

final report

Vang Vieng Town and Environs Master Plan, 2010 -2020

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Appendix 1 Design Guidelines for the Master Plan

Abbreviations

ADB	Asian Development Bank
GDP	Gross Domestic Product
GMS	Greater Mekong Subregion
Lao PDR	Lao People's Democratic Republic
LNTA	Lao National Tourism Administration
OPOV	One Product, One Village
SME	Small and Medium Enterprise
STDP	GMS Sustainable Tourism Development Project
UDA	Urban Development Authority
UGB	Urban Growth Boundary
UMA	Vang Vieng Urban Management Authority
UNWTO	United Nations World Tourism Organization
UNESCO	United Nations Educational, Scientific, and Cultural Organization
USD	United States of America Dollar
VVMPCC	Vang Vieng Master Plan Co-ordination Committee

Glossary of terms

J	
Articulated elevations	The front, side and rear faces of a building incorporating two or more sections which break up the mass and bulk of the face into smaller parts
Capacity building	The training of people in appropriate policy, administrative, management and legal frameworks, and institutional development etc, using contemporary work practices and approaches
Consolidation	The intensification of development through higher density development and redevelopment of under developed land within existing urban areas
Facade	The face of a building, especially the principal or front face showing its most prominent architectural features
Fenestration	The design and placing of windows in a building
Gateway	A place or passage signifying the point of entry into an area, town or city which can be reinforced through the use of natural or man made features e.g. The gateway into a town may be highlighted by an arch, a monument, a boulevard of trees, flags or banners etc.
Grid configuration / grid subdivision	A type of urban development layout in which streets run at right angles to each other, forming a grid pattern.
Hard infrastructure	Basic physical services and facilities serving human settlements e.g. roads and bridges, drainage, water supply, solid waste collection and disposal, sewage collection and treatment, power, gas, telecommunications etc.
Illustrative	adj. Acting or serving as an illustration.
Joint venture	An entity formed between two or more parties (e.g. businesses) to undertake an activity together. For example, the public sector may enter into a joint venture partnership with a private sector company or consortium to build a new road, a new hospital, a new bridge etc.

Key views and vistas	Views are Important sight lines or outlooks of a landscape that are so attractive that they are worth protecting and enhancing. For example, panoramic views of a mountain range. Vistas relate to a distant view which may be terminated by a prominent natural or built form feature. For example a large monument which is placed at the end of a road so that the human eye is drawn to that monument in the distance.
Karst limestone mountains	A rugged landscape of mountains and pinnacles shaped by the dissolution of a soluble layer or layers of bedrock that consists of carbonate rich limestone. Such topography is usually characterised by numerous caves, sinkholes and underground streams, and usually forms in regions of plentiful rainfall.
'No build' zone	Designated area of land where new buildings and works are not allowed.
Panoramic	A wide view of an area of land. For example, a wide view of a mountain range.
Reticulated sewage system	A network to collect and treat sewage in an underground network of pipes leading to a treatment plant.
Setback	The physical distance between a building and its allotment boundaries (front/street, side and rear boundaries).
Soft infrastructure	Social and community facilities and services such as schools, hospitals, community meeting halls, libraries, sporting and recreational facilities etc
Stakeholder	A person or group that has an investment, share or interest in something.
Streetscape	A visual image of a street with its buildings, activities, infrastructure, landscaping etc.
Sustainable community	Communities planned, built, or modified to promote sustainable living. Sustainable communities are places where people want to live and work, now and in the future. They meet the diverse needs of existing and future residents, offer good access to services and facilities, are sensitive to their environment, adopt energy efficient practices in all aspects of living and contribute to a high quality of life. They are safe and inclusive, well planned and well connected communities
SWOT Analysis	A SWOT Analysis is a strategic planning tool used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in planning for future land use and development in an area.
Sustainable	To provide the best outcomes for the human and natural environments both now and into the indefinite future.

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Executive summary

Background

In response to a grant from the Asian Development Bank (ADB) to undertake the GMS Sustainable Tourism Development Project (STDP), the Lao National Tourism Administration, as the executing agency responsible for the coordination, management and implementation of the project engaged Hansen Partnership (hansen) to prepare a Town Master Plan for Vang Vieng Town and its Environs. The primary objective of the Vang Vieng and Environs project is to produce a comprehensive and harmonised set of planning documents to guide the sustainable development of Vang Vieng and its Environs to the year 2020.

The key outputs of the project are:

- Master Plan for Vang Vieng Town and Environs
- Management and Monitoring Tool Kit
- Evaluation Report in the Training Program and Stakeholder Consultation Workshops in Vang Vieng

Understanding the Place

The town of Vang Vieng is located in Vang Vieng District in the Province of Vientiane and is approximately 150km north of the Lao PDR National Capital Vientiane. As shown in Figure 2 Vientiane Province is within the Central Region of Lao PDR with its provincial capital at Phonhong.

Vang Vieng District is one of 12 districts in Vientiane Province and covers a land area of 212.5 km2 with a total population in 2008 of 51,671 persons. Vang Vieng Town is located along Highway No.13 being the main road connecting the National Capital of Lao PDR, Vientiane with the UNESCO World Heritage listed town of Luang Prabang to the north. The Town itself is nestled in the Nam Xong river valley with a stunning limestone karst landscape to the west and a heavily forested sandstone mountain range to the east. Rich farmland surrounds the Town with the Nam Xong river forming a natural boundary to the western edge of the existing urban area.

The strategic location of Vang Vieng Town almost midway between two very popular tourist destinations, coupled with its stunning natural features and cultural attributes, has resulted in the town functioning not only as a tourist service point or stopover but as a tourist destination in its own right. Tourism volumes to the Town are growing annually at 15-20% per annum and are expected to surpass 250,000 tourists by 2010 and possibly reach 500,000 tourists by 2020. With future growth in the tourism sector in Vang Vieng Town anticipated to grow and diversify it is inevitable the Town and its environs will experience considerable development pressures. These pressures will not only focus on tourist accommodation and tourist related services catering for the needs of domestic and international tourists, but development meeting the needs of local and district communities, particularly in the service sector.

Within this context of managing future change within the Town and its environs to the year 2020 it will be vital for the relevant government agencies to have a 'blueprint' within which to plan for growth in a co-ordinated and integrated manner. Furthermore, investors and householders will want to know where they can develop and how the design and siting of new development should occur to protect the important characteristics and qualities of the Town and its surrounds. This Master Plan provides such a blueprint for growth ensuring the special attributes and features which make Vang Vieng Town and Environs appealing to tourists and to the people who live and work there are protected and enhanced.

After extensive filed work by the joint international and national/local Project Team followed by a SWOT Analysis and two community consultation workshops a diverse range of key issues were identified relating to the future growth and development of Vang Vieng Town and Environs. The community's aspirations for the Town were also identified as well as opportunities for further investment.

This comprehensive process of investigation and enquiry into Understanding the Place resulted in four key elements or strategic themes underpinning the Master Plan for Vang Vieng Town and its Environs. They are:

- 1. Town Character
- 2. Urban Growth
- 3. Environment
- 4. Tourism

Future Directions

The following Vision Statement for Vang Vieng Town and Environs to the year 2020 was formulated to embrace these four strategic themes:

	In 2020 Vang Vieng will be a diverse tourist destination offering experiences in adventure and recreation pursuits, as well as an appreciation of the area's natural and cultural heritage by international and domestic visitors and the community who live and work in the town and its environs.
Vision Statement	Located in a beautiful landscape of karst limestone mountains, sandstone ridges, and rich farmland, the town will promote its image of clean, green and safe living. Growth will be accommodated within the existing urban core and in the developing new areas to the north and east.
	Vang Vieng will reinforce its role as a thriving trade and service centre meeting the varied needs of the residential community and tourists. The town and its environs will develop in a sustainable and integrated manner, celebrating its past, enhancing its town character and responsibly managing its future.

The Vision Statement forms the over arching statement of intent guiding the future growth and development of the Town and its Environs and the evolution of a possible town logo – 'Vang Vieng – a clean, green, safe and friendly city.

Accompanying the Vision Statement are Principles underpinning the strategic themes. These Principles represent the foundation stones for building a well planned and sustainable community which prospers from a strong economy, a healthy lifestyle and a natural setting of stunning beauty and scenic splendour.

	Town Character:
	Vang Vieng and Environs will be a green, clean, safe and welcoming town.
	Urban Growth:
	Vang Vieng and Environs will develop in an integrated and sustainable manner.
Principles	Environment:
	Vang Vieng and Environs will conserve, protect and enhance its landscapes.
	Tourism:
	Vang Vieng and Environs will develop as a diverse tourism destination.

For the principles to be applied in a co-ordinated and integrated way requires the formulation of objectives and actions relevant to each principle. This approach ensures that the links between implementation of the Master Plan and the Vision Statement are maintained throughout the life of the Plan.

However, before specific objectives and actions can be formulated the Project Team undertook investigations into the likely land budget needed to accommodate future growth and development. Population scenarios were examined based on the current rate of population growth of 3.1% per annum (a rate which prevailed from 1995- 2005) to 4.5% per annum and a higher rate of growth of 6% per annum. It was determined that the middle growth rate of 4.5% per annum was a real possibility whereas the more accelerated rate of 6% per annum would rely upon a substantial in-migration of people from the surrounding area.

Other land use types were also addressed in the land budget projections and the following table is a summary of the final urban land allocation estimated for Vang Vieng Town from 2010 to 2020.

Table 1 Summary of Urban Land Allocation 2010-2020

Activity	Land Allocation, 2010- 2020	Distribution of growth in Urban Core*	Distribution of growth in Urban Expansion Area
Housing with local community facilities	33 ha.	8 ha.	25 ha.
Tourist accommodation and services including commercial development	20 ha.	15 ha.**	5 ha.
Government offices	5 ha.	5 ha.	
Service Industry and Light Industry	10-12 ha.		10-12 ha.
Other	10 ha.	2 ha.	8 ha.
TOTAL:	80 ha.	30 ha.	50 ha.

^{*} New development will be a combination of redevelopment of under utilised land and development of vacant land

In summary, future urban growth for Vang Vieng Town will be accommodated in two ways, namely:

- Continued development within the existing Urban Core being a combination of new development on vacant land and redevelopment of existing developed land. The strategy is one of consolidating the Urban Core within the land use precincts identified in Figures 17 and 18. The Urban Core offers substantial existing social and physical infrastructure as well as close proximity to a wide range of goods and services and every effort should be made to maximise the use of this capital investment; and
- Gradual staged development of the new urban areas to the north and east of the Urban Core but within the identified Urban Growth Boundary (UGB) for the Town as shown in Figure 18.

There will also be incremental growth in the small villages outside the UGB but the majority of new development will focus on the urban land within the designated town boundaries.

The Master Plan allocates sufficient land to accommodate the projected growth to the year 2020 with scope within the well defined UGB to cater for additional growth beyond that foreseen in the Plan.

Objectives and Actions

Master planning requires more than a Vision Statement and Principles. It also needs Objectives and Actions of a more specific nature to drive the Master Plan forward in a co-ordinated and integrated manner. Adopting each of the four strategic themes a set of Objectives and Actions have been identified and they are as follows.

^{**} This figure will be lower if some of the new tourist accommodation adopts a resort style format in which case it is encouraged to locate outside the UGB

TOWN CHARACTER		
Objective 1: Promote Vang Vieng as a clean, green, safe and friendly town.		
TC1	Develop a network of 'Green Streets' by planting trees on all streets within urban areas and improving street lighting and footpaths.	
TC2	Establish the Nam Xong river walkway (Stage 1 = 900m adjacent to river) commencing at a north point adjacent to Don Khang Island and extending south just beyond the main bridge connecting the town to Houyhnae Village with several east-west connecting points off Kam Song Road.	
TC3	Establish attractive landscape and/or built form elements at the Inner Township and Outer Township 'Gateways' to Vang Vieng.	
TC4	Continue and complete drainage improvements program within the established Urban Core and install adequate drainage systems in newly developing areas to the north and east.	
TC5	Improve all directional and tourist signage based on a Town logo and colour scheme which is applied in all aspects of town identification and marketing.	
TC6	Establish a new Central Park with viewing platform on the old airstrip land and public amenities as a community space for recreation, ceremonies, festivals and other important gatherings.	
Objective 2: Manage new development in a sustainable and integrated manner.		
TC7	Amend the current construction regulations to ensure the incorporation of sustainability measures in all new development (private and public sector development) including solar panels, water tanks to collect rainwater for use in gardens and landscaped areas, household and business recycling programs (paper, glass, plastic, aluminium, second hand timber etc).	
Objective 3: Re	tain and celebrate the traditions, customs and culture of the town and the surrounding villages.	
TC8	Establish a yearly calendar of festivals and celebrations of traditional Lao culture, update annually and promote these activities to the wider community and tourists planning to visit Vang Vieng Town.	

URBAN GROWTH

Objective 1: Contain and consolidate the town within the established Urban Core and new Urban Growth Areas as defined by the Urban Growth Boundary for the town.

UG1	Establish a clear Urban Growth Boundary (UGB) around the Town to accommodate growth and development to the year 2020 and encourage new urban development within the identified Precincts contained within the UGB with potential, in the longer term (beyond 2020), to continue urban development further north towards the village of Vieng Samai.	
UG4	Develop the old airstrip land to either side of the proposed Central Park as primarily an office, commercial/business and higher education precinct based on an approved concept plan and include within this area a modern Tourist Information Centre.	
UG6	Prepare and implement an appropriate growth area neighbourhood development model for the newly developing urban areas to the north and east of the Urban Core which incorporates land for new schools, medical centres and other community based facilities.	

Objective 2: Facilitate orderly development accompanied by the provision of urban infrastructure and social services and facilities required by the community

UG2	Upgrade and improve the existing solid waste landfill facility to meet appropriate environmental standards and establish a low tech transfer station facility for recycling of waste within the 10hectares of land set aside for solid waste disposal. Purchas another one or possibly two garbage trucks to meet current and future needs. Instigate a waste recycling program for paper, glass, aluminium and second hand timber and administer at the village level for all households and businesses. Gradually introduce a 'no plastic bags' policy in all commercial businesses.	
UG3	Improve capacity of the existing water reservoir to meet current and future water needs of the community.	
UG7	Provide a well designed multi-purpose sports and recreation facility for badminton, volleyball, football, tennis etc on the low lying flat land immediately north of Don Khang Island	
UG8	Commence planning for the installation of a reticulated waste water treatment plant (which is likely to be located to the south/ south-east of the Urban Core) and seek funding to construct this much needed facility on a staged basis as the town develops and expands.	
Objective 3: Improve the service, trade and production sectors to meet local and district needs.		
UG5	Establish a new Employment and Service Industry Precinct to the north of the new urban area to the north and provide safe road access to and from Highway No.13 to this employment area.	

FNVIRONMENT		
Objective 1: Protect the natural landscape setting of the town which includes the limestone karst mountains to the west, the Nam Xong river, the agricultural land and the sandstone ridges to the east.		
E2	Enforce existing regulations and introduce new regulations, where appropriate, to contain and control the riverside entertainment and water based recreational activities north of the proposed pedestrian bridge (between Tam Lom and Tam None).	
E3	Undertake the necessary technical investigations into the natural and scenic values of the limestone karst mountains and the Nam Xong river to the west of the town and, based on these findings consider nominating these environmental features for appropriate conservation and protection under the Lao PDR Law on National Heritage.	
E7	Protect and improve the health of Nam Xong river and other tributaries within the master plan area.	
E8	Retain agricultural land (flood prone) to the north of Don Khang Island until such time as it is developed (in part) as a major multi-purpose recreational facility surrounded by farming.	
E11	Surround the town with organic agriculture activities compatible with the area's natural setting.	
Objective 2: Conserve and protect panoramic and corridor views of the surrounding natural landscape.		
E1	Introduce Design Guidelines and Building Height controls for new development.	
Objective 3	: Improve air and water quality and reduce noise pollution levels.	
E5	Enforce existing regulations and, where appropriate, amend these regulations in respect to developments creating air, water and noise pollution problems.	
Objective 4	: Identify, conserve and protect sites of cultural heritage and environmental significance.	
E6	Identify places of cultural heritage importance within and around the Town and ensure adequate legal protection of these places e.g. Town graveyard, old village well at corner of Central Road and Crossroad No. 3 etc.	
E9	Establish network of walking trails to caves and other places of natural and cultural significance.	

