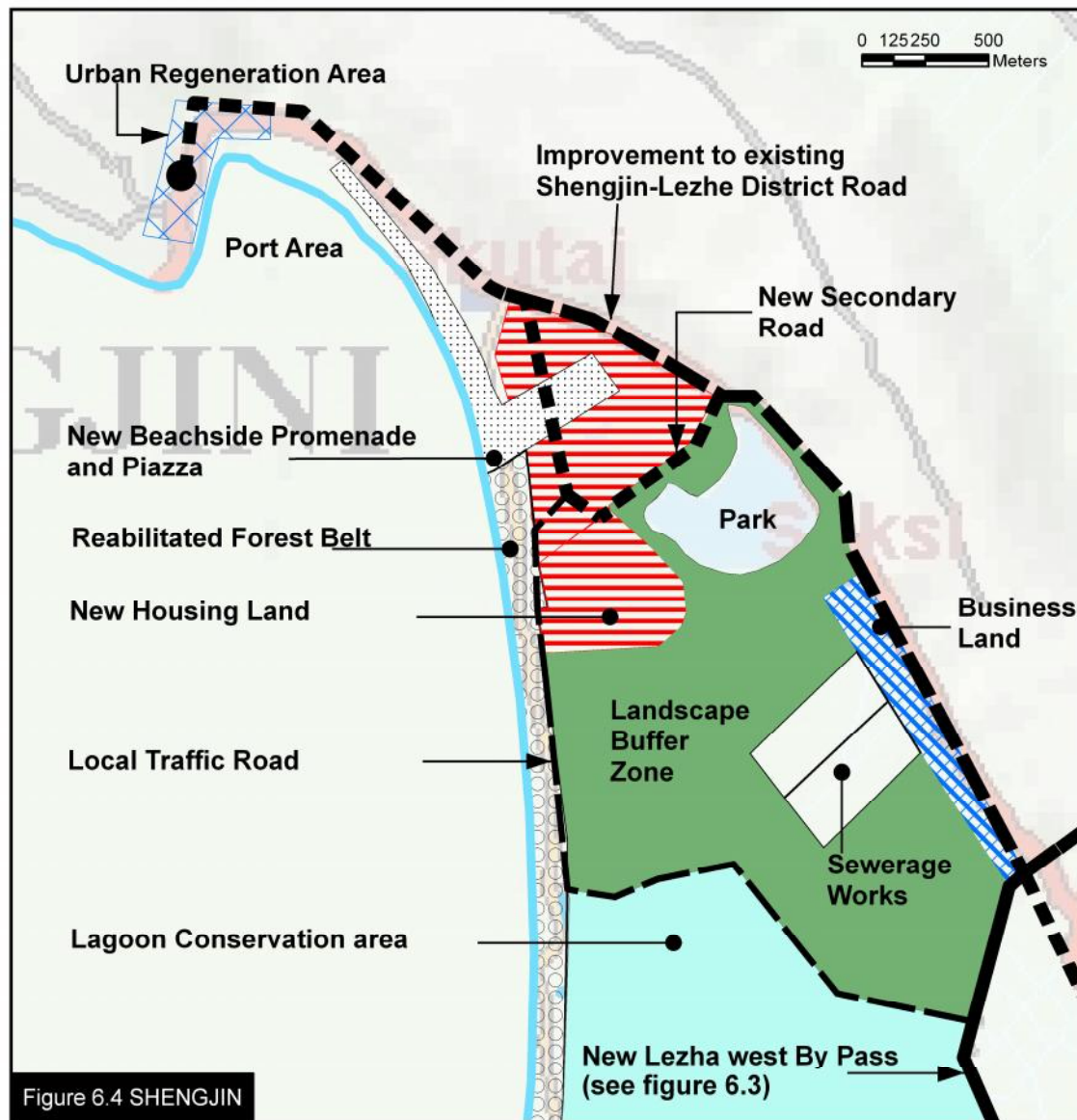
6.2.1 Shkoder City

This is illustrated by Figure 6.1. The regional plan would entail tasks being fulfilled in Shkoder, as follows.

- Shkoder By-Pass Road, so as to connect Podgorica to Lezhe without delay or congestion in or near Shkodra. This would

pass west of the city, (between the city and Lake Shkoder.)

- Provision of minor roads linking to the By-Pass Road and the rest of the city, and providing access to building plots for new housing.
- Delivery of land for housing
- Creation of new Central Business District (CBD) land to the south of the city.
- A new 'Northern Link Road' which connects the bypass to the existing industrial area (which needs extensive rehabilitation) and also new business land north of the city.



- Reactivating the railway, opening new stations at key destinations and achieving intermodal coordination in the long term, so as to enhance internal connectivity within the 'PodShkod' region.
- Carrying out primary, secondary and tertiary urban infrastructure works, plus flood control works, and the creation of 'Artificial Wetlands' for sewage treatment.

There are many other local needs, but probably these points are the ones with the greatest impact on regional plan strategy.

Figure 6.1 shows the new by-pass road. Intersections are not closer than 750 m and there are no cross -

roads. Frontage access directly onto this road must be absolutely forbidden.

The plan shows secondary roads which connect into the existing road system. Local roads (which are not shown) will provide access to development plots, which are situated on vacant land between the existing urban area and the by-pass.