E10

Ensure sensitive design around cave environs in terms of signage and other structures.

Objective 5: Identify, conserve and protect the biodiversity values of the area.

Undertake the necessary technical investigations to identify the biodiversity values of the area and, apply the appropriate laws and regulations to protect these values.

TOURISM	
Objective 1: S	trengthen the role and functions of the Town and its environs as a popular tourist destination.
T1	Consolidate a special tourism entertainment precinct within the northern area of the Urban Core and undertake various public works improvements enhancing the appearance and amenity of this precinct.
T5	Establish a tourism training and education precinct in the southern portion of the old airstrip land which aims to improve the standard of services in the hospitality, food and beverage sector as well as other tourist related activities.
T6	Construct three new bridges across the Nam Xong river providing safe, easy and free access between the Urban Core and the tourist attractions and villages to the west.
-	iversify the types of attractions, experiences and accommodation offered to international and ists to the Town.
T2	Operate a night bazaar/market in Crossroad No.1 at specified times and eventually extend this activity into Kam Xong Road.
Т8	Improve Naduang Road connecting visitors to the Keang Nyui Waterfall at Ban Duong.
Objective 3: Consolidate existing tourist accommodation and entertainment activities into well-defined, contained and responsibly managed tourist precincts.	
Т3	Consolidate and contain the riverside hotel precinct on the eastern side of the Nam Xong river within the parameters of no more than 3 storeys in height with landscaped setbacks to the Nam Xong river frontage.
T4	Direct well designed new guesthouse development to the established guesthouse and residential area south of the Town's commercial area.
Т7	Encourage well designed satellite eco-resort nodes outside the Vang Vieng Urban Core with farmland separating these nodes and the provision of appropriate local road access.

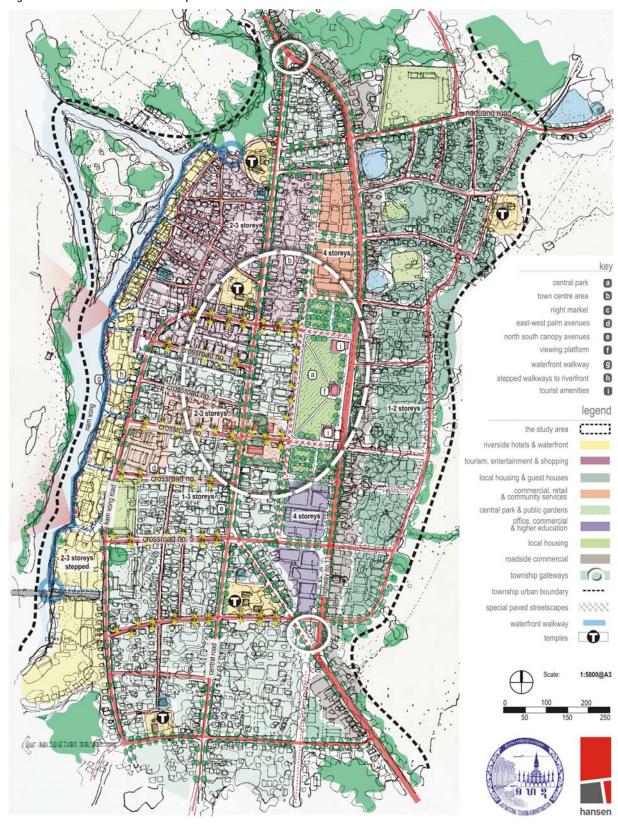
Implementation Program

One of the key challenges when master planning a town such as Vang Vieng and Environs is to provide a clear path forward in terms of implementation. An Implementation Program accompanies the 35 Actions contained in the Master Plan addressing:

- what action is to be undertaken in order of priority;
- who will be responsible for that action being implemented;
- the timeframe for implementing the action;
- who will pay for the implementation of the action; and
- a guestimate of cost involved in the implementation of the action based on an initial assessment of low, medium and high cost.

The Implementation Program sets out a comprehensive framework within which budgets for future public works programs and other initiatives involving the public and private sectors can be determined in an orderly and co-ordinated way.

Figure 1 Urban Core Master Plan Concept



key limit extent of water future multi purpose sport complex Œ employment & service precinct future urban growth towards the village of Vieng Samai C commercial/ community centres 0 possible future foot bridges e protected water catchment area 0 protected panoramic mountain views g commercial, retail, office & education area interim urban waterway environmental enhancement new government offices precinct pha phong C national natural naduang road legend the study area consolidate existing township interim urban growth boundary consolidate new growth area existing township employment & service precinct improved access to caves & climbing tourism entertainment precinct proposed satellite resorts national natural heritage area water catchment protection area organic agriculture township gateways proposed riverside walk •---• pha lao proposed footbridges new government offices 1:20,000@A3 expand existing hansen

Figure 2 Master Plan Concept for the Area Surrounding the Urban Core

Other Master Planning Tools

Taking into consideration the zoning pattern identified in the Vang Vieng 1997 Town Plan, a new zoning plan has been prepared for the Master Plan as shown in Figure 3. Unlike the 1997 Plan which identified 6 zones, the new zoning plan adopts three zones using the relevant zones of the earlier town plan but rationalising these zones as follows:

- 1. **Uba Zone Current Urban Core** which is earmarked for continued consolidation via new development of vacant urban land and redevelopment of under utilised urban land;
- Na Zone Urban Expansion Area which is currently experiencing new development and will continue to do so
 over the next 10+ years. This area to the north of the Urban Core accommodates the new Market Complex and the
 Bus Terminal with new housing and employment opportunities encouraged in this area; and
- 3. **Nc Zone Agricultural Conservation Area** outside the UGB including all river flats, mountains and environmental features that contribute to the visual amenity and natural setting of the Town. This land is set aside for Agriculture and Environmental Conservation purposes.

In essence the Master Plan favours two clear urban areas within the Urban Growth Boundary (UGB). Each area provides for residential, commercial and employment based development, combined with the integration of new soft and hard infrastructure to meet community needs as they arise and change over time. The third zone covers all that land outside the UGB which is to remain as predominantly farmland and land of natural/environment conservation value.

Related to the introduction of three land use zones for the area is the introduction and enforcement of Building Height Controls for all new urban development. Whilst there are currently regulations dealing with building height in the Town these heights have been reviewed in the context of social, economic and environmental factors. Figure 4 is the proposed new building height controls.

A set of Design Guidelines have also been prepared to assist in the development of Vang Vieng Town and Environs in an integrated and sustained manner. These guidelines address the following:

- Road Access Hierarchy
- Urban Expansion Area Development
- Building Height, Scale and Design
- Public and Private Landscape
- Signage
- Street Furniture
- Pedestrian Access
- Gateways/Entries
- Central Park
- Caves

Figure 3 Proposed Zoning

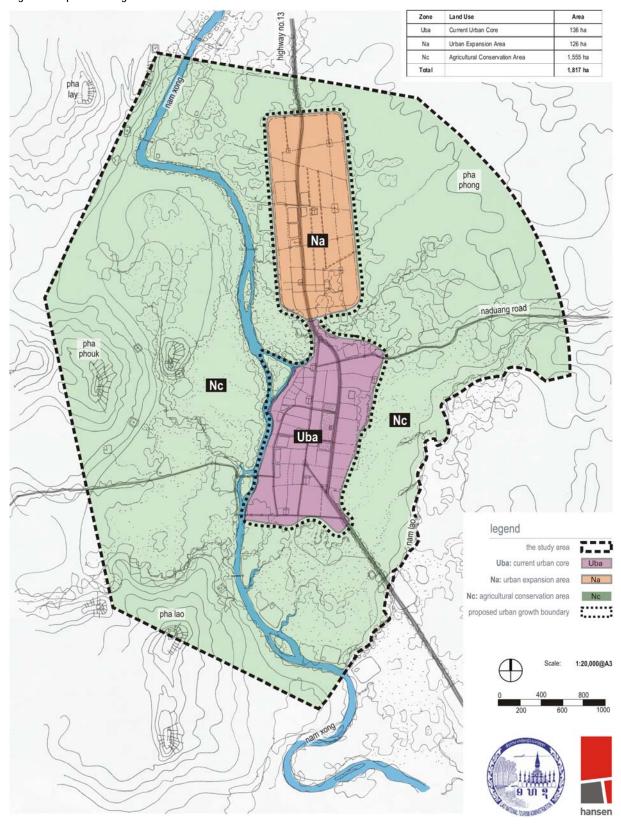
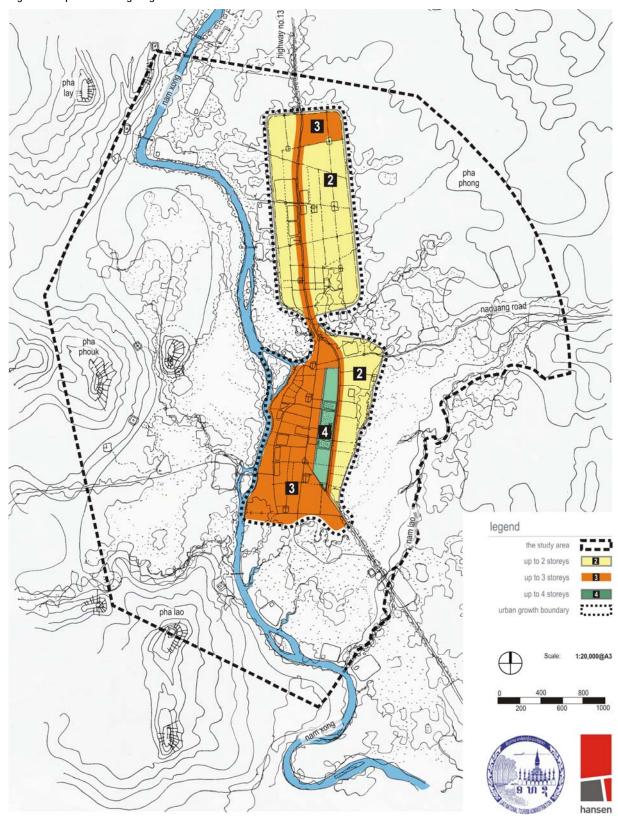


Figure 4 Proposed Building Heights



Establishment of the Vang Vieng Master Plan Co-ordination Committee

When implementing, monitoring and reviewing the performance of a master plan it is imperative there is one agency responsible for the overall co-ordination of that plan. Although there will be a diverse range of public and private sector entities responsible for the actual implementation of identified actions contained in the master plan, as is the case with the Vang Vieng and Environs Master Plan, the establishment of one organisation to oversee this process is vital to the success of the Master Plan. It is recommended that the Urban Development Authority (UDA) act in this role.

Within this framework it is also recommended that the Vang Vieng Master Plan Co-ordination Committee (VVMPCC) be established by Government with its composition being approximately 70% of members from key government agencies and 30% from private sector organisations/companies. The actual role and responsibilities of the VVMPCC will need to be clearly stated in the establishment of the Committee with adequate financial and human resources provided by Government to ensure its efficient and effective operation. Essentially the VVMPCC will act in an advisory capacity to Government on a range of issues including government policy, emerging development issues within the Master Plan area etc.

Adequate funding to implement the Master Plan Actions will always be an issue for towns like Vang Vieng. Various options have been identified for capital raising from a more equitable bed tax or accommodation tariff system for tourist accommodation and businesses to development contribution levies and converting government owned land within the area into capital for investing back into community infrastructure and key public projects.

Management and Monitoring Tool Kit

In conjunction with the Design Guidelines which provide additional tools for assessing future development projects, a **Management and Monitoring Toolkit** has been prepared as a key output of the Vang Vieng Town and Environs Master Plan, 2010-2020. The toolkit provides information on a range of tools to be applied in the implementation of the Master Plan including:

- Key indicators for monitoring change within Vang Vieng Town and Environs;
- Annual and Tri-annual Audit Reports on the implementation of the Master Plan;
- The steps in the Development Approval Process for Public and Private Sector developments under the Master Plan;
- What information is to be included with a Development Application in a check list format;
- Establishment of a Development Application Register in a digital format; and
- The role of referral agencies in the Development Approval Process.

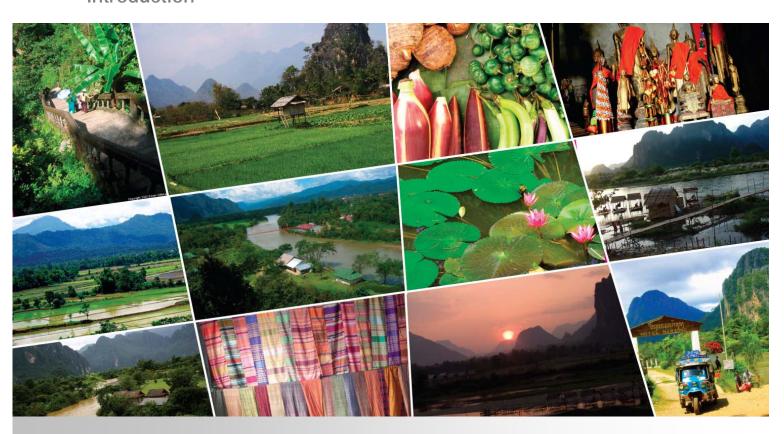
These audits or 'report cards' will track the progress on the implementation of actions and alert all stakeholders of what additional work will need to be undertaken and by whom to keep 'on track' with making the Vision a reality. Because the Master Plan relies on a strong sense of community ownership and pride in the planned development of Vang Vieng Town and Environs, the audit process is a means of assessing and recognising the performance of all stakeholders responsible for its implementation.

In addition, the audits can become a demonstration to the investment community that the Town of Vang Vieng is 'Open for Business' with a Master Plan in place to guide and direct such investment.

The Vang Vieng Town and Environs Master Plan, 2010 -2020 provides the necessary strategic framework for Government, business people, investors and the community to guide future growth and development in a sustainable and integrated manner. It provides all parties with the confidence and certainty to embrace growth in a positive and collaborative spirit with the benefits shared amongst all stakeholders.



Introduction



1 Background

In response to a grant from the Asian Development Bank (ADB) to undertake the GMS Sustainable Tourism Development Project (STDP), the Lao National Tourism Administration, as the executing agency responsible for the coordination, management and implementation of the project engaged Hansen Partnership (hansen) to prepare a Town Master Plan for Vang Vieng Town and its Environs. The main goal of the STDP is to implement various programs and projects which contribute towards the sustainable socio-economic development of Lao PDR with a focus specifically on poverty reduction. Within this context tourism is a major economic sector which urgently needs improved management practices and appropriate infrastructure that accelerates poverty reduction and reduces undesirable social and environmental impacts.

The primary objective of the Vang Vieng and Environs project is to produce a comprehensive and harmonised set of planning documents to guide the sustainable development of Vang Vieng and its Environs to the year 2020. The key outputs of the project are:

- Master Plan for Vang Vieng Town and Environs;
- Management and Monitoring Tool Kit; and
- Evaluation Report in the Training Program and Stakeholder Consultation Workshops in Vang Vieng

Figure 1 illustrates the four staged methodology adopted for the Vang Vieng Town Master Plan. The stages are:

- Stage 1: Understanding the Issues
- Stage 2: Identifying Future Directions
- Stage 3: Planning for future development within the Functional Elements of the Town
- Stage 4: Implementation, Monitoring and Review of the Master Plan.

The Master Plan for Vang Vieng Town and Environs will provide the necessary planning and development framework within which to ensure the protection and enhancement of both the natural landscape and cultural elements in and around the town and, plan for its growth in an orderly manner. In essence the Master Plan will:

- maximise the social, economic and environmental benefits of further growth and development for the local and district communities;
- attract appropriate investment to the town from local, national and international developers;
- encourage diversification within the tourism sector as well as a more robust and prosperous economy; and
- integrate social and physical infrastructure into the town in a cost-efficient and co-ordinated manner.

A Master Plan is a document developed by the community, stakeholders and government that guides future land use and development in a township over time and in an integrated and sustainable way. A Master Plan consists of a clear, overall vision for future growth and development and contains the necessary action-oriented steps to realise that vision.

To assist in the preparation of the Master Plan a small team of officials from national and district government agencies in the fields of planning, architecture, engineering, tourism and environment, assisted by local administration support from the Vang Vieng Urban Management Authority (UMA), worked closely with hansen from 19 June to 3 July 2009. A training manual was prepared in advance by hansen with the four staged master planning methodology adopted throughout the intensive work program in Vang Vieng Town by the project team. This collaboration between is not only an important capacity building and institutional strengthening component of the project but it is anticipated these professionals will assist in the communication and implementation of the Master Plan to the Vang Vieng community upon its formal approval by the Central Government of Lao PDR.

Vang Vieng Master Plan Process

Approval Process

Project initiation

Agree on work program

Finalise the draft Master Plan

- Present draft to District

and Provincial Government.

- Consider any comments.

- Agree on implementation

- Council review

- Plan activities
- Notify participants

Work **Process**

Stage 1: Understanding the Place

- Document Review
- Fieldwork survey and observe to fill in gaps.
- SWOT analysis

Strengths - Weaknesses - Opportunities - Threats

- Identify key issues

Evolve vision for Vang Vieng



Stage 2: Future Directions

Develop future directions

- Incorporate issues identified by the community
- Include issues identified by stakehlders.
- Map ideas
- Identify principles that drive the Plan
- Map the principles.

Evolve Principles and elements of the Vang Vieng Master Plan



Stage 3: Masterplan and Themes

Develop the plan & key elements

- Formulate the masterplan concept
- Illustrate objectives of the Master Plan by breaking it into elements or precincts
- Develop diagrams to represent these elements
- Assign a set of actions, design guidelines and priorities for the implementation of each element



Stage 4: Implementation

- Identify key project priorities
- Show how the Master Plan will create positive change and by whom



Draft Vang Vieng Master Plan

Present to LNTA

Review and Complete Draft Masterplan:

- Full report to be reviewed by all levels of Government.
 Review and amend Master Plan based on comments
- Write up detailed report and implementation plan.

Consultation

Listen and learn Workshop 1a

- Community representatives

Workshop 1b

- Provincial and District Government
- Agencies
- Landowners
- Developers/ business owners

Share Knowledge with **Tourism experts**

- Understand tourism potential
- Principles for tourism growth
- Identify further tourism themes

Present Concepts

Workshop 2a

- Community representatives

Workshop 2b

- Provincial and District Government
- Agencies



Understanding the Place



2 Context

2.1 Provincial & District Context

The town of Vang Vieng is located in Vang Vieng District in the Province of Vientiane and is approximately 150km north of the Lao PDR National Capital Vientiane. As shown in Figure 2 Vientiane Province is within the Central Region of Lao PDR with its provincial capital at Phonhong.

Figure 2 Provincial Context



Source: National Ecotourism Strategy and Action Plan 2005-2010, Summary Report, LNTA

Vang Vieng District is one of 12 districts in Vientiane Province and covers a land area of 212.5 km2 with a total population in 2008 of 51,671 persons. Some interesting facts include the following:

- In 2008 the Gross Domestic Product (GDP) per capita of Vientiane Province was USD730 compared with the National average GDP per capita of approximately USD917;
- The rate of population growth in the district from 1995-2005 was 3.1% per annum;

- The age structure of the district is strongly biased towards the under 20 year old group (50%+) with life expectancy for men and women being generally 65 and 68 years of age respectively;
- In 2005 there were a total of 8,432 households with an average household size of 5.6 persons;
- The dominant economic sector by number of workers in 2005 was agriculture (92% of the workforce) being mainly
 wet-season and swidden rice cultivation with the remaining 8% in all other sectors noting that the service sector in
 Vang Vieng Town is likely to be higher than other settlements in the district;
- Only 17% of the population have completed primary school and 10% have completed secondary school in 2005 noting that 80% of the Provincial population were literate in 2005; and
- Typically young people in the district migrate to the main towns in Vientiane Province or nearby Vientiane Capital City for jobs and higher levels of education.

Figure 3 shows the immediate district context of Vang Vieng Town with the main activities outside the town boundaries including existing villages, two cement production plants, the existing solid waste landfill which serves the town and its surrounding villages, farmland and mountain ranges to the east and west.

Vang Vieng Town is located along Highway No.13 being the main road connecting the National Capital of Lao PDR, Vientiane with the UNESCO World Heritage listed town of Luang Prabang to the north. The Town itself is nestled in the Nam Xong river valley with a stunning limestone karst landscape to the west and a heavily forested sandstone mountain range to the east. Rich farmland surrounds the Town with the Nam Xong river forming a natural boundary to the western edge of the existing urban area.

Figure 4 provides an aerial photograph of the area covered by the Master Plan and the land beyond.

The strategic location of Vang Vieng Town almost midway between two very popular tourist destinations, coupled with its stunning natural features and cultural attributes, has resulted in the town functioning not only as a tourist service point or stopover but as a tourist destination in its own right. Tourism volumes to the Town are growing annually at 15-20% per annum and are expected to surpass 250,000 tourists by 2010 and possibly reach 500,000 tourists by 2020. Currently, approximately 100 lodging establishments and restaurants exist in the urban core of Vang Vieng Town, while numerous small resorts are located within 20 km of the main town.

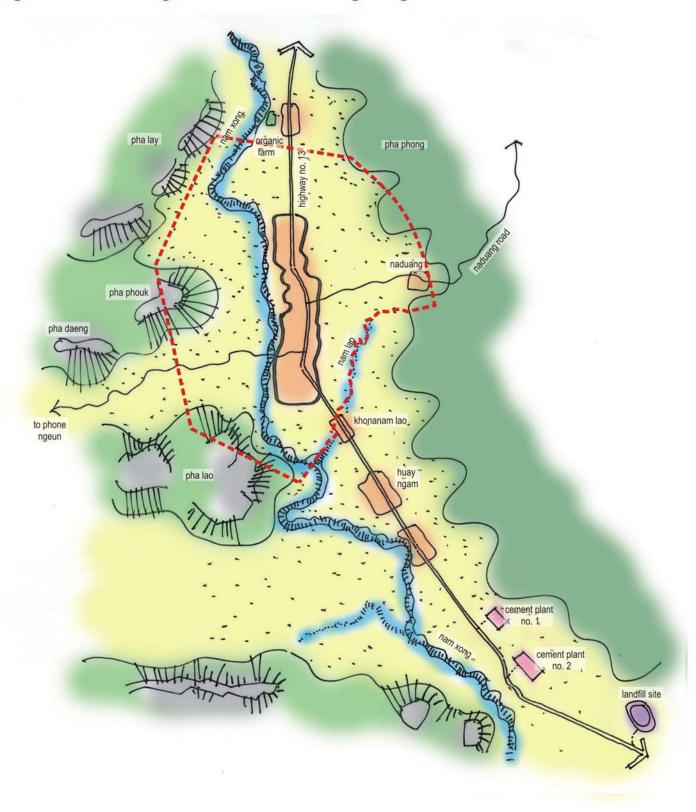
The role of Vang Vieng as a popular tourist destination, especially by backpackers in the 18 to 25 age group, highlights the importance of tourism to the Lao PDR economy. Hydropower and tourism are the two key sources of foreign exchange earnings for the country with nature and culture-based tourism estimated to account for approximately 50% of the total income generated by foreign tourists. Vang Vieng Town and environs offers a range of activities for tourists including rubber tubing, kayaking, rafting and swimming all of which are associated with the Nam Xong river to rock climbing, trekking and spelunking in the cave system concealed within the karst mountains.

With future growth in the tourism sector in Vang Vieng Town anticipated to grow and diversify it is inevitable the Town and its environs will experience considerable development pressures. These pressures will not only focus on tourist accommodation and tourist related services catering for the needs of domestic and international tourists, but development meeting the needs of local and district communities, particularly in the service sector.

In 1997 a Town Plan for Vang Vieng was prepared and subsequently adopted by government. See figure 5. However the plan, which is now more than 10 years old, is largely a zoning plan addressing broad land use and development in and around the town, including identification of areas nominated for urban expansion. The 1997 Town Plan does not adequately address the full range of social, economic and environmental considerations which impact on the character, role and functions of the town and its surrounds now and in the future.

vang vieng town & environs masterplan 2010-2020

figure 3 surrounding district context of vang vieng town



legend the study area



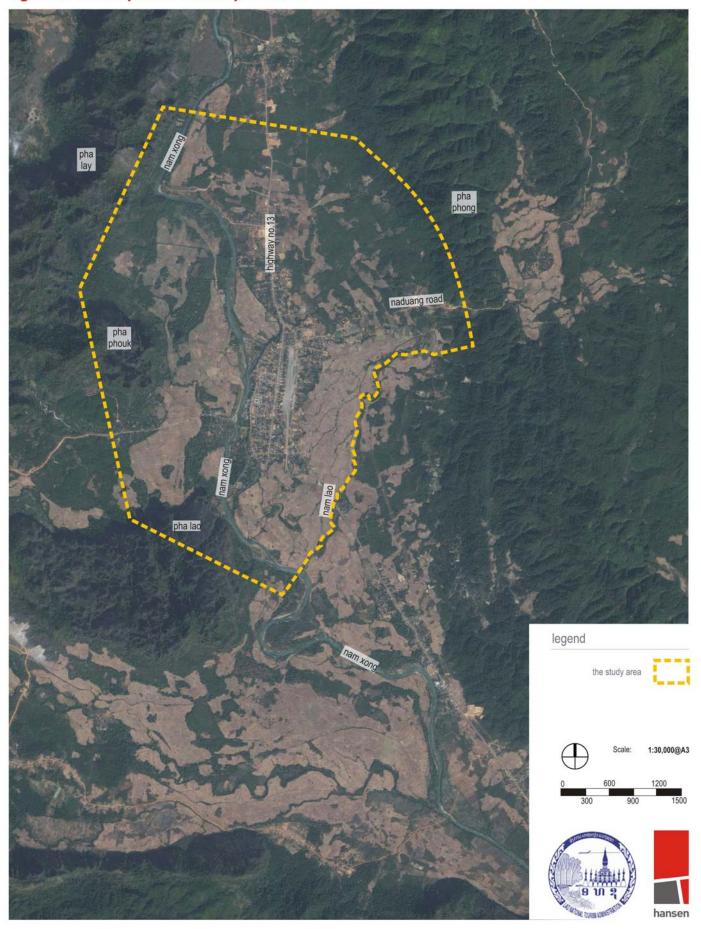
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vang vieng town & environs masterplan 2010-2020

figure 4 aerial photo masterplan area



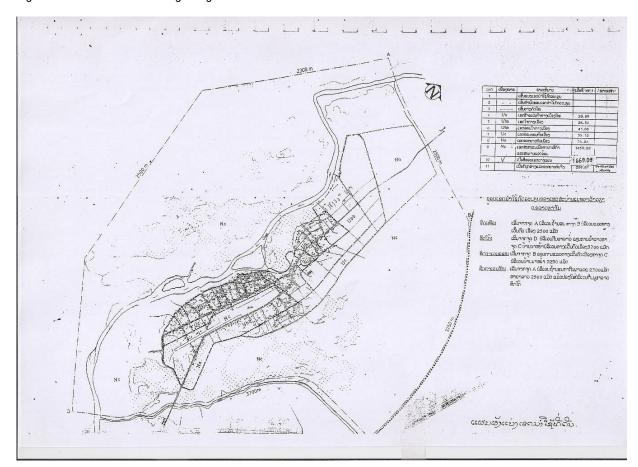


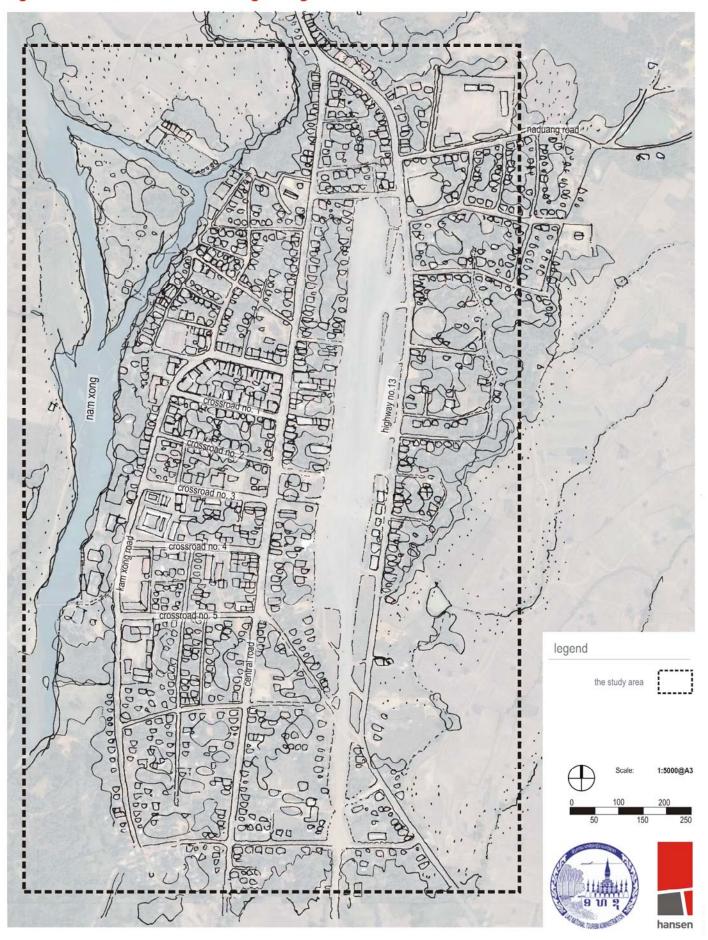
Figure 5 1997 Town Plan for Vang Vieng and Environs

Within this context of managing future change within the Town and its environs to the year 2020 it will be vital for the relevant government agencies to have a 'blueprint' within which to plan for growth in a co-ordinated and integrated manner. Furthermore, investors and householders will want to know where they can develop and how the design and siting of new development should occur to protect the important characteristics and qualities of the Town and its surrounds. This Master Plan provides such a blueprint for growth ensuring the special attributes and features which make Vang Vieng Town and Environs appealing to tourists and to the people who live and work there are protected and enhanced.

An assessment of current conditions and features of the Master Plan area has been undertaken for the *Urban Core* and also for the *Area surrounding the Urban Core*. Figures 6 and 7 identify these areas of investigation. The Urban Core has a total area of 185 ha. whereas the land presently zoned urban for future expansion for the north and east of the core totals 83.5 ha. The total area covered by the Master Plan is approximately 1,670 hectares.