Regarding sewerage, the best idea would be the creation of artificial wetlands to allow primary treatment before discharge. This takes up a lot of land. About 15 hectares might be sufficient for Shkodra. It would be located south of the city between the River Buna on the west and the Velipoje road on the east.

The main wellfield is a short distance north-west of the city, and it acts as a limit on the location of the envisaged by-pass. In effect, this is likely to result in a broad landscape (or 'non-development') zone separating the city from the corridor.

The river dredging and diversion projects (see Chapter 9) would reduce the level of the lake by 3metres and solve the flooding problem. If this were not carried out, then the proposed By-Pass Road would be raised on a dike, with a ditch next to it. The ditch would be pumped out to the lake. This problem is discussed in Chapter9.

6.2.2 Shkoder-Koplik ('KopShkod') Corridor

This is shown in Figure 6.2. The area on the north side of the lake, (between Shkoder city and Koplik,) has been developed at low density for housing in the form of villas or small apartment houses. This is illegal development, without infrastructure or layout. However, it is quite attractive and well-built. The land was of high agricultural value, and the extensive system of irrigation canals still exists (to a great extent.) The question now is what future policy should be.

Obviously this quantity of sound housing cannot be demolished. The density is so low (and the development is so dispersed) that it will be unaffordable to provide road access to plots plus urban infrastructure. This implies that the density should be increased by building more houses. But this should be done on the smallest possible area of ground so that density is high enough for affordable roads and infrastructure. There are two ways to achieve this. First, substantial vacant areas should be reserved for small farms or market gardens, and second, the local plan should define a boundary of urbanization, beyond which no new building would be allowed. The layout would concentrate the urban growth at defined localities:

- Shtoj
- Boric-Gril
- Ktosh
- Bogic-Polvar
- Koplik

The proposed Koplik By Pass would intersect the Koplik-Dedaj road, and urban growth land would lie between the existing town and the by pass.

- The existing Shkoder-Koplik road, which is 15km long, would be widened and upgraded. Intersections with local roads

would be at minimum one kilometre intervals, and provide access to buildings. Frontage access would be strictly forbidden.

- Substantial areas of undeveloped land would be reserved for small farms (or 'market gardens')
- The outer boundary of future urbanization would be drawn so as to exclude areas of low density or dispersed development. Future building on this land would be forbidden.
- Sites for schools, land for business and commerce and public uses would be identified.
- Lateral roads would contain sewers, with a collector sewer alignment parallel to the shore of the lake. At intervals of several kilometres, artificial wetlands (of 4 to 5 hectares) would be constructed as sewage treatment lagoons, with discharge into the lake.
- The railway from Lezhe to Podgorica should be brought into function with new stations (with car parks) at intervals.

The net density of development should be sufficient to allow roads and infrastructure to be financed. This will allow pollution of the lake to be reduced. In order to achieve this, the boundary of urbanization should be tightly drawn.

6.2.3 Lezhe City

The strategy is shown on Figure 6.3. Lezhe city has some strong topographical features which help to create its exciting character, but also they are leading to some significant 'structural difficulties'.

The city originated in a narrow defile between two steep hills occupied by a river. This problem manifested itself when the railway had to enter a tunnel to connect between the coastal plain and the Shkoder-Lezhe plain. On the south side is Lezhe fortress and a steep hill, with great archeological sensitivity. The side of the hill has been partly built over more recently.

The Shkoder-Tirana road cannot be widened for topographical reasons. It provides the main entry point to the city core via a small roundabout (with a minibus park lining the national road) and a narrow bridge over the river. This bridge leads to the old Tirana road (via Milot and Lac) The Milot road is the main commercial street.

The congestion can only get worse, and this will suffocate the progress of the city in the long term. The response to the lack of expansion space in more recent years has been to build on the north hill, but this cannot expand any further. We can see only one possibility. The proposed solution is to build a short tunnel in order to take the Shkoder road from Balldren village under the hillside. It would be located north of the old railway tunnel and when it emerged on the west side of the hill, the road would turn southwards and join the Tirana road at an existing roundabout on the western edge of the city. Refer to Figure 6.3. This would stop congestion in the city and release its scope for long-term development.

We also envisage that (a) the minor road from Hajmel and Vau i Dejes turns westwards, over the river and connects to the Shkodra road at the tunnel entrance, and (b) the minor road from Zejmen and Milot similarly turns west (or south-west) just south of the city and connects to the Tirana road. These two roads would access new development land.

The benefit of this would be that congestion in the city core would be reduced. Traffic is now obliged to drive through the middle and over the bridge. If this idea were implemented, however, through-traffic would be eliminated and a traffic management scheme could regenerate the core.

Our strategy for Lezhe can be summed up in six points.

- The Principal Road (Tirana-Durres to Shkoder) would pass through a tunnel as described above. District roads would by pass the town on the north, (linking the Vau i Dejes road to the tunnel entrance,) and on the south (linking the Milot road to the Tirana road.)
- This would allow the centre to be decongested and regenerated. Land between the centre and the Tirana road (west of the river) would be developed for business, including a Central Business District.
- The three road projects mentioned above, would provide access to the three urban expansion zones, mainly used for housing, and referred to as the west, north and south zones: see Figure 6.3.
- The Sewage Treatment Works (funded by the World Bank,) will lie immediately north of the exit from the proposed tunnel.
- Development between the Tirana road and the sea should be halted for reasons of

traffic severance, flood risk and environmental protection.