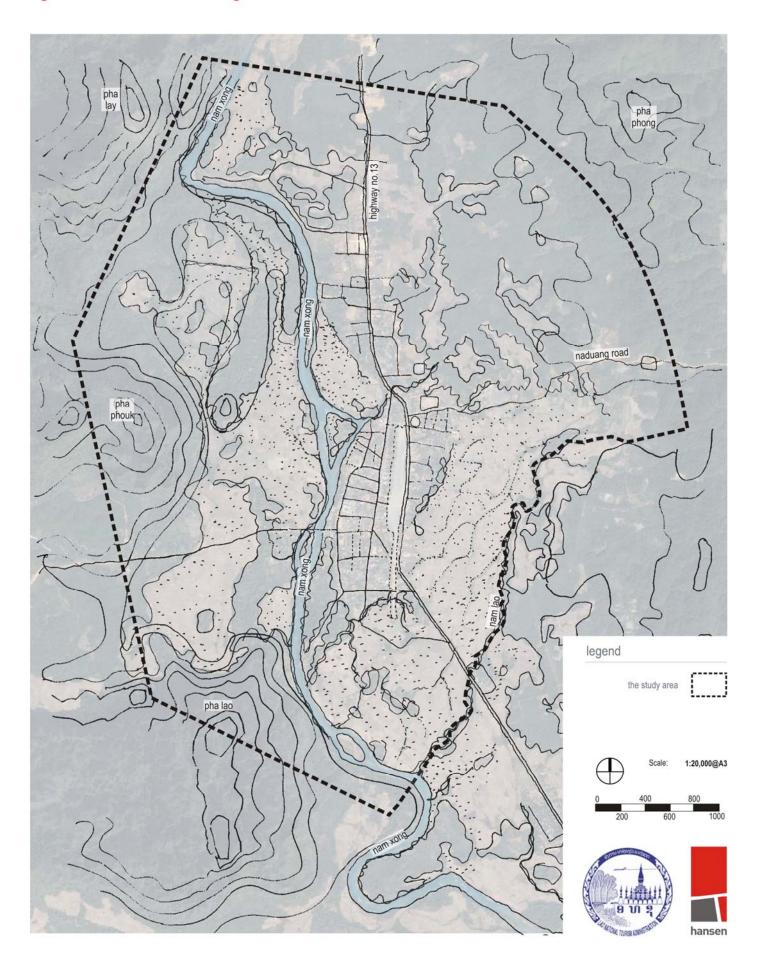
vang vieng town & environs masterplan 2010-2020

figure 6 the urban core of vang vieng town



vang vieng town & environs masterplan 2010-2020

figure 7 area surrounding the urban core





Vang Vieng Town and Environs in 2009



3 Social Facilities and Infrastructure

The project team undertook a comprehensive existing conditions survey of Vang Vieng Town and Environs supplemented by additional information from relevant government agencies and published reports. Given that the Master Plan is underpinned by the application of sustainable development principles, the information collected and analysed by the project team as part of Understanding the Place related to social, economic and environmental features. The following is a summary of the key features of Vang Vieng and Environs in 2009.

3.1 Soft infrastructure

There are two types of infrastructure in urban areas. They are:

- Soft Infrastructure social and community facilities and services such as schools, hospitals, community meeting halls, libraries, sporting and recreational facilities etc; and
- Hard Infrastructure roads and bridges, drainage, water supply, electricity supply, solid waste collection and disposal, sewerage collection and treatment, telecommunications etc.

The social and community facilities available to the people of Vang Vieng Town and Environs include a hospital, three primary schools, a secondary school, a teaching training facility, a community hall, post office, bus terminal, a recently constructed new commercial market and the Kaysone Memorial Park.

There are very few public recreation facilities within Vang Vieng and surrounds and there are no formal sports fields with the exception of those associated with schools.

Seven temples operate within Vang Vieng and its surrounds being important places of worship and, in some cases, significant cultural heritage places. The temple complexes are often complemented by spacious and attractive grounds. Of particular note is Wat Si Vieng Xong (Wat That) located within the northern portion of the existing Urban Core which is set on elevated ground and is well landscaped.

In addition to these facilities there are several government offices accommodating the following district agencies:

- Urban Development Authority
- Land Management
- District Administration
- Water Resources and Environment
- Agriculture and Forestry
- Public Works and Transport
- Planning and Investment
- Office of Finance
- Trade
- Industry and Commercial
- Information and Culture
- Tourism
- Education

The strong government presence within the Town serves not only as an important source of employment but provides a wide range of services to the community.



Wat Si Vieng Xong (Wat That)



Vang Vieng District Administration Office



New market Kaysone Memorial



3.2 Hard Infrastructure

Vang Vieng has access to, and is well serviced with clean water derived from the water supply station, reservoir and catchment located within the sandstone mountain area, along Naduang Road to the east of the town. Most homes have water meters and pay monthly for the amount of water they use, although water pressure and availability is sometimes poor in the dry season.

Formal covered drainage systems for stormwater exist along the main north-south roads namely Central Road and Kam Xong Road, and some east-west roads, while open drains operate within the outlying roads. All stormwater drains into the Nam Xong river, and currently, no form of pollutant traps are currently in place. It is understood however that the installation of pollutant traps is to commence as part of a concurrent ADB funded project.

Utility infrastructure or the 'hard infrastructure' in the Town and its environs also includes sealed and unsealed roads. Highway No.13 is the main road running north-south through the Town with Central Road And Kam Xong Road running parallel and west of this main road. East west cross streets and smaller lanes enhance the local access system. Some

of the sealed roads include street lighting and provision of footpaths. With regard to street lighting however, it is understood that not all existing lights are in operation at certain times. In the context of traffic flow, congestion along main roads does occur on occasion, often created by unordered car parking methods.

Paved footpaths flank both the northern and central stretches of Central Road and Kam Xong Road, and some footpaths exist in conjunction with the closed drainage system along selected east-west connector roads. These are generally in reasonable condition although some drainage covers, which double as footpath space, are in a state of disrepair and unsafe for pedestrian traffic. Where no defined footpaths exist, pedestrians share the same space set aside also for motorbikes, bicycles and cars, however, this is generally not problematic for most of the local access roads. There is a clear lack of street tree planting.

Advice from the Urban Planning and Transport Office indicates that a by-pass road is proposed east of Highway No.13. At this stage no budget is committed to this project and its alignment is conceptual.

Provision of access to land to the west of the Nam Xong river is available via a wooden suspension bridge located south of the urban core. This bridge is privately owned, and the owner/operator enforces a payment crossing system, charging both local people and foreigners a structured fee for crossing the river.

There is no reticulated sewerage but rather a reliance on either septic tanks or pit latrines, many of which are operating in the rural areas around the Urban Core villages.

The electricity supply in Vang Vieng is currently considered to be of high quality with very infrequent black or brown outs.

To the south of the broader study area near the two existing cement production plants is a solid waste disposal facility located on 10ha of land. However this facility lacks regular management and currently contains high levels of recyclable waste. Whilst some informal recycling occurs within the Town, and a single garbage truck collects materials on a weekly basis, there is no established solid waste management transfer plan to separate and dispose of garbage generated by homes and businesses in the town.

Considering the population size of Vang Vieng Town it is well endowed with community facilities and services, as well as utility services such as water and power. Further growth and development will however place pressure on these services to meet the community's needs and cater for the growing number of domestic and international tourists.

Figures 8 and 9 show the location of the existing social and community facilities, the main utility lines connecting into the urban core and the main and secondary road network.







Entrance to wooden suspension bridge



Footpath and drainage

vang vieng town & environs masterplan 2010-2020

figure 8 villages within the masterplan area

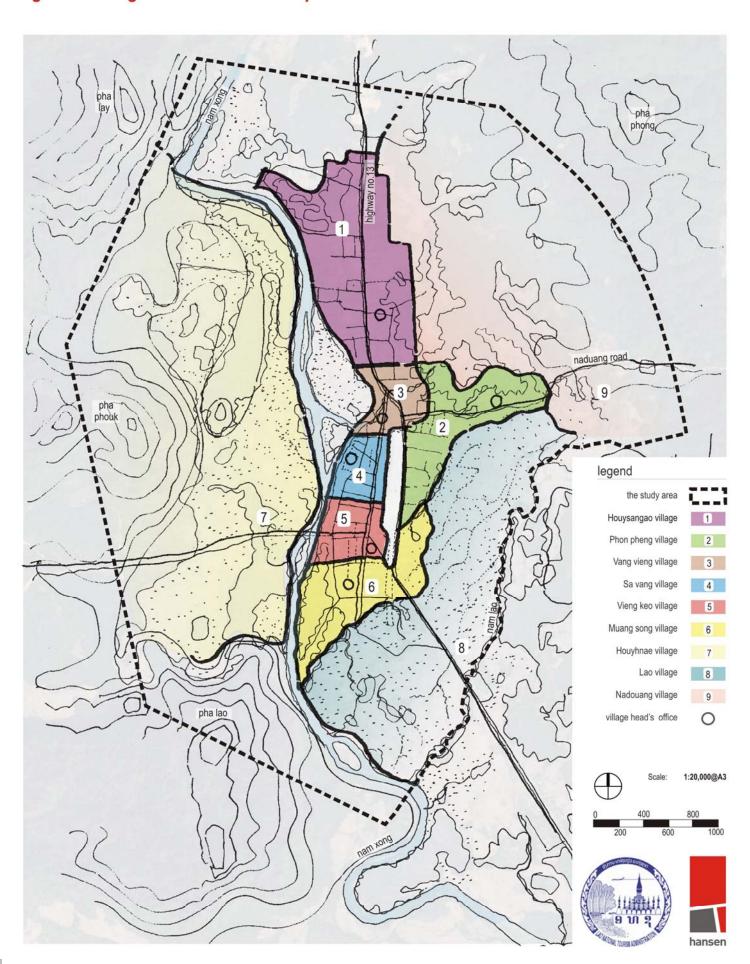


figure 9 social facilities & infrastructure in the urban core

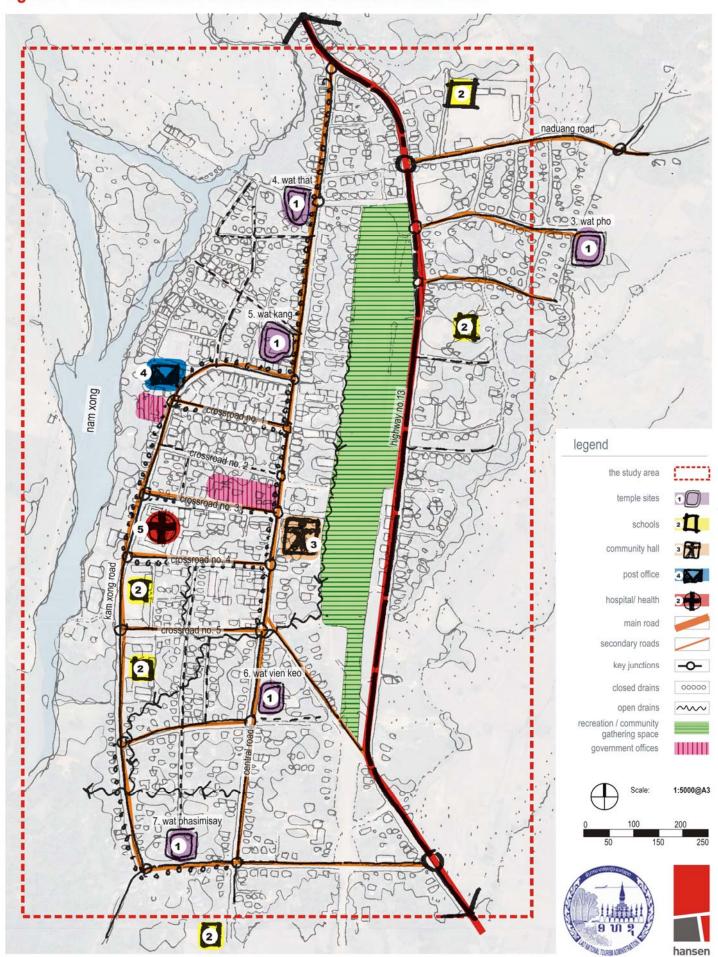
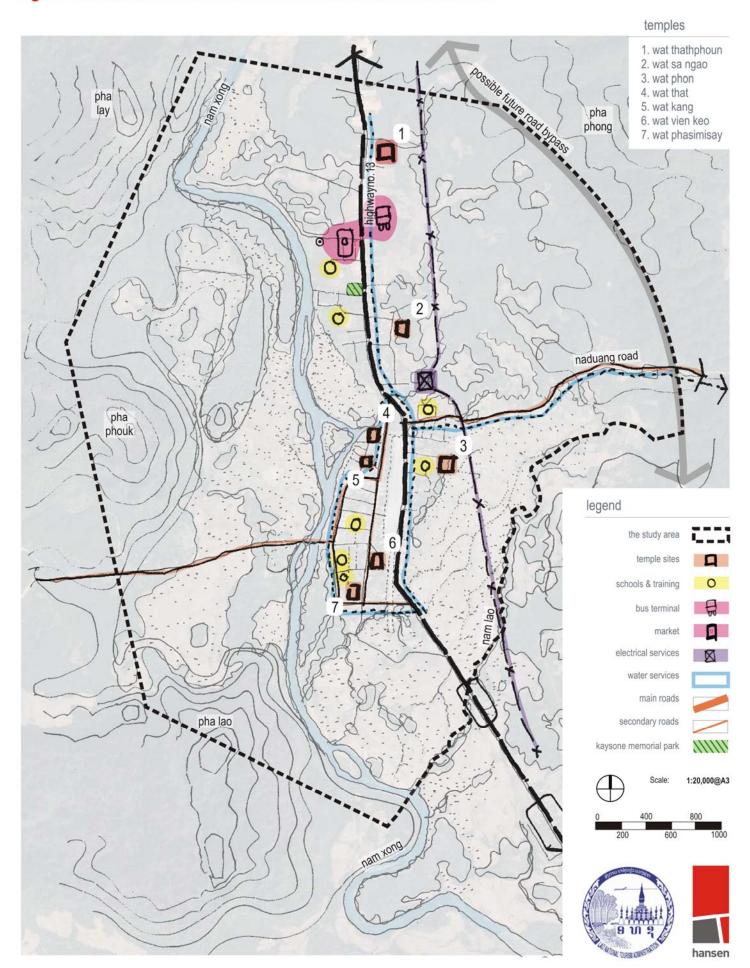


figure 10 social facilities & infrastructure in the environs



3.3 Population and Household Numbers

Within the Urban Core of the Master Plan there are six villages each with a village head's office. An additional three villages exist in the surrounding area with more small villages outside the master plan boundaries. See Figure 10. Each village operates as an important social and administrative unit with a village head responsible for liaising with members of the village and with government agencies at the district level on various matters. The village structure also provides an important 'grass roots' entity within which to undertake government sponsored programs requiring community input and assistance.

It is estimated the population of Vang Vieng Town in 2008 was approximately 10,000 persons. This represents an annual growth rate since 1995 of approximately 3.1% per annum. It is inevitable that as the economy of Vang Vieng and its surrounding area continues to attract more tourism related activities, accompanied by a wider range of services to support tourism as well as local community needs, there is a likelihood of this current rate of growth of being exceeded. Adequate land will need to be set aside for future urban growth and development in an orderly and staged manner to accommodate such growth.



The Environment



4 The Environment

The character of Vang Vieng Town is embedded within its environmental, cultural and historical values. Nestled within a mountainous and forested backdrop, the township itself has a strong physical and functional association with the Nam Xong river. Agricultural land, characterised by rice fields and orchards, generally encircles the Urban Core providing a lush green setting for the Town. The town also contains important Buddhist temples and associated grounds, key historic buildings exhibiting French colonial architecture and some good examples of Lao vernacular domestic architecture.

The key environmental qualities of Vang Vieng and environs are summarised below. Figures 11 and 12 indicate the main environmental features of Vang Vieng and its Environs.

4.1 Natural Landscape

The stunning limestone karst mountains with numerous unexplored caves and tunnels is characterised by sheer cliff faces draped with lush vegetation. This natural setting of natural beauty and scenic splendour is complemented by well maintained padi fields and the Nam Xong river.

To the south and east of the town is another mountain range which is characterised by dense forest and shifting cultivation practices within undulating sandstone hills. The base of this mountain range forms part of the Nam Xong river basin and is farmed mainly with rice production, orchards and timber plantations.