- Finally, the flood risk should be ameliorated by the river dredging and reduction projects described in Chapter 9, and also perhaps by creating a canal along the Tirana road and pumping to lagoons on the western side of the road.

6.2.4 Shengjin

The strategy here is shown in Figure 6.4. There are six points.

- The Shengjin urban growth zone would lie west of the existing Shengjin-Lezhe road, north of the proposed Sewage Treatment Site and east of the beach/seafront. Land reclamation operations would be needed.
- There is an existing lake of no great ecological importance. The proposal is that this becomes the centre of an urban park. The buildings would cluster around the park.
- A 'promenade' would be built next to the beach, with an elegant building frontage of a coordinated design. The promenade would have a pedestrian piazza linking the beach to the urban park. The existing beach-side road would be upgraded
- The planning authority should prepare an urban design plan for the port area and the hillside adjacent.
- Employment land would be provided near the port for boat repair and marina-related activity, as well as fish-product firms. Two hotel sites (of 1 ha each) are also identified.
- There should be no road link between Velipoje and Shengjin for reasons of environmental sensitivity and impact.

The Environmental Legislation and Planning Project (funded by the E.C.) will prepare an urban planning study for Shengjin. It would be helpful if the local plan envisaged by the Regional Plan were coordinated with this.

6.2.5 Velipoja

The Strategy for Velipoja is shown in Figure 6.5. The Concept Plan (Chapter 3) envisaged a Strategic Road between Ulqin and Bushat, with several purposes. One purpose would be to extend the Adriatic Riviera as a tourism region into Albania. This plan envisages such a road crossing the River Buna five kilometers north of Velipoje: see Figure 6.5.

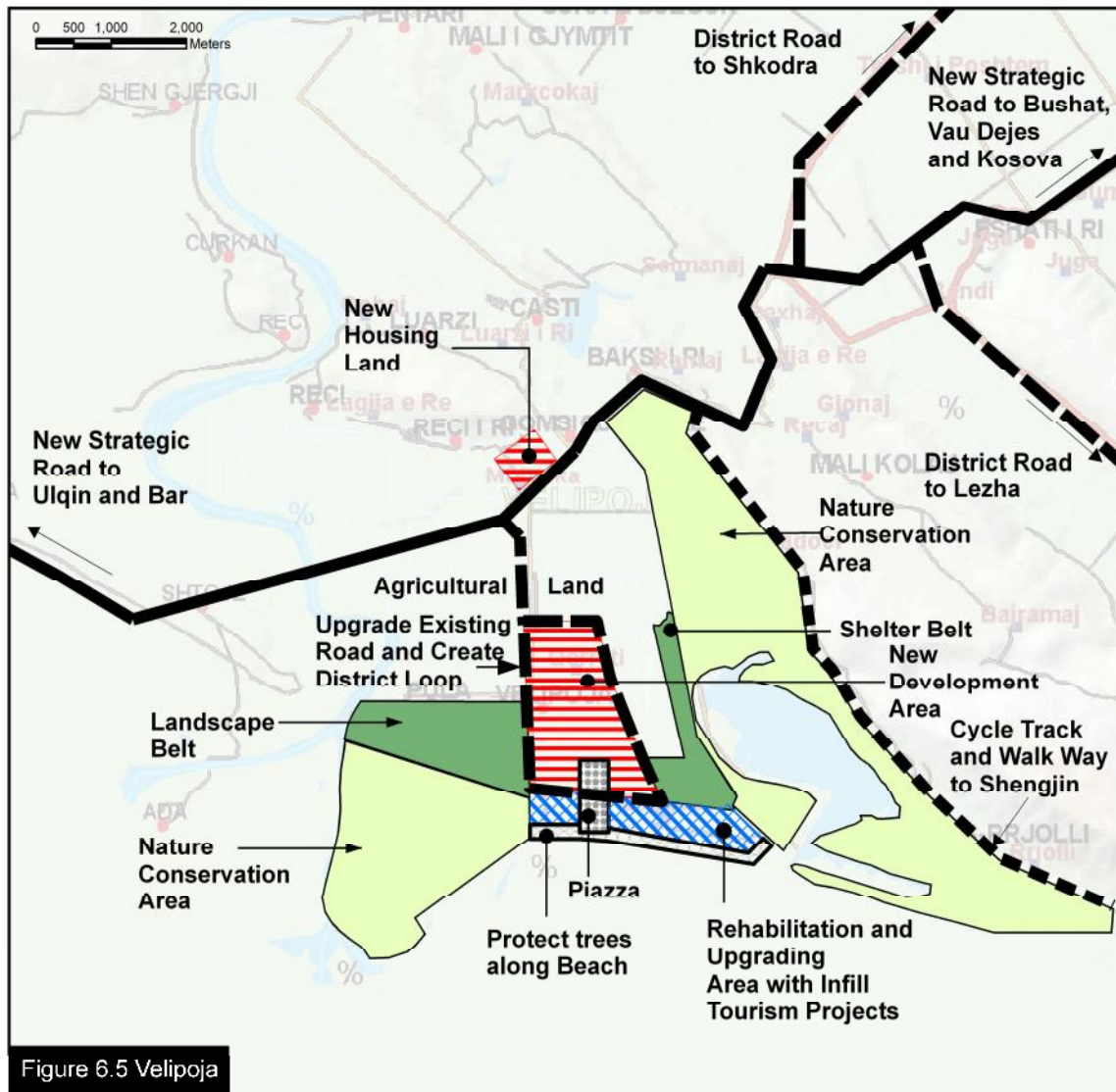


Figure 6.5 Velipoja

However, Velipoje (as it currently exists) compares very unfavorably to Montenegrin resorts and has no chance of attracting international visitors. The failure of Velipoje exemplifies the failure of Albanian urbanism as a whole. There is no layout, no roads and no infrastructure, no orderly phasing and no respect for the environment.