According to the 'Nam Xong Sub-river Basin Profile' draft report1:

'Riverine and floodplain wetland habitats sustain aquatic biodiversity and provide important areas for fish breeding and other acquatic ecosystems processes and links. There is little known about the wetland in the Nam Xong River Basin (NXRB)...... Studies are required to understand the importance and extent of wetland habitat existing and lost in the basin. Many of the wetland and swamps in the basin have been drained and used for rice cultivation.' (page 49)

The draft report notes that the natural aquatic conditions of the Nam Xong Basin are not only constantly changing but that water quality of the river system is becoming a significant issue, particularly during the dry season around urban settlements, and the 'current status of many native species (aquatic) is said to be declining in both size and distribution.' (page 58) The report acknowledges the need for more investigations into the biodiversity values of the Nam Xong Basin to inform economic, social and environmental management decisions by government.

Whilst there is very limited knowledge about the biodiversity values of the natural landscape surrounding the Town, it is anticipated that the landscape has moderate biodiversity value, especially given its riverine and forested context.

The Nam Xong river which meanders along to the west of Vang Vieng's Urban Core enhances the landscape and environmental qualities of the area. Given that riverine environments are favoured tourist attractions in the Lower Mekong Basin, it is not surprising that the Nam Xong river, being part of this Basin, is not only a place to photograph but a place for play and recreation.

The riparian zone directly adjacent to the township has been largely altered, with urban development very close to the river banks causing problems in terms of erosion, stormwater runoff and effluent seepage into the waterway. At present there is very limited public open space abutting the river frontage due to urban encroachment.

Numerous tributaries within Vang Vieng environs such as the Nam Lao River also contribute to the natural landscape as well as providing a source of water for farming activities and domestic use by outlying villages.

¹ Nam Xong Sub-River Basin draft report (June 2009), Department of Water Resource and Environment Administration, Prime Minister's Office, Lao PDR – prepared under the Nam Ngu, River Basin Development Sector Project supported by ADB (Loan 1933-LAO) and AFD (Grant CLA 1048 01H)

There are many private gardens within the town itself which grow fruit and vegetables for household consumption adding to the overall landscape quality of the town. The Town is devoid of street tree planting and it is understood that street trees initially existed but were removed for the provision of the closed drainage system.





Pha Daeng Nam Xong

4.2 Built Form

The layout of Vang Vieng Town is characterised by two main north-south roads – Highway No.13 and Central Road - crossed by a network of mainly sealed east-west local roads. Subdivision patterns favour average residential allotments of 200 square metres in area noting that there are smaller allotments within the commercial area and a growing tendency for developers to amalgamate land into larger allotments to accommodate more intense development.

A former US airfield remains as a large asphalt expanse devoid of trees and grass between Highway No.13 and the majority of existing urban development to the west. The airfield was historically used during the Second Indo-China War for ingoing and outgoing aircraft and for storage purposes. It is now used as an informal open space area used for community events and recreation.

The predominant built form in Vang Vieng Town is one and two storeys detached housing complemented by private gardens. Pitched roof forms, regular fenestration, small porch or veranda areas and, on occasions a small retail use some as a shop or roadside café are accommodated within temporary structures. External materials and finishes generally include a range of locally sourced materials such as timber, stone, woven bamboo, and concrete, and other materials sourced outside the Town such as red bricks, roof tiles, corrugated iron roof, sand, glass, and steel. Some of the more traditional houses are on stilts to enhance natural ventilation and avoid flooding.

A more modern form of new housing is emerging not only in the Urban Core but in the developing urban area to the north of the core along Highway No.13. These are substantial brick and painted rendered two storey dwellings with tiled pitched roofs and space for parking of cars and motorcycles.

Within the main commercial area the built form is often attached, constructed to the street alignment with shopfronts, cafés, restaurants and tourist related businesses and dwellings to the rear or in an upper storey. Most restaurants and bars are open fronted to the street. Buildings exhibit metal and timber cladding, with pitched tiled or corrugated iron roofs. A concentration of signage and lighting is present within this strip. The commercial area remains mainly one and two storey in height with sealed footpaths or grassed verges.

An emerging built form of a higher density is emerging especially adjacent to the east bank of the Nam Xong river. These tourist hotels and guesthouses are being constructed on consolidated land parcels and vary in height from 4 to 6 storeys with river frontage being 'privatised' due to the lack of adequate setbacks to the river edge. These more recent tourist developments are changing the character and appearance of the Town, particularly when viewed from the Nam Xong river.

figure 11 the environment in the urban core

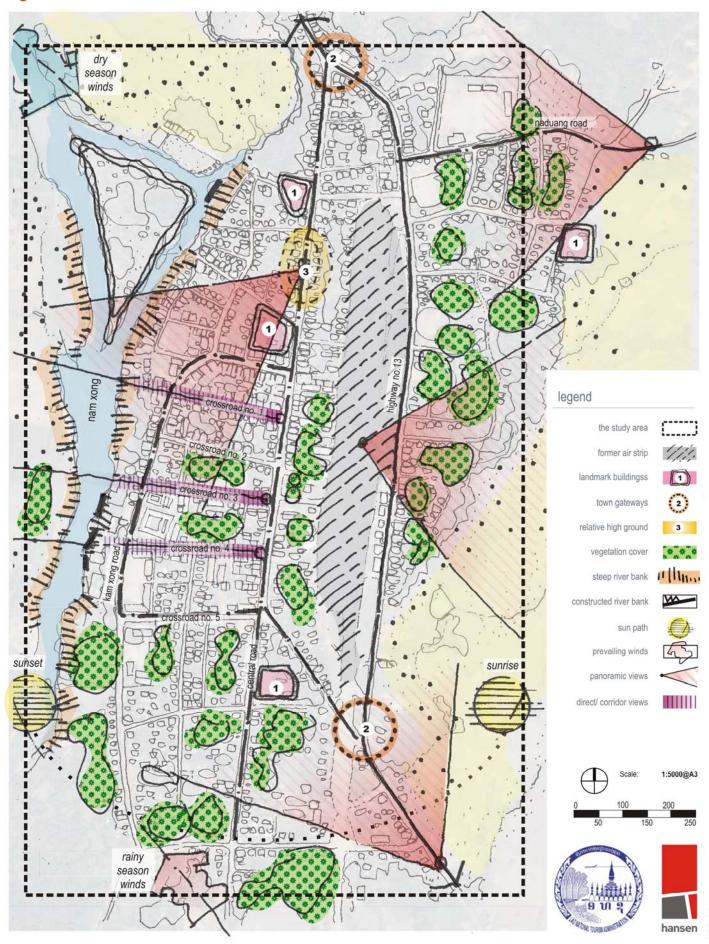
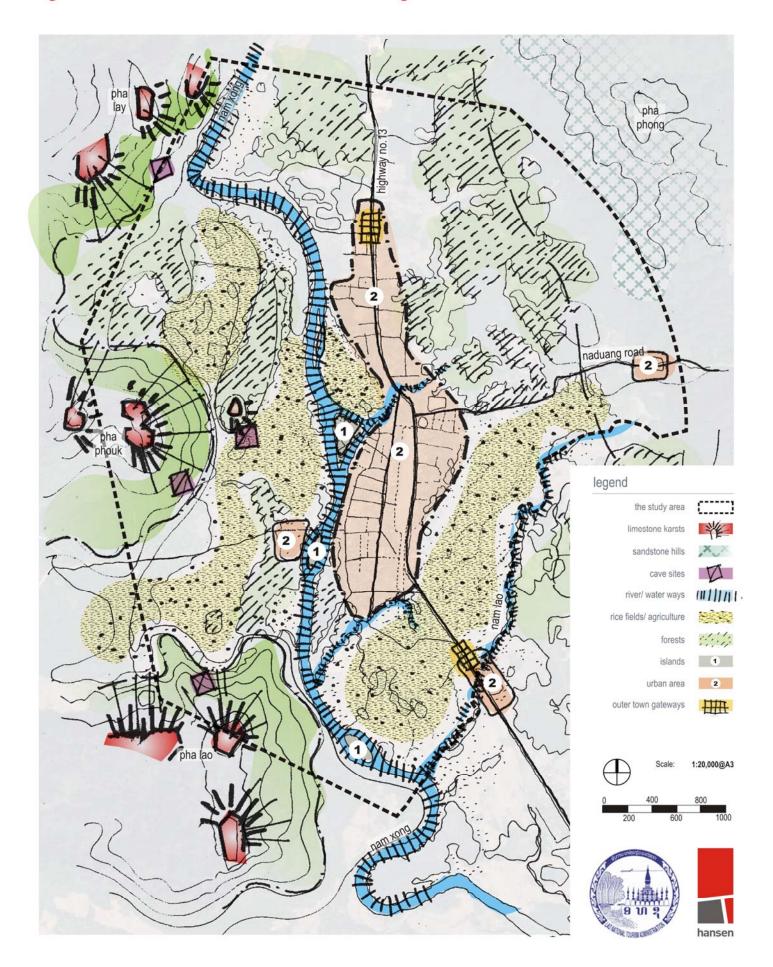


figure 12 the environment of the surrounding area



The Kaysone Memorial Park situated to the north of the main Urban Core offers an attractive public space in Vang Vieng, while other areas such as the Town's Market Place and Bus Station also located north of the Urban Core are relatively recent developments which lack landscaping in terms of shade and greenery.

Other key buildings that provide landscaped open space around them include government offices such as the Land Management Office and the Urban Development Authority office which is a French colonial building of cultural heritage value. The schools located within Vang Vieng and its environs also display open spaces and treed areas which contribute to the overall landscape quality of the area.



Raised single storey dwelling; bamboo thatched finish



Elevated single storey dwelling; timber finish



Two storey dwelling; rendered finish



French colonial building (Urban Development Authority Office)



Two storey dwelling; combination of timber and render finish



Three storey dwelling with render and tile finish



Two storey dwelling; stone and timber finish

4.3 Key Views and 'Gateways'

The natural beauty and scenic qualities of the area contribute to the 'sense of place' of Vang Vieng Town. The ability to appreciate the beautiful setting of the Town of Vang Vieng is facilitated by a number of key views and vistas located on

the edge and within the Town itself. These include panoramic views of the mountains to the east and west, as well as direct corridor views along roads terminated by components of the natural landscape or built form. The key views and vistas are shown in Figure 11.

Views are also gained from within and along the banks of the Nam Xong river, which is particularly important given the increasing number of tourism activities locating within the river corridor. There are also views of the distant mountains from other vantage points within the Town, particularly between gaps in the built form abutting the river's edge.

Often a visitor's first impressions of a town are influenced by the 'sense of arrival' or entry into the urban area. These entry points or 'gateways' provide opportunities to enhance the character and appearance of the town using such techniques as particular tree planting, archways, signage and other structures which inform the public that they are entering a specific town. Figures 10 and 11 identify 'outer town gateways' and 'town gateways' at both the northern and southern entries into Vang Vieng. Further consideration needs to be given as to how to reinforce these gateway points having regard for their immediate context.



The Economy



5 The Economy

5.1 Land Use

Approximately 60% of Van Vieng's income is reportedly from tourism. The growth in guesthouse accommodation and, more recently in multi storey hotels and bungalow style resorts, has not only created jobs for locals living in the Town and surrounding villages, but fostered close links with agriculture given that most of the food being consumed by tourists is locally sourced. The economic benefits of tourism also extend to the sale of local handicrafts although there is scope for more handicrafts to be sold to tourists based on the skills and traditions of the villages within and beyond the town boundaries.

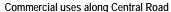
Similarly, the multiplier effects of tourism, both in terms of monetary value and creating jobs, are significant, especially in the service sector. Research in 2005 by the LNTA indicated that for every 100 jobs created in the tourism sector in Lao PDR 1,170 jobs are created in the supply sectors².

It is anticipated tourist numbers to Vang Vieng Town will increase. It is estimated that a total of 107,238 tourists visited Vang Vieng Town in 2008 (42% domestic tourists and 58% international tourist) representing a doubling in tourist numbers over the period 2001-2008. According to a recent report³ by Dr. Paul Rogers, Heritage Tourism Specialist, projected tourist arrivals to the year 2020 for Vang Vieng will be approximately 480,000 visitors. This growth, which is substantial and reliant on a number of factors, will not only generate more investment and economic activity but will rely on the provision of adequately serviced land to accommodate such development.

In addition, other sectors within the economy will undergo growth due to the direct and indirect benefits of tourism resulting in increased in-migration of workers and their families from elsewhere in the province and beyond to the town seeking jobs, schooling etc coupled with natural growth of the existing residential population. It is anticipated that the service sector will undergo significant growth in employment opportunities and, to a lesser degree, growth in agricultural related ventures such as food processing, manufacturing of tourist related goods and souvenirs as well as the building and construction sector. However, it is anticipated that within the urban areas the primary source of income and investment will be in the tourist sector with agriculture retaining its primacy in the surrounding area outside the town boundaries.

At present Vang Vieng Town displays a clustering of similar types of land uses as shown in Figure 13. The main commercial core comprising shops, cafés, restaurants, bars and other tourist related services is relatively compact with established housing to the north and south and more intense tourist accommodation to the west adjacent to the Nam Xong river. The riverside tourist development is occurring in a densely developed manner with new hotels of 4-6 storeys in height constructed very close to one another and with minimal landscaping.







Manual labour intensive rice fields

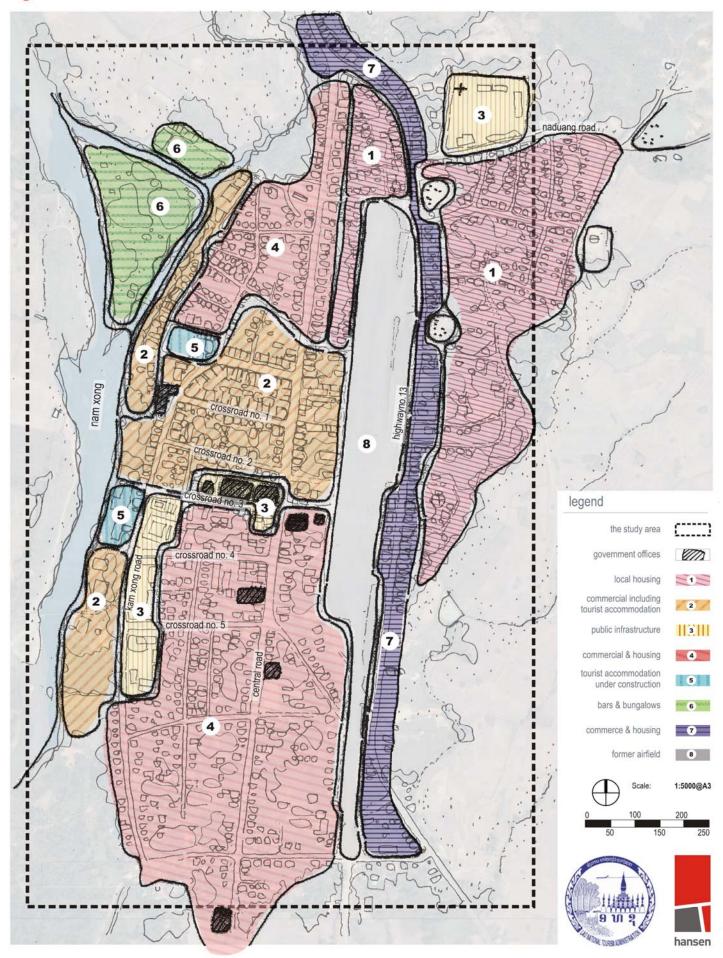


Multi-storey hotels under construction

² International Tourism – Socio-Economic Impacts in the Lao PDR, Technical Background Paper for the third National Human Development Report Laon PDR 2006, Lao National Tourism Administration, page 28

³ Tourism to Vang Vieng – Strategy for Staying Longer-Spending More, Dr Paul Rogers for the Lao National Tourism Administration- Asian Development Bank Sustainable Tourism Development Project

figure 13 land use in the urban core



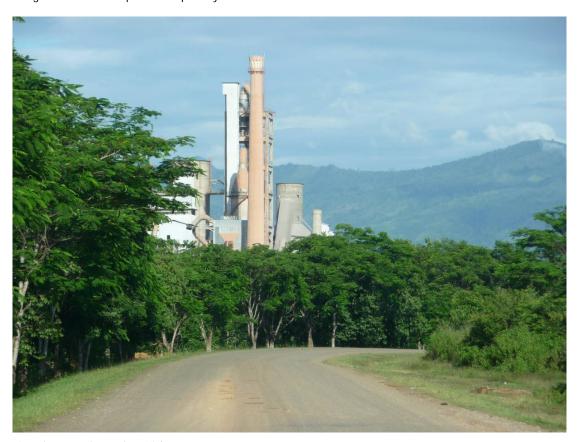
Government offices are mainly in and around the Central Road and Crossroad No.3 intersection creating a government services precinct which is highly accessible and well defined.

Residential areas are largely located within the southern and northern portions of the Urban Core, and to the east of Highway No.13. These areas are generally interspersed with small guesthouse accommodation and community facilities such as primary schools and temples.

New housing is generally favouring the northern area beyond the junction of Central Road and Highway No. 13 with the new Market, Secondary School, Bus Station and recently constructed Ethnic Minorities School further north acting as catalysts to attract development to the north of the Urban Core. Historically, buses stopped on Highway No.13 adjacent to the former airstrip and passengers traversed the strip by foot or tuk-tuk to reach the main commercial area. Whilst this passage of access continues many tourists arriving by bus now commence their journey into town from the north.

A mix of commercial and residential activities is locating along Highway No.13 in a linear pattern but with potential for future urban development to occur to either side of this main road corridor. There is also some industrial activity within this corridor but it is generally small scale and providing goods and services to the local community such as motorcycle repairs, the storage and sale of building materials etc.

Community facilities and social infrastructure are dispersed throughout the Urban Core with a small cluster along Kam Song Road for the hospital and a primary school.



View of concrete factory from Highway 13

5.2 Tourist Attractions

The small island to the west of the Urban Core, accessed by a footbridge, is occupied by tourist bars/entertainment venues and bungalow style accommodation. These mainly bamboo and timber structures are single storey.

In addition to the activities within and close to the Urban Core are small clusters of waterside activities along the Nam Xong river, to the north of the urban areas. Bars, aerial swings, water slides, and informal outdoor deck areas cantilevering over the river banks attract large numbers of mainly young adult backpackers. Loud amplified noise, availability of alcohol, inappropriate social behaviour and an overall lack of supervision of these riverside recreational and social venues are causing adverse impacts on neighbouring properties as well as concerns about tourist safety and inappropriate social behaviour. The intensity of these activities is also causing pollution and degradation of the riverine environs.

Other water based activities have gravitated to the Nam Xong river including a rubber tubing business which operates as a co-operative agreement between the villages of Vang Vieng, kayaking and rafting. Tourism activities also occur within the karst landscape such as well bolted sports rock climbing, spelunking within the cave system and trekking through the mountainous valleys.

Figure 14 identifies the main tourist attractions outside the urban area whilst Figure 15 highlights the dominant land uses surrounding Vang Vieng Town being agriculture, mainly rice fields and orchards, which are generally labour intensive. There are also several small villages within the rural environs to the Town.

As mentioned already, two large concrete producing plants, plus the Town's solid waste landfill facility are located south beyond the boundaries of the Master Plan. The concrete plants offer employment to the local community and provide a readily available and valuable building material used not only in Vang Vieng but elsewhere in the Province and in Vientiane. However, the concrete plants are also unsightly being highly visible from Highway No.13, emit smoke which is often visible from Vang Vieng Town and generate considerable heavy vehicle/truck traffic.









Popular tourist activities

figure 14 main tourist attractions in the environs

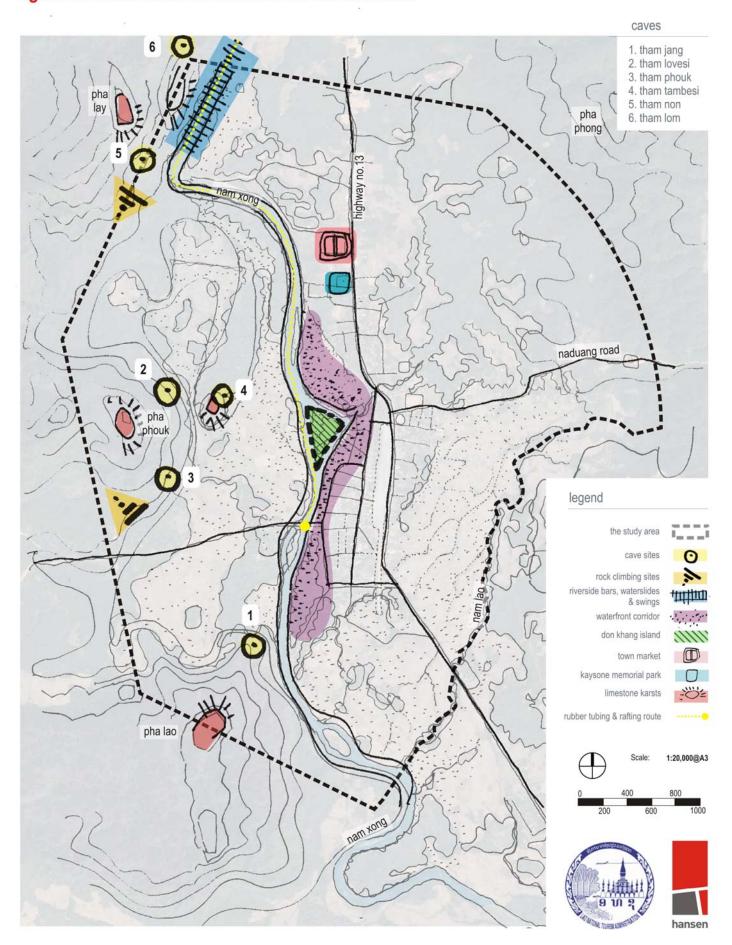
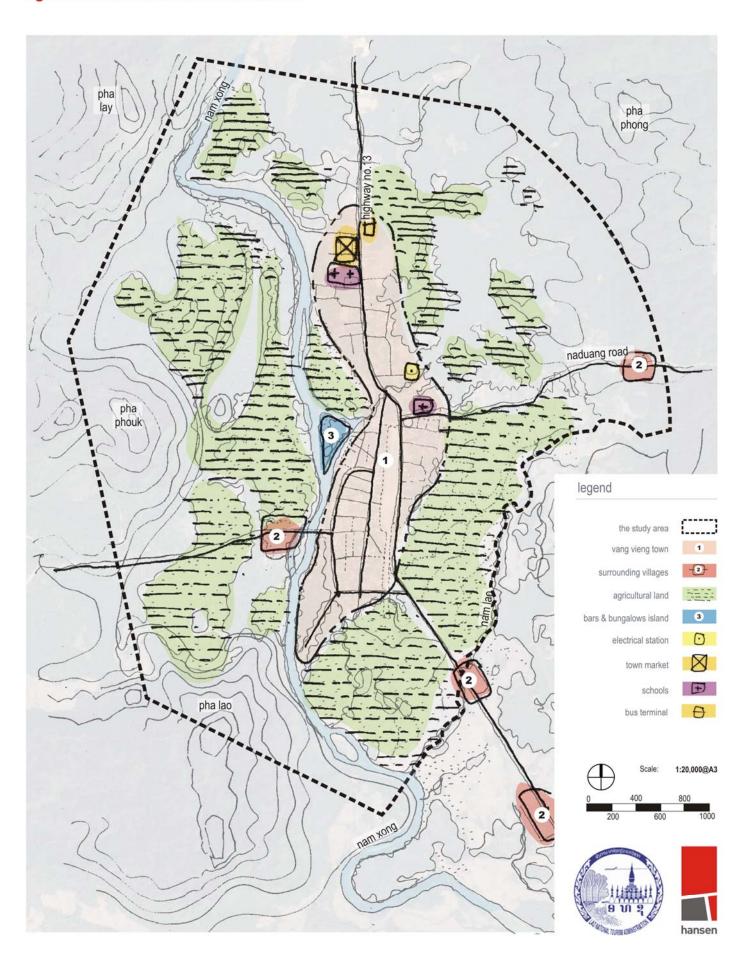


figure 15 land use in the environs





Identifying Key Issues



6 Key Issues

The project team undertook a number of activities in order to identify key issues relevant to the future planning and development of Vang Vieng Town and its Environs. This included:

- Inception meeting on 19 June 2009 with the Deputy Chairman of the Lao National Tourism Administration, the District Governor, representatives from various district government agencies and business people;
- A detailed SWOT (Strengths; Weaknesses; Opportunities; Threats) analysis;
- Two public consultation sessions with key stakeholders and representatives of relevant government agencies; and
- Review of relevant publications about the Town and its surrounding area.

6.1 SWOT Analysis

Following the Inception meeting in Vang Vieng Town and the fieldwork by the project team, a SWOT analysis was undertaken to identify the Strengths, Weaknesses, Opportunities and Threats relevant to Vang Vieng and its Environs, now and in the future. This analysis is a crucial step in the master planning process. Table 4 summarises the key findings of the SWOT analysis.

Table 1 SWOT Analysis

Strengths	Weaknesses
Social	
 several schools available to the community street lights – helps for security many temples (culture and spirituality) different cultures and customs (ethnic minority groups) hospital (health care) young population (encourages positive workforce) good water pressure good electricity supply safe town local culture; ancient customs; peaceful; local festivals good facilities, particularly infrastructure good facilities, particularly infrastructure 	 poor water quality and water shortage in dry months lack of vocational school tourists not respecting the Lao culture (specific reference to inappropriate dress and behaviour in public places) low percentage of children completing primary and secondary education lack of vocational training centres workforce does not have expertise in a diverse range of skills (mainly concentrated in tourism) drainage system in need of upgrading lack of some community facilities such as pre-school centres
Economic	
 located on the Vientiane – Luang Prabang transport corridor and tourist route tourist accommodation – high capacity due to number of available beds new market offering a range of goods in an easily accessible location many small businesses (source of employment, particularly amongst families) good agricultural land concrete factory brings jobs and provides readily available concrete for the construction industry good local investment rate (therefore not reliant on outside sources) good transportation 	 not all villages within Vang Vieng provide a village fund for business investment (borrowing system) high direct and indirect charges (e.g taxes; tariffs etc) cost of water usage is high economy overly reliant on tourism and lacks diversity imbalance in workforce structure (high percentage of people in the agricultural sector; low percentage of people in secondary and tertiary sectors) cost of living is too high over reliance on outside sources of food in some seasons making food more expensive lack of diversity in tourist accommodation and services – too much of the same product being offered dominance of low end tourist accommodation inadequately trained staff in the hospitality, food and

beverage sector and as tourist guides

 poor management of some tourist activities raising concerns about safety and well-being

Environment

- diverse nature of natural environment (mountains; caves; rivers; forests)
- fresh air
- local housing characterised by gardens
- waterways contain clean and healthy water
- good weather conditions / altitude

- limited gardens and green spaces for public use ratio of green area is very low
- lack of street trees for shade and greenery
- lack of effective recycling program
- air pollution from concrete factories
- noise pollution along river from loud music from riverside bars and tourists frequenting these venues
- untreated waste water and stormwater from urban development into the river system
- overdevelopment along the river bank (scale of building form too large) creating a wall of buildings without greenery or adequate physical separation
- large proportion on septic tanks but also use of pit latrines –pollution issues and poor maintenance of some concrete septic tanks
- lack of protection of the river bank
- new development is blocking the views of the valued landscape
- few publicly accessible green areas along Nam Xong river within the town itself
- some business owners do not take responsibility for the natural environment, including noise pollution
- deforestation to the north of Vang Vieng
- ad-hoc access to caves and poor management of the cave system
- emergence of architectural styles in new tourist accommodation which fail to integrate well with their surrounds and do not respect the amenity of adjacent properties

Governance

- reasonable community and stakeholder consultation prior to government making regulations/laws
- approval system at district level for housing very quick
- development regulations are not consistently enforced
- unstructured and poorly monitored building development activity
- land use activity regulations not enforced
- Provincial government offices are located in Phon Hong and only have a limited number of government offices in Van Vieng - therefore problems with co-ordination and time to travel to and from Phon Hong
- lack of standard for septic tanks construction and maintenance
- some construction works occur unofficially, and do not obtain permission from relevant authorities
- developments larger than 200 sq.m are dealt with at the provincial level with the approval process taking up to 3 months

Opportunities **Threats** Social public awareness of natural disaster and caring for the lack of professional skills environment lack of technological knowledge (human resources) increase participation in education and encourage local community to ensure children attend school training and retraining community in skills matched to investment and development needs establish a vocational school, a university and a children's pre school facility establish school to train local people in the English improve infrastructure including roads, footpaths, street lights, car parking, drainage etc good quality water to be accessed all year round every village head to have their own office promote customs, culture, singing, dancing etc of ethnic groups and local Lao people **Economic** establish some landmark projects for tourism lack of funding encourage more SME's (small and medium enterprises) lack of modern machinery in Vang Vieng, particularly in secondary and tertiary lack of co-operation from private sector sectors lack of diversity in employment types and skill base in the establishment of cool stores to ensure produce is workforce available for longer periods, rather than seasonally establish community based tourism OPOV (One Product One Village) - new idea for tourism strategy in terms of handicrafts etc diversity of tourist accommodation and restaurants establish different types of tourist activities cave trails including interpretation methods different standards of accommodation (encourage higher standard of tourist accommodation) and include tourist accommodation classification rating system more variety of food - multicultural food; good taste change image of Vang Vieng to be clean, green and safe technical staff and tourism guides to be officially trained promote agricultural products of the district improve food processing establish information centre provide a more attractive business climate for investment (for locals and foreigners) establish business groups Environment tree planting along streets attracting the 'wrong' type of industry that create adverse environmental impacts create large public park poor management of the environment protect river banks, river and mountains assess biodiversity of Vang Vieng and surrounds and provide appropriate management and protection of

valued ecosystems and habitats

Governance

- establish appropriate regulations to ensure tourists are safe, and also respect the local culture in terms of tourist behaviour and dress
- implement a local culture laws campaign to raise awareness regarding these issues (does and don't)
- campaign to increase awareness regarding building regulations and good design in new development
- increase co-operation amongst public sector / government agencies to facilitate development
- add adherence to regulations
- review of current construction regulations and urban planning to facilitate appropriate development

- lack of appropriate master plan to guide future growth and development in a sustainable manner
- poor leadership in private and public sectors



SWOT Session

6.2 Stakeholder Consultation Workshops

Community consultation sessions were held on 24June 2009. The session was held in two parts as follows:

- officials from various government departments and some members of the general public in the morning; and
- representatives from the tourism industry and other business owners in the afternoon.

The consultations provided a valuable opportunity for people who live and work in Vang Vieng Town the opportunity to express their concerns, ideas and aspirations for the current and future development of the Town and its environs





Consultation Workshops

Each group was divided into smaller focus groups who were then asked to answer specific questions about the Town. Members of the project team sat at each of the focus group tables to facilitate discussion and assist the groups in recording their comments. Each smaller groups then presented their feedback via a nominated spokesperson. The following is a summary of the feedback from the community at this first consultation session.