The existing urbanized area has invaded the beach and the adjacent forest areas, which are 'nature reserves'. It is important to stop this.

The official plan, (prepared by the National Planning Institute,) has no relationship to what has been built, and will be hard to carry out in retrospect. It might be more feasible to base future action on what exists, (as far as possible.)

Therefore we propose that a consortium of owners establishes a society to plan and finance the construction of roads and infrastructure in the existing area. We call this the 'Improvement Area'. The beach and nature reserves should be strictly protected from now on. Growth Areas should be defined. We show two Growth Areas. One is next to the 'Improvement Area'. This area would be marketed for tourism projects and holiday homes. The second area would be for normal urban purposes, including houses for workers in the tourism sector. In the case of Velipoje, there is enough space to create two separate locations, reflecting distinct market conditions.

The concept has five points.

- The 'Improvement Area' should include a promenade along the beach, lined with an

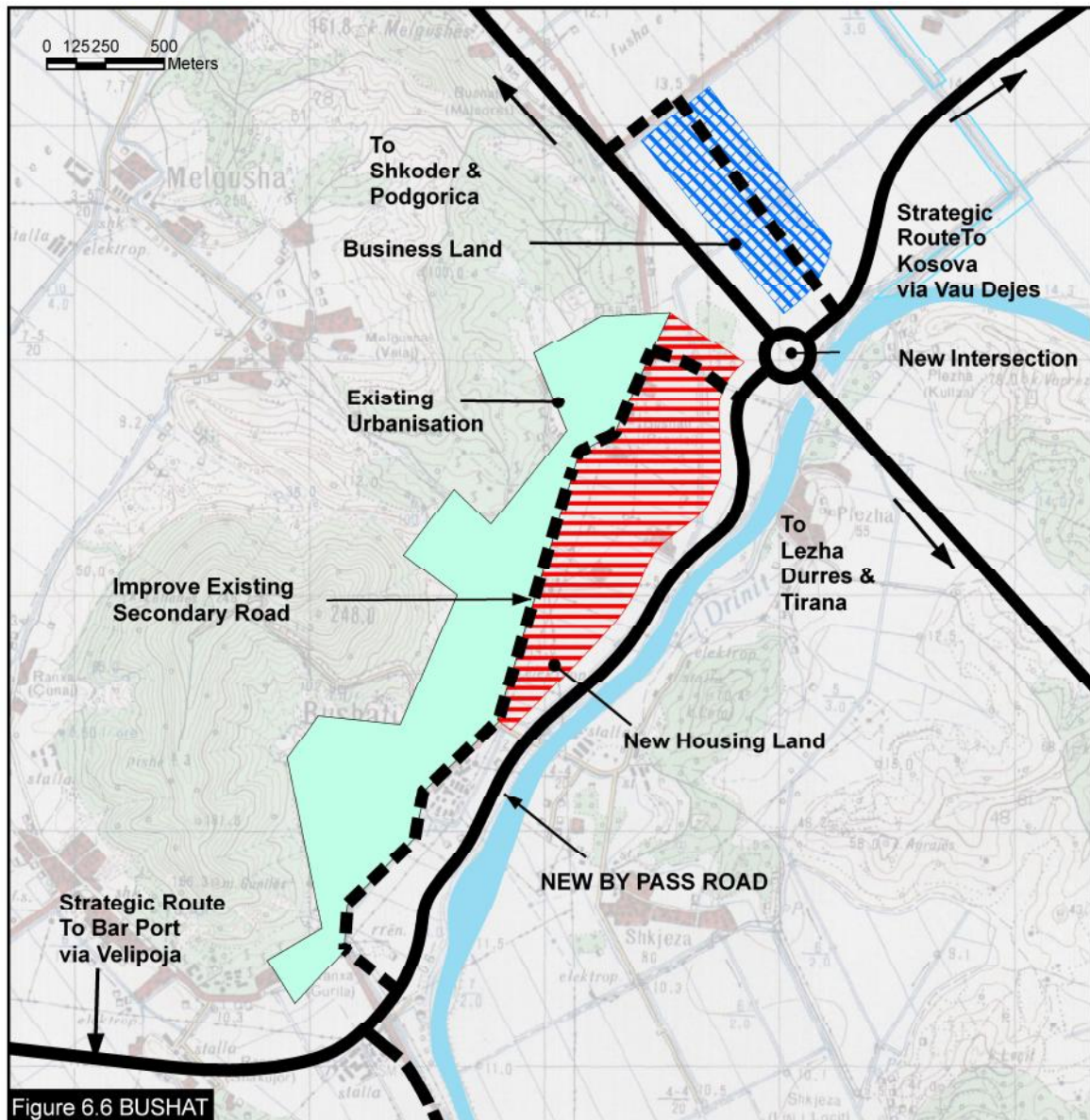
elegant frontage of coordinated buildings. There should be (at least one) public square opening onto the promenade.