Table 2 Stakeholder Consultation Feedback

What do you like about living and working in Vang Vieng?	 rich natural resources good weather conditions good transport good facilities safe, peaceful and old/valued customs and culture many tourist activities trade, commerce and tourism facilities
What do you dislike about living and working in Vang Vieng?	 Poor wastewater system Lots of garbage Noise pollution from bars playing loud music Insufficient street lighting Inappropriate dress and behaviour of tourists Poor tourism management Air and water pollution High cost of living High buildings blocking views to the natural landscape Some buildings are built 'unofficially' No green area along Nam Xong river Some business owners do not take responsibility for others or the environment

	■ Deforestation
	DeforestationCement plant - pollution
	 Chemical use for agricultural purposes which causes ill health (chemicals are
	 predominantly imported from China and Thailand) and seeps into the rivers Unofficial fees from government and high tariffs and taxes
What changes would you like to see happen in Vang Vieng over the next 10	Better regulations and good urban planning No defrectation
years?	 No deforestation Enforce regulations to address tourist behaviour to ensure respect for Lao
	 Enforce regulations to address tourist behaviour to ensure respect for Lao culture
	River bank protection along Nam Xong river
	Official training for technical staff and guides
	 Public park / open space area and culture park
	 To become an Internationally recognised sustainable tourist cit y
	Protection of local and ethnic culture
	Improvement of drainage system
	 Improvement of infrastructure (roads, car parks, footpaths, streetlights, drainage)
	 Establishment of reserve for forest protection especially within watershed, and stop cultivation shifting into forest areas
	Garbage truck to follow schedule
	 Car parking control
	 Regulation of guesthouse prices to address fluctuations and inconsistencies in prices
	Raise awareness of environmental issues.
The local economy of Vang Vieng is	Service improvement - more categories and standards of services
very dependant on tourism.	Set up business groups i.e. Handicrafts and local souvenirs
	 Improve industry- include food processing and food storage facilities
How can we make the economy of the	Establish information centre
town stronger?	 Open economy for investment, for both locals and foreigners
	 Capacity building and training for government and business staff
	 Promote local handicraft industries
	Protect agricultural activity from urban encroachment
	Improve choice of facilities and types of accommodation Stablish food processing factors to generate food processing and starges to
	 Establish food processing factory to generate food processing and storage to ensure foods are available all year round
	 Promotion of local culture and customs
	Improve food quality
How can we get tourists to stay longer	Improve tourist services
in Vang Vieng and spend more	 Expand, diversify and promote tourist activities
money?	Protect and improve use of caves and river for tourists
	Establish tourist information centre
	Improve and guarantee safety for tourists
	Fair pricing system
	 Tourist police should be peaceful, not aggressive
	Promote home stay accommodation
If you won the lottery and all the money was to be spent on	 Improve wastewater treatment, improved landfill practices and mitigate noise pollution
improvements in Vang Vieng, what	 More streetlights – will improve safety and stop thieves
would be the 3 projects you would fund?	 Improve general environment and clean roads
	 Improve quality of Nam Xong river

- Two or three more garbage trucks
- Promote recycling of waste
- Water availability and electricity fluctuate by the season need to address
- Improve education promote project to help more students learn English
- Promote Lao culture and customs

There is substantial agreement, both within the project team and the stakeholders who participated in the first round of community consultations, as to the issues facing the Town and its environs. In brief these issues relate to

- Increased demand on existing infrastructure as the town develops and grows;
- Adverse impacts on the appearance, integrity and quality of the natural environment especially the Nam Xong river and its immediate environs;
- The changing appearance and character of the town in a way which may deter tourists from coming to the town as well as hinder further investment and development; and
- Pressure to expand the town perhaps in areas of environmental sensitivity which are not suitable for urban development and, in a manner which is not sustainable in the medium to long term.

In summary this process of investigation and enquiry has identified four key elements to underpin the Master Plan for Vang Vieng Town and its Environs. They are:

- 1. Town Character
- 2. Urban Growth
- 3. Environment
- 4. Tourism

These strategic elements are explored further in the next stage of master planning – Future Directions.



Future Directions



7 Future Directions

7.1 Vision Statement

The establishment of an agreed vision is a fundamental step in master planning. It is a collective picture of a community's environmental, social and economic future which is underpinned by core values and long term outcomes, reflective of different stakeholder interests and aspirations and, adopts new ways of planning the future for the long term well being of the community.

The findings of *Understanding the Place* have resulted in the following Vision Statement for Vang Vieng and Environs for the period 2010 to 2020:

Vision Statement	In 2020 Vang Vieng will be a diverse tourist destination offering experiences in adventure and recreation pursuits, as well as an appreciation of the area's natural and cultural heritage by international and domestic visitors and the community who live and work in the town and its environs.
	Located in a beautiful landscape of karst limestone mountains, sandstone ridges, and rich farmland, the town will promote its image of clean, green and safe living. Growth will be accommodated within the existing urban core and in the developing new areas to the north and east.
	Vang Vieng will reinforce its role as a thriving trade and service centre meeting the varied needs of the residential community and tourists. The town and its environs will develop in a sustainable and integrated manner, celebrating its past, enhancing its town character and responsibly managing its future.

The Vision Statement forms the over arching statement of intent guiding the future growth and development of the Town and its Environs with a potential Town logo – 'Vang Vieng – a clean, green, safe and friendly town' – as a means of marketing and promoting the intrinsic attributes and values of the community living and working in the town and its environs.

All development proposals within the area covered by the Master Plan need to be assessed in terms of whether or not the proposal is consistent with the Vision Statement. If a development is <u>not</u> consistent with the Vision Statement and other elements of the Master Plan then it should be refused by the relevant government agency(ies).



7.2 Principles underpinning the Vision Statement

Derived from the findings of the first stage of the master planning process four principles have been identified for the Vang Vieng Town and Environs Master Plan. They are as follows:

	Town Character:
	Vang Vieng and Environs will be a green, clean, safe and welcoming town.
	Urban Growth:
	Vang Vieng and Environs will develop in an integrated and sustainable manner.
Principles	Environment:
	Vang Vieng and Environs will conserve, protect and enhance its landscapes.
	Tourism:
	Vang Vieng and Environs will develop as a diverse tourism destination.

These four principles are not only embraced in the Vision Statement but represent the foundation stones for building a well planned and sustainable community which prospers from a strong economy, a healthy lifestyle and a natural setting of stunning beauty and scenic splendour. For the principles to be applied in a co-ordinated and integrated way requires the formulation of objectives and actions relevant to each principle. This approach ensures that the links between implementation of the Master Plan and the Vision Statement are maintained throughout the life of the Plan.

8 Future Growth and Development Projections

8.1 Population Projections, 2009- 2020

From the base population of 10,000 persons in 2008 three scenarios for future population growth have been determined for the Town noting there will also be additional population growth in the small villages outside the Urban Core. However, the additional growth in surrounding areas will not be of the magnitude likely to be experienced in the Town itself which is the main focus of the majority of economic development and investment activity. The three scenarios are based on different annual growth rates over the period 2009 to 2020 ranging from the 1995-2005 rate of 3.1% p.a. to 4.5% p.a. and 6% p.a.

Table 3 Scenario 1: Existing growth rate (3.1% per annum)

year	total population	additional number of people	additional number of households
2009	10,310	310	55.35
2010	10,629.61	319.61	57.07
2011	10,959.12	329.51	58.84
2012	11,298.85	339.27	60.58
2013	11,649.11	350.26	62.54
2014	12,010.23	361.12	64.48
2015	12,382.54	372.31	66.48
2016	12,766.39	383.85	68.54
2017	13,162.14	395.75	70.66
2018	13,570.16	408.02	72.86
2019	13,990.83	420.67	75.11
2020	14,424.54	433.71	77.44
Total:	14,425	4,425	790 (approx.)

Table 4 Scenario 2: Incremental growth rate (4.5% per annum)

year	total population	additional number of people	additional number of households
2009	10,450	450	80
2010	10,920	470.25	83.97
2011	11,411.41	491.41	87.75
2012	11,924.92	513.51	91.69
2013	12,462.35	537.43	95.96
2014	13,023.15	560.80	100.14
2015	13,609.19	586.01	104.64
2016	14,221.60	612.41	109.35
2017	14,860.92	639.97	114.28
2018	15,529.66	668.77	119.42
2019	16,228.49	698.83	124.79
2020	16,958.77	730.28	130.40
Total:	16,959	6,960	1,242

Table 5 Scenario 3: Accelerated growth rate (6% per annum)

year	total population	additional number of	additional number of
		people	households
2009	10,600	600	107.14
2010	11,236	636	113.57
2011	11,910	674.16	120.38
2012	12,624.76	714.60	127.60
2013	13,382	757.48	135.26
2014	14,184.93	802.93	143.38
2015	15,036.02	851.06	151.97
2016	15,938.18	902.16	161.1
2017	16,894.47	956.29	170.76
2018	17,908.13	1,013.66	181.01
2019	18,982.61	1,074.48	191.87
2020	20,121.56	1,138.95	203.38
Total:	20,122	10,122	1,807

Note: Total population levels and number of additional people have been rounded up as approximate numbers.

The total population levels and growth in household numbers for each scenario over this period are shown in Tables 1 to 3 and based on the average household size of 5.6 persons per household derived from the 2005 Census data. In summary, the total population levels and associated new households created under these scenarios are as follows:

Table 6 Summary of Population and Household Projections, 2009-2020

	Total Population by 2020	No. of Additional People, 2009- 2020	No of Additional Households, 2009-2020
Scenario 1: 3.1% p.a. growth	14,425	4,425	790
Scenario 2: 4.5% p.a. growth	16,959	6,960	1,242
Scenario 3: 6% p.a. growth	20,122	10,122	1,807

The Master Plan adopts the population growth **Scenario 2**, namely 4.5% p.a., being a conservative growth rate but a rate which is believed to be achievable based on past trends and the possible influx of new arrivals from the surrounding rural areas seeking jobs and better living conditions. There is no doubt that this growth rate <u>could</u> be exceeded over the next 10 years, but if this is the case (given regular monitoring of population growth within the Town) then there is substantial land available to include within an UGB to the north and south of the Town at a later date. The Master Plan warrants triennial reviews providing the potential to amend elements of the Plan if substantiated by sound data and other information pertaining to growth and development rates and, emerging development opportunities.

8.2 Land Use Allocation to the Year 2020

Applying the 2020 population levels under each of these scenarios the challenge is to identify the amount of urban land needed to accommodate future growth. In the case of housing the average housing allotment is 200 square metres in area. Based on the additional households created under each scenario the following amount of land for residential purposes will be required plus another 30% for roads and community infrastructure:

Table 7 Summary of Population Growth scenarios to 2020

	No. of new households	Total no. of hectares (ha.)	Additional land for roads and community facilities (ha.)	Total land area required for new housing (ha.)
Scenario 1: 3.1% p.a.	790	15.8	4.74	20.54
Scenario 2: 4.5% p.a.	1,242	24.84	7.45	32.29
Scenario 3: 6 % p.a.	1,807	36.14	10.84	46.98

In addition to housing required to meet the needs of the additional residential population to the year 2020 there will be a need for land for commercial development (including tourism) and employment in service industries and light industrial activities. Estimated tourist numbers to Vang Vieng Town by 2020 are approximately 480,000 persons being a 35% increase in total tourists since 2008. These tourists will generate the need for accommodation and associated tourist services and facilities such as dining and entertainment venues, tour operators and other services catering for the tourist market e.g. laundry services, transport services etc.

It is guestimated that approximately 30 hectares of land within the existing Urban Core is committed to tourist/ commercial related activities in 2009. An additional 35% increase in tourist numbers could generate a demand for at least another 10+ hectares of land for these activities to the year 2020. This allocation will be impacted not only by the nature of new tourist development be it hotels, guesthouses, home stay accommodation, resort style development etc but also the intensity of development given that some of the tourist accommodation is presently 4-6 storeys in height. A lowering of permissible building height for tourist accommodation will create the need for more land beyond 10 ha. Hence it would be prudent to allocate at least 20 ha. of land within the proposed UGB for tourist related activities.

Additional to tourist accommodation and new housing to accommodate population growth is the demand for urban land for growth in government offices (which currently occupies approximately 5 ha.) and other employment activities related to service industries and agricultural related opportunities such as food processing. At present these non tourist and non residential uses do not occupy a large area of land within the Urban Core and Urban Expansion area to the north. However, it is anticipated that if the economy of Vang Vieng Town and its environs is to become more robust and diversified there will be a growing demand for service industries catering for residents and tourists alike. Land will need to be provided for growth in both the government administration and service industry sectors. Therefore it is estimated that another 5 ha. of land for government offices be provided to the year 2020 and a total of 12 ha. for service industries/employment uses given that some of these uses will require sufficient land to accommodate single storey buildings suited to their production techniques.

There may be other activities seeking land within the Town over the next 10 years which serve the wider district's needs and hence a further 10 ha. of land is committed to these opportunities. This could include new higher order community facilities and services such as training colleges, a new hospital catering for local resident and tourist needs etc.

8.3 Allocation of new development within the Urban Core

Within the identified Urban Core under the Master Plan the total area of land is approximately 136 ha. Approximately 75-80% of this area is already developed but with substantial potential for redevelopment of under developed allotments and development on vacant land.

A strategically significant development opportunity is the old airstrip land. Being centrally located with excellent access to Highway No.13 and close to existing government offices, residential development and guesthouse accommodation, the Master Plan anticipates major development of the old airstrip for offices, commercial/retail development as well as community and education based activities including a Central Park precinct. In this location the building height will be of a scale which can be integrated into its surrounds, provide generous landscaped setbacks and adopt a pavilion style built form. The old airstrip land is <u>not</u> earmarked for tourist accommodation or residential development being much valued land suitable for more community/public and commercial activities.

It is anticipated the Urban Core will continue as the preferred location for the majority of new tourist related activities. At least 75% of new tourist accommodation and services, including commercial development, will locate within the Urban Core. This may result in some Urban Core residents relocating to the Urban Expansion Area enabling the redevelopment of their land for tourist and commercial related uses.

New housing will continue to be provided in the Urban Core but the majority of new housing will favour a northern location thus enabling the continued consolidation of tourist related uses in the Core area itself.

8.4 Allocation of new development in the Urban Expansion Area

The Urban Expansion Area to the north is approximately 126 ha. in area. The pattern of existing development presently aligns either side of Highway No.13 and is predominantly housing, commercial development, community facilities and existing farmland.

This northern area is currently under developed with ample land available for further growth, particularly new housing. Hence 75% of new housing over the next 10 years is allocated to land in the Urban Expansion Area. It is not a favoured location for tourist accommodation or tourist related services but may accommodate limited home stay and small questhouse establishments.

The service industry and light industry will locate predominantly in a new well designed Employment and Service Precinct in the northern part of the Urban Expansion Area. This new precinct is easily accessed from Highway No.13 and will be proximate to the proposed road bypass planned to the east of the Town thus ensuring, in the longer term, the redirection of truck and heavy vehicle traffic off the section of Highway No.13 traversing the Town via the bypass.

It is anticipated that additional space for Government offices will be required over the next ten years and that such development is to cluster in the northern part of the Urban Expansion Area east of the proposed new Employment and Service Precinct.

Activities in the 'Other' category such as higher order community facilities etc will also favour an Urban Expansion Area with the exception of the proposed training college focusing on the hospitality, food and beverage and tourist services sector which is earmarked for the old airstrip land.

8.5 Summary of Urban Land Allocation, 2010-2020

Taking into account the above land allocations it is desirable that the land available for future growth and development is in accordance with the estimates in Table 8.

Table 8 Summary of Urban Land Allocation 2010-2020

Activity	Land Allocation, 2010- 2020	Distribution of growth in Urban Core*	Distribution of growth in Urban Expansion Area
Housing with local community facilities	33 ha.	8 ha.	25 ha.
Tourist accommodation and services including commercial development	20 ha.	15 ha.**	5 ha.
Government offices	5 ha.	5 ha.	
Service Industry and Light Industry	10-12 ha.		10-12 ha.
Other	10 ha.	2 ha.	8 ha.
TOTAL:	80 ha.	30 ha.	50 ha.

^{*} New development will be a combination of redevelopment of under utilised land and development of vacant land

It must be appreciated that it is often very difficult to accurately correlate the land area requirements with new growth and development, just as it is difficult to accurately predict future growth and development rates. Invariably market forces will favour some locations over others and the rates of development and investment will also be influenced by factors external to local, provincial and national circumstances such as the impacts of global economic factors. Therefore, the growth and urban land allocation projections in the Master Plan will need to be regularly monitored and possible adjustments made to the Master Plan as deemed fit by government. What is clear, however, is that the total area of urban land set aside for Vang Vieng Town to the Year 2020 will be sufficient to accommodate anticipated growth, especially given that the Urban Expansion Area totals 126 ha. of land whereby the existing and projected growth for this area will still retain a possible 35+ ha. for unforeseen growth during the life of the Master Plan.