- Buildings on (or too close to the beach) should be demolished.
- The Nature Reserves should be strictly protected and enhanced.
- An area for new tourism-related development should be defined near the 'Improvement Area', and another area for supporting urban functions near the proposed Ulqin-Shkoder road, (Gomsiqe e Re.) Urbanisation outside these boundaries should be prevented.
- The tourism zone should be connected back to the principal Ulqin-Shkoder road by a loop route.

6.2.6 Bushat

The urban study for Bushat is shown in Figure 6.6. The location of Bushat has considerable development potential, (particularly as a Logistics Node or 'Inland Port',) because the proposed route from Kosovo to Bar Port crosses the Tirana-PodShkod road at this point. From here, vehicles could choose to go to either Bar Port or Durres Port.

The new Kosovo-Bar route would come from Vau i Dejes (via Stajke) to the Lezhe-Shkoder road. This is an existing route but needs upgrading, (which would be simple and economical.) The road from here to Velipoje and Ulqin (and thence Bar) would be partly a new alignment. It would pass along the west bank of the River Drin, (east of Bushat Hill). We call this the



'Bushat Bypass'. It would then curve westwards at Shakujor between Gur I Dragonit Hill and Bushat Hill, joining the old Tirana road near Mal-Jush. From here a new link (of 2.5 km) would connect to the existing Shkoder-Velipoje road, before crossing the River Buna by a new bridge. The Kosovo-Bar road would cross the Shkodra-Lezhe road by a roundabout just north of Bushat.

The proposal here is to provide business land in the north-west quadrant of the cross roads, and housing land south of the Shkoder-Lezhe road, between the existing Bushat village and the River Drin: see Figure 6.6.

6.2.7 Vau i Dejes

The urban growth area plan principles are shown in Figure 6.7. The proposal is to reroute the Kosovo road to the south of the urban area from the railway station to the eastern edge of Vau i Dejes. The Kosovo road would become the southern boundary of the town. No frontage access would be allowed, and the land between the existing town and this road would be allocated for building development. Housing would be sited at Mjede as well as Vau i Dejes, and business

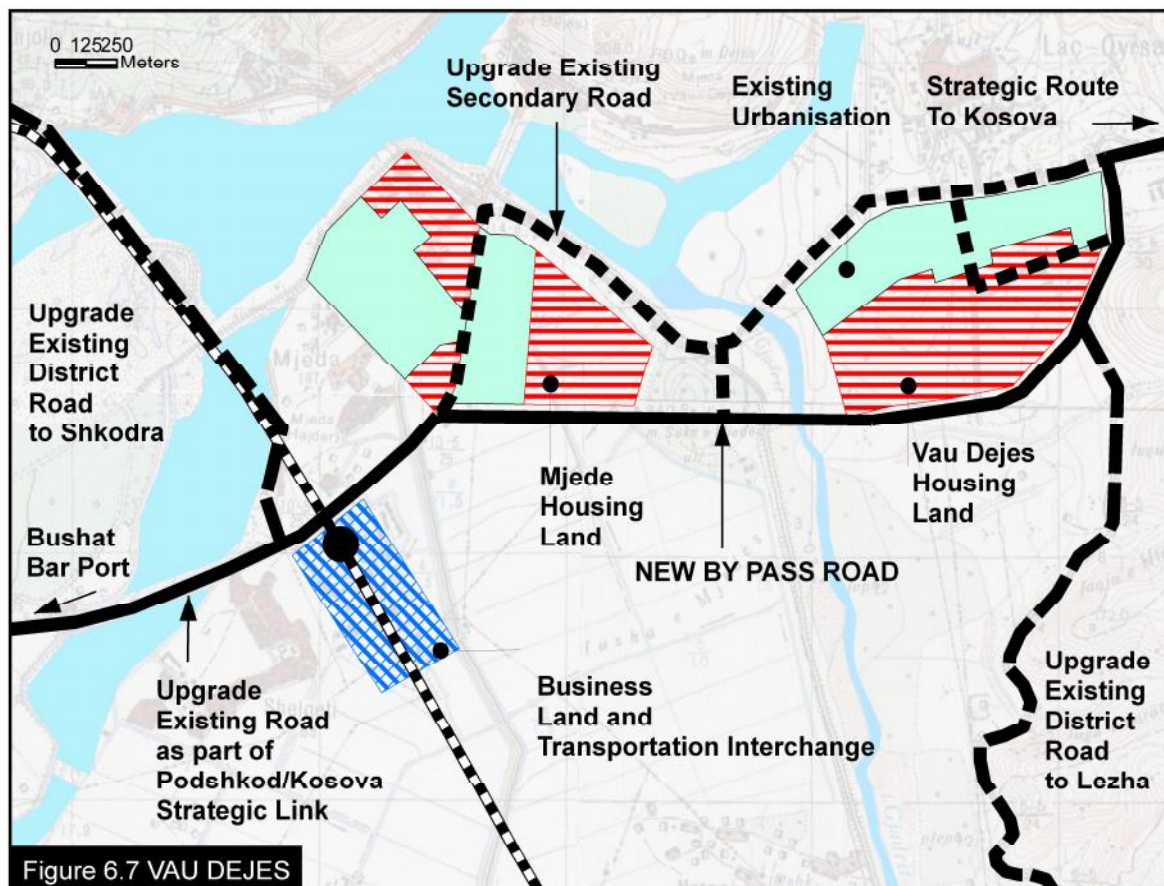
land at Shelqet, near the railway station: see Figure 6.7. Mjede would be densified and infilled north of the existing main road, and urban expansion would occur south of it.

6.3 COST OF ROADS AND INFRASTRUCTURE IN LOCAL HOUSING DEVELOPMENT AREAS

6.3.1 Three types of 'Public Rights of Way' (PRoW)

The purpose of this section is to estimate the cost of providing roads and physical infrastructure within the housing land referred to in the chapter. We base the cost estimates on a "Layout Model", and present the cost as (a) Euros per hectare and (b) Euros per household. There are three types of Public Right of Way (PRoW) which contain all infrastructure as well as roads. Our estimate is based on the combined cost per linear metre of the right of way. The cross sections of the three types of PRoW are shown in Figure 6.8 and Table 6.1.

- **Secondary Roads** provides the basic network and connect the area to Principal and District Roads, (which are strategic in nature at the scale of the region.)



- **Local Roads** subdivide the area into substantial 'blocks' of land (and also access plots of land next to them.)
- **Access Roads** subdivide these blocks into arrays or groups of plots, and give access to the plots.

6.3.2 Layout Model

Secondary Roads

The model is based on notional square kilometre shown in Figure 6.9. The Secondary Roads define the edge of the area, but the cost is shared with adjacent land. Also there is a secondary road dividing the area into two halves. The total length is therefore 3 km.

Local Roads

The two halves are divided again by two local roads. At right angles to this are six local roads. The total length is 6 km. The basic block of land thus enclosed is 250 m long by 166 m deep.

Access Roads

These blocks are further divided by Access Roads. The road length per block is 0.5 km and there are 24 blocks, so the total road length is 12 km.

Roadway Classif	Roadway Element/Dimension (metres)				Right-of-Way Total Width meters
	Traffic Way Alb. Std.	Traffic Way Prop'd	Margin A	Margin B	
Secondary	2-lanes 4.0-6.0 metres	2-lanes 5.0 metres	1.0 meter Power Pole Low Curb Pavement	1.0 meter Low Curb Pavement	7.0
Local	2-lane 3.5 metres	2-lane 3.5 metres	0.3 meter Power Pole Low Curb Pavement	1.0 meter Low Curb Pavement	4.8
Access (Special Case)	Not Applicable	1-lane 2.5 metres	0.3 meters Power Pole Low Curb Pavement	0.3 meter Low Curb Pavement	3.1

Table 6.1 Hierarchy of Roadways with Elements and Dimensions

6.3.3 Cost Rate for PRoW

In Table 6.2 we set out the cost per linear metre (of the PRoW) for water, sewerage, drainage, power, light and road construction. We envisage two possible stages of construction.

- Stage 1 includes the basic road, (kerbs and a crushed stone surface,) plus water, sewerage and drains, (but there are no drains on access roads)
- Stage 2 adds a bituminous asphalt surface plus power and lighting.

6.3.4 Other Cost Items

In Table 6.3 we set out other items required for the square kilometre model. These are solid waste points, bus and minibs lay-bys, canal repairs and bridges over canals.

Item	Unit of Measure	Cost/Unit (Euro)
Solid waste collection points	Number	1,160
Bus lay bys	Number	2,400
Mini bus lay bys	Number	1,320
Canals and watercourses	Metre	14.4
Minor bridges: secondary roads	Number	10,400
Minor bridges: local roads	Number	8,240
Setbacks		
• Boundary relocation	Metre	9.6
• Compensation	Square Metre	12
Landscaping	Square Metre	1.6

Table 6.3 Cost Assumptions for Other Items

6.3.5 Cost Adjustment to Reflect Density

In Table 6.4 we show how reduction in density will reduce the cost. However, we should bear in mind that the number of households will also increase so that the cost per household will be reduced nonetheless.

Density (hh/ha)	Factor
15	0.85
25	0.95
35	1.05
45	1.15
55	1.25
65	1.35
75	1.45

Table 6.4 Cost Adjustment Factors for Density

6.3.6 Cost Rates in Housing Areas

In Table 6.5 and 6.6 we summarise the data so far set out. We indicate the Stage One Cost for the PRoW for the model layout. We then add the itemised costs. We assume a density of 75 households per hectare, so we apply the density cost adjustment and divide the result by the density to indicate the cost per household. We can see that the cost of providing access and all infrastructure to this model layout is Euro 570 for one household and Euro 42,000 per hectare.

To this should be added design and supervision fees (10%), contingencies (15%) totalling 25%. But even so, the total is Euro 710 per household for Stage 1 and Euro 970 for both stages. We have not mentioned the costs of strategic roads and infrastructure, nor have we added costs to reflect the gradient of the site or the presence of rock near the surface.

Road Type	Length (m)	Stage 1 Cost (Euro per m)	Stage 2 Cost (Euro per m)	Total per km2 Stage 1 (Euro)	Total per km2 Stage 2
Secondary	3,000	265	107	795,000	327,000
Local	6,000	165	76	990,000	456,000
Access	12,000	80	63	960,000	756,000
Total				2,745,000	1,539,000

Table 6.5 Summary of Housing Area Costs

6.3.7 Economic Development Areas

There are several different types of economic development area, and the cost will depend on their various characteristics. For example, a CBD will have a higher cost than an industrial area. This needs study

in greater depth. As an average for budgeting purposes at this stage, we propose to use Euro 60,000 per hectare, (which is the cost rate for housing.) We think this will average out so that the total budget will be adequate, but we advise more study when specific details have been worked out.

Total PRoW Cost (Stage 1)	Euro 2,745,000
Total PRoW Cost (Stage 2)	Euro 1,539,000
Item Costs	Euro 215,000
Subtotal	Euro 2,960,000
Density Adjustment (1.45)	Euro 4,292,000
No of households (75/ha)	7,500 Households
Cost per household (Stage 1)	Euro 570
Cost per hectare (Stage 1)	Euro 42,920
Cost per household (Stage 2)	Euro 205
Cost per hectare (Stage 2)	Euro 15,375
Cost per household (Total)	Euro 775
Cost per hectare (total)	Euro 58,295

Table 6.6 Costs per Household and Hectare

6.3.8 Implementation

We discussed a five-step implementation process in Chapter 5, paragraph 5.4.2. It is extremely important to read this methodology as a background to this chapter.

6.4 HOUSING AND PROJECT SUMMARY

The plan proposes to deliver serviced land for housing and business purposes in a 5:1 split, (as the 'land budget' in Table 5.1 implies.) We have estimated the cost per hectare of housing land on the basis set out in this chapter (i.e. Euro 60,000 per hectare at 75 household per ha). The capital budget is given in Table 6.7, totaling Euro 21.7 million. We are proposing to fund this from land sales.

PROJECT CODE	PROJECT NAME	LAND (HA)	BUDGET COST
H-1	Shkoder	60	€ 3,600,000
H-2	KopShkod	62	€ 3,720,000
H-3	Lezhe	106	€ 6,360,000
H-4	Shengjin	33	€ 1,980,000
H-5	Velipoje	34	€ 2,040,000
H-6	Bushat	32	€ 1,920,000
H-7	Vau Dejes	9	€ 540,000
H-8	Villages	27	€ 1,620,000
		362	€ 21,720,000

Table 6.7 Serviced Housing Sites

6.4 CONCLUSION

The main proposal here is that land should be delivered with local roads and infrastructure, which should be financed from the land sales income.

The next chapter will study strategic infrastructure which is needed beyond the boundaries of each local development area.

Table 6.2
Cost Rates for Rights of Way

Road Type	Costs per Linear Meter of Right-of-Way (Euro)							Total Costs (Euro)		
	Water	Sewage	Drainage	Power	Light	Road Stage 1	Road Stage 2	Stage 1	Stage 2	Stage 1 & 2
Second. Local Access	15.9	56.4	82.7	17.6	3.8	56.7	64.2	211.7	85.6	297.4
	7.36	29.9	48.5	17.6	3.8	44.4	39.2	129.9	60.7	190.2
	11.2	23.5	0	22.2	3.8	29.3	24.0	64	50.8	114.0

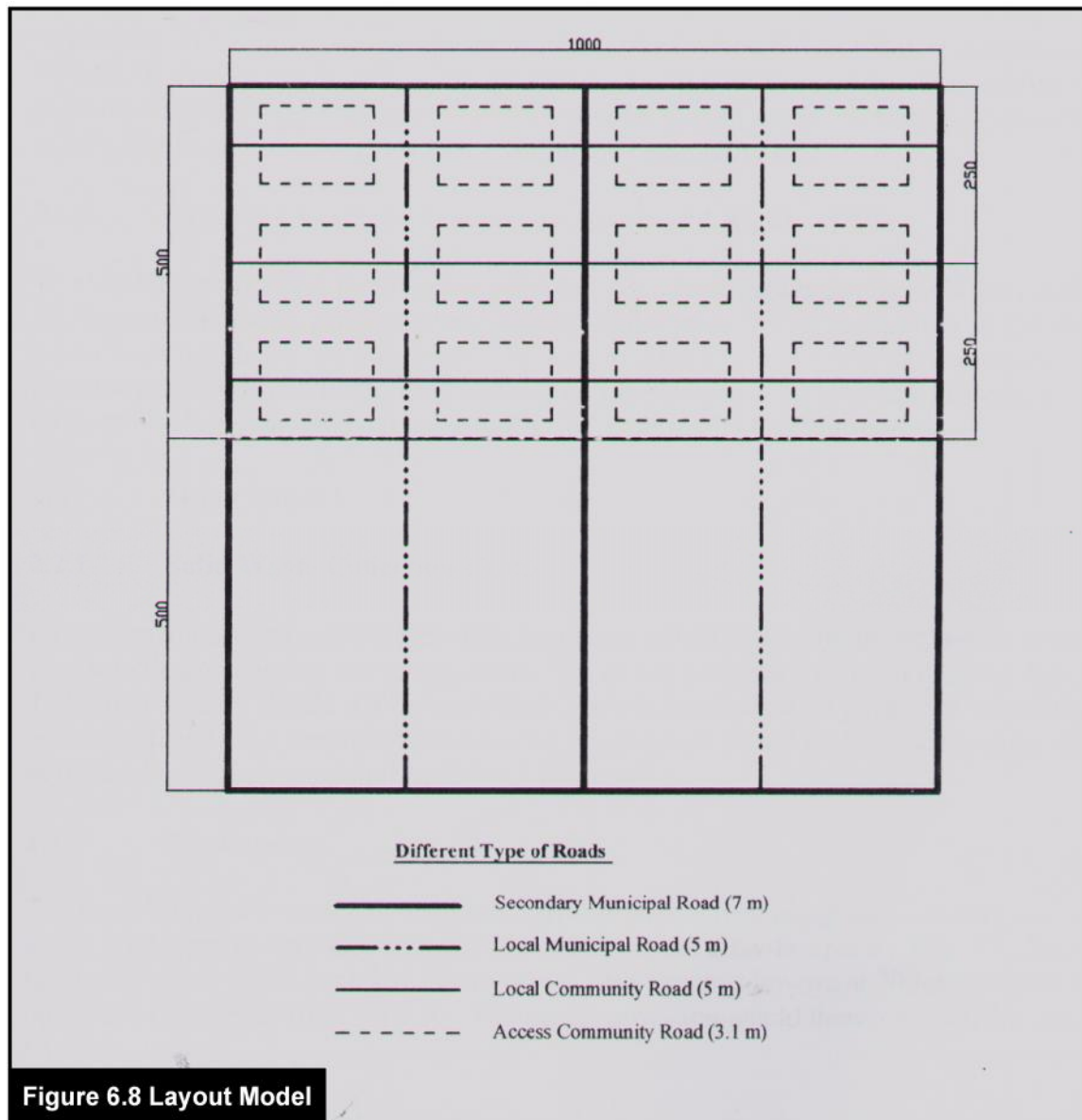


Figure 6.8 Layout Model

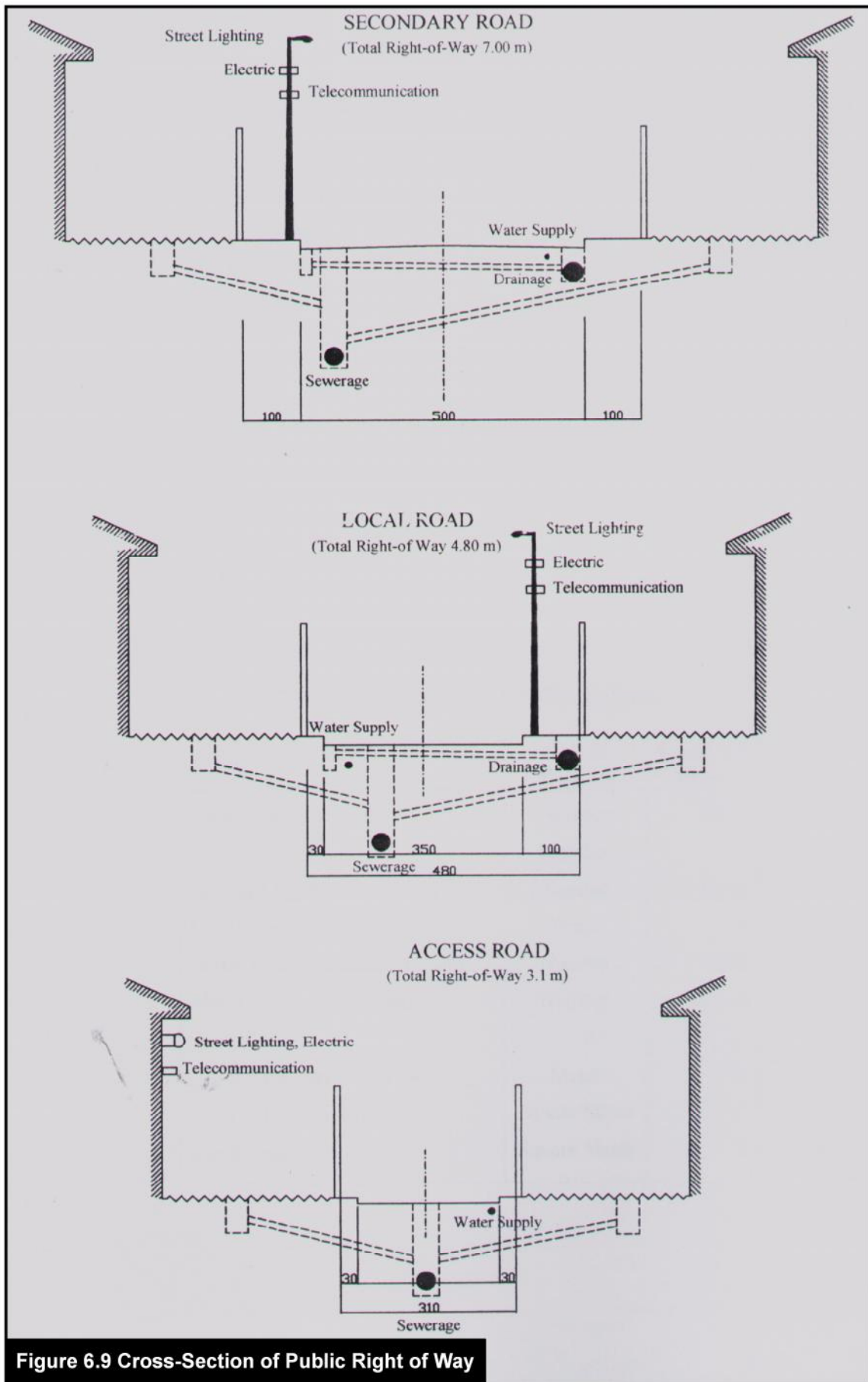


Figure 6.9 Cross-Section of Public Right of Way