In summary, future urban growth for Vang Vieng Town will be accommodated in two ways, namely:

- Continued development within the existing Urban Core being a combination of new development on vacant land and redevelopment of existing developed land. The strategy is one of consolidating the Urban Core within the land use precincts identified in Figures 17 and 18. The Urban Core offers substantial existing social and physical infrastructure as well as close proximity to a wide range of goods and services and every effort should be made to maximise the use of this capital investment; and
- Gradual staged development of the new urban areas to the north and east of the Urban Core but within the identified Urban Growth Boundary (UGB) for the Town as shown in Figure 18.

There will also be incremental growth in the small villages outside the UGB but the majority of new development will focus on the urban land within the designated town boundaries.

^{**} This figure will be lower if some of the new tourist accommodation adopts a resort style format in which case it is encouraged to locate outside the UGB

9 Objectives and Actions

The following objectives and actions apply to all future development within the area covered by the Vang Vieng Town and Environs Master Plan, 2010-2020.

9.1 Town Character

The appearance, amenity and quality of Vang Vieng's urban environment will strongly influence its appeal to investors and new arrivals seeking to live and work in the town. The town's character will also have an impact on the tourism sector, not only in terms of tourist numbers each year, but how long tourists stay in the town to enjoy its many and varied experiences and activities. It is evident that places which offer a high standard of liveability are the places that people often choose to live in the most. Liveability includes factors such as fresh air, clean water, a safe and secure environment, friendly and hospitable behaviour from its citizens, greenery and attractive public spaces, a rich cultural life etc.

The following **Objectives** apply to the Town Character of Vang Vieng as it develops and grows.

Vang Vieng and Environs will be a green, clean, safe and welcoming town.		
Objective 1 Promote Vang Vieng as a clean, green, safe and friendly town.		
Objective 2	Manage new development in a sustainable and integrated manner.	
Objective 3	Retain and celebrate the traditions, customs and culture of the town and the surrounding villages.	

The **Actions** identified for achieving the Town Character Objectives are as follows noting that the number beside each action reflects the order of priority in terms of commencing implementation of these actions. See also figure 16.

	Doyalan a natwork of 'Croon Stroots' by planting troop on all stroots within urban group and
TC1	Develop a network of 'Green Streets' by planting trees on all streets within urban areas and improving street lighting and footpaths.
TC2	Establish the Nam Xong river walkway (Stage 1 = 900m adjacent to river) commencing at a north point adjacent to Don Khang Island and extending south just beyond the main bridge connecting the town to Houyhnae Village with several east-west connecting points off Kam Song Road.
TC3	Establish attractive landscape and/or built form elements at the Inner Township and Outer Township 'Gateways' to Vang Vieng.
TC4	Continue and complete drainage improvements program within the established Urban Core and install adequate drainage systems in newly developing areas to the north and east.
TC5	Improve all directional and tourist signage based on a Town logo and colour scheme which is applied in all aspects of town identification and marketing.
TC6	Establish a new Central Park with viewing platform on the old airstrip land and public amenities as a community space for recreation, ceremonies, festivals and other important gatherings.

Objective 2: Manage new development in a sustainable and integrated manner.

TC7

Amend the current construction regulations to ensure the incorporation of sustainability measures in all new development (private and public sector development) including solar panels, water tanks to collect rainwater for use in gardens and landscaped areas, household and business recycling programs (paper, glass, plastic, aluminium, second hand timber etc).

Objective 3: Retain and celebrate the traditions, customs and culture of the town and the surrounding villages.

TC8

Establish a yearly calendar of festivals and celebrations of traditional Lao culture, update annually and promote these activities to the wider community and tourists planning to visit Vang Vieng Town.



Vang Vieng old airstrip



Central Road and Highway No.13 - northern intersection

figure 16 masterplan concept: town character

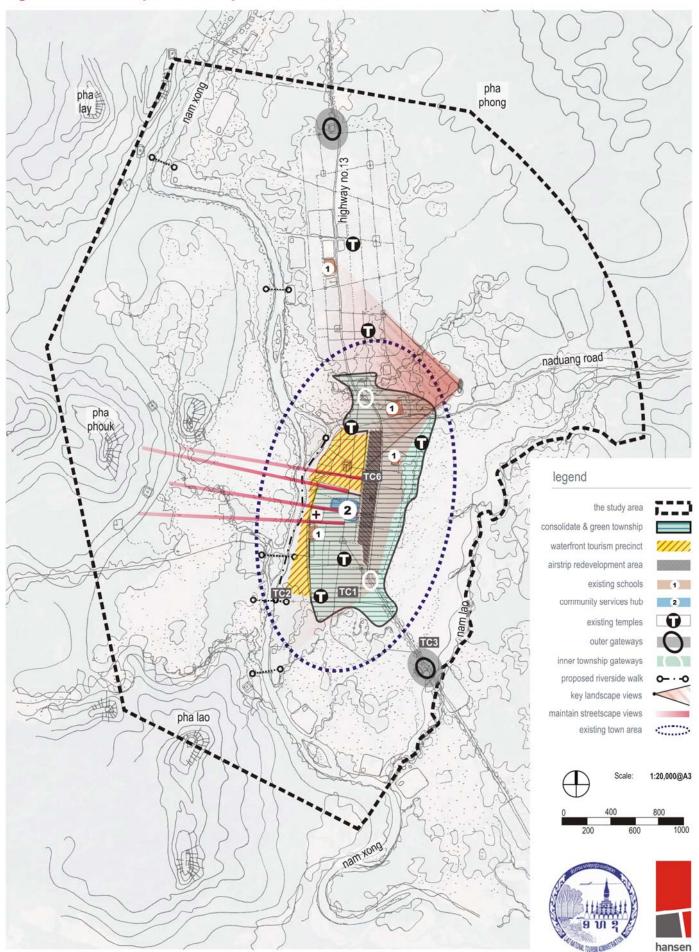
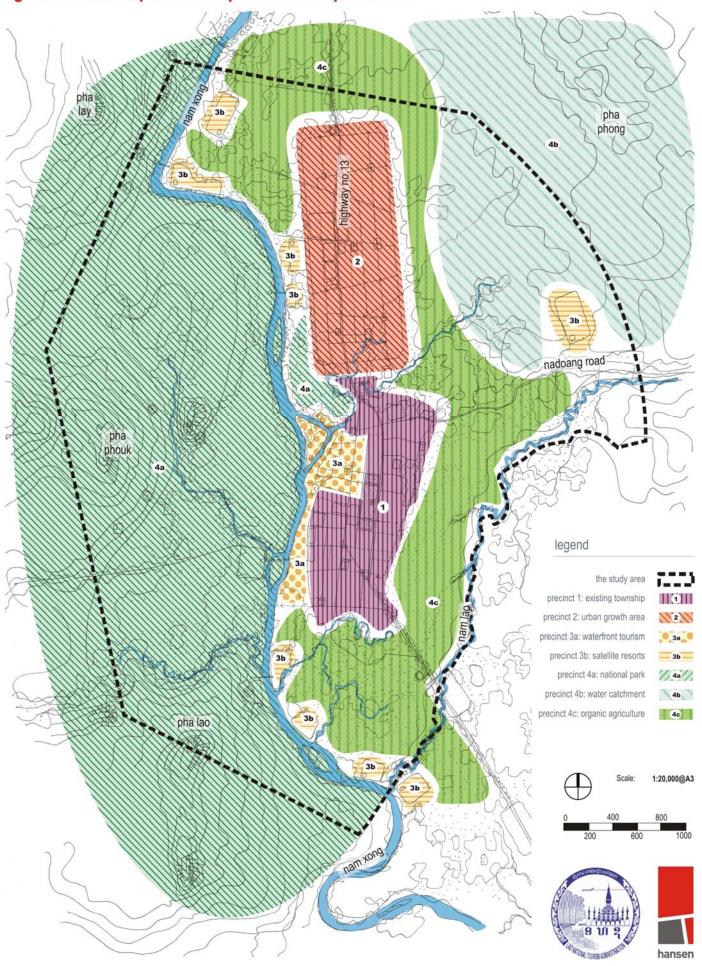


figure 17 masterplan concept: land use precincts



9.2 Urban Growth

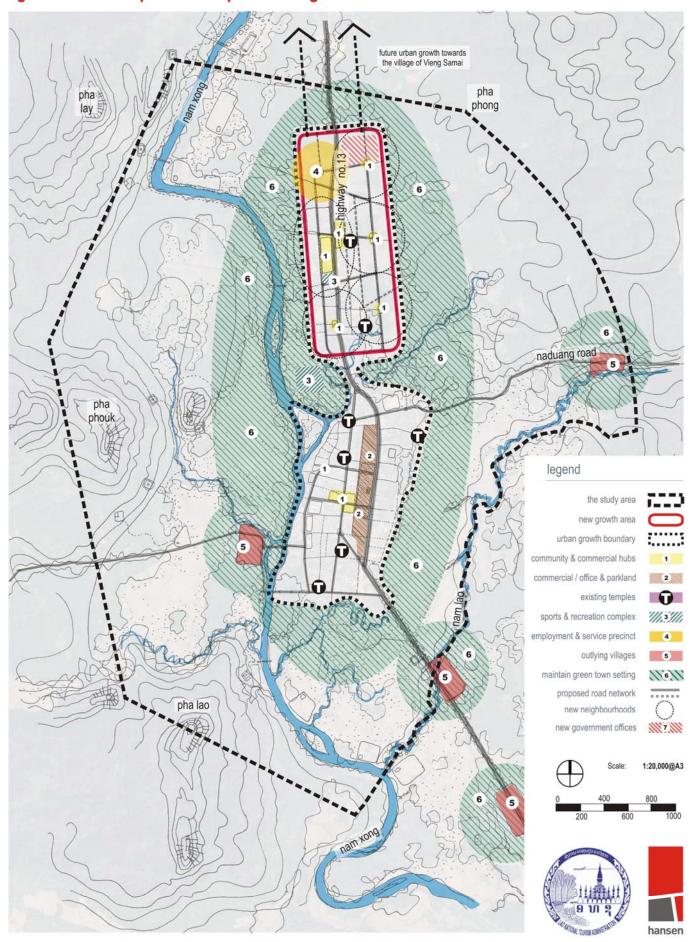
The following **Objectives** apply to the Urban Growth of Vang Vieng to the year 2020.

Vang Vieng and Environs will develop in an integrated and sustainable manner.					
Objective 1	Contain and consolidate development within the established Urban Core and new Urban Growth Area as defined by the Urban Growth Boundary for the town with potential, in the longer term (beyond 2020), to continue urban development further north towards the village of Vieng Samai.				
Objective 2	Facilitate orderly development accompanied by the provision of urban infrastructure and social services and facilities required by the community.				
Objective 3	Improve the service, trade and production sectors to meet local and district needs.				

The **Actions** identified for achieving the Urban Growth Objectives are as follows noting that the number beside each action reflects the order of priority in terms of implementation of the actions.

	ntain and consolidate the town within the established Urban Core and new Urban Growth Areas as define owth Boundary for the town.
UG1	Establish a clear Urban Growth Boundary (UGB) around the Town to accommodate growth and development to the year 2020 and encourage new urban development within the identified Precincts contained within the UGB.
UG4	Develop the old airstrip land to either side of the proposed Central Park as an office, commercial/business and higher education precinct based on an approved concept plan and include within this area a modern Tourist Information Centre.
UG6	Prepare and implement an appropriate growth area neighbourhood development model for the newly developing urban areas to the north and east of the Urban Core which incorporates land for new schools, medical centres and other community based facilities.
	ilitate orderly development accompanied by the provision of urban infrastructure and social services and by the community
UG2	Upgrade and improve the existing solid waste landfill facility to meet appropriate environmental standards and establish a low tech transfer station facility for recycling of waste within the 10hectares of land set aside for solid waste disposal. Purchase another one, or possibly two garbage trucks to meet current and future needs. Instigate a waste recycling program for paper, glass, aluminium and second hand timber and administer at the village level for all households and businesses. Gradually introduce a 'no plastic bags' policy in all commercial businesses.
UG3	Improve capacity of the existing water reservoir to meet current and future water needs of the community.
UG7	Provide a well designed multi-purpose sports and recreation facility for badminton, volleyball, football, tennis etc on the low lying flat land immediately north of Don Khang Island.
UG8	Commence planning for the installation of a reticulated waste water treatment plant (which is likely to be located to the south/ south-east of the Urban Core) and seek funding to construct this much needed facility on a staged basis as the town develops and expands.
	prove the service, trade and production sectors to meet local and district needs.
bjective 3: Imp	To the control than and production control to more recall and allower.

figure 18 masterplan concept: urban growth



9.3 Environment

The environment of Vang Vieng Town and Environs is reflected in its built form – buildings and streetscapes – as well as its natural landscape and highly cultivated farmland. The natural setting of the Town is a significant feature contributing to the ambience, appearance and character. Protecting and enhancing the environmental attributes of the Town and environs, whilst sensitively integrating new development into the landscape, is fundamental to securing the role and function of Vang Vieng as a place not only for living and working but as a popular tourist destination. In contrast, failure to respect and care for the natural and built form environment in a responsible manner is likely to seriously compromise the very elements which make it attractive to the community and its visitors.

The following objectives apply to the environmental characteristics of Vang Vieng and Environs.

Vang Vieng and Environs will conserve, protect and enhance its landscapes.					
Objective 1	Protect the natural landscape setting of the town which includes the limestone karst mountains to the west, the Nam Xong river, the agricultural land and the sandstone ridges to the east.				
Objective 2	Conserve and protect panoramic and corridor views of the surrounding natural landscape.				
Objective 3	Improve air and water quality and reduce noise pollution levels.				
Objective 4	Identify, conserve and protect sites of cultural heritage and environmental significance.				
Objective 5	Identify, conserve and protect the biodiversity values of the area.				

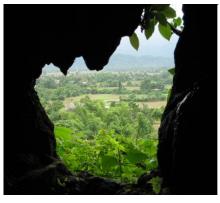
The **Actions** identified for achieving the Environment Objectives are as follows noting that the number beside each action reflects the order of priority in terms of implementation of the actions. Figure 19 summarises the Master Plan Concept for the Environment.

	Protect the natural landscape setting of the town which includes the limestone karst mountains to the west, ng river, the agricultural land and the sandstone ridges to the east.			
E2	Enforce existing regulations and introduce new regulations, where appropriate, to contain and control the riverside entertainment and water based recreational activities north of the proposed pedestrian bridge (between Tam Lom and Tam None).			
E3	Undertake the necessary technical investigations into the natural and scenic values of the limestone karst mountains and the Nam Xong river to the west of the town and, based on these findings consider nominating these environmental features for appropriate conservation and protection under the Lao PDR Law on National Heritage.			
E7	Protect and improve the health of Nam Xong river and other tributaries within the master plan area.			
E8	Retain agricultural land (flood prone) to the north of Don Khang Island until such time as it is developed (in part) as a major multi-purpose recreational facility surrounded by farming.			
E11	Surround the town with organic agriculture activities compatible with the area's natural setting.			
Objective 2: Conserve and protect panoramic and corridor views of the surrounding natural landscape.				
E1	Introduce Design Guidelines and Building Height controls for new development.			

Objective 3: Improve air and water quality and reduce noise pollution levels. Enforce existing regulations and, where appropriate, amend these regulations in respect to developments creating **E**5 air, water and noise pollution problems. Objective 4: Identify, conserve and protect sites of cultural heritage and environmental significance. Identify places of cultural heritage importance within and around the Town and ensure adequate legal protection of E6 these places e.g. Town graveyard, old village well at corner of Central Road and Crossroad No. 3 etc. E9 Establish network of walking trails to caves and other places of natural and cultural significance. E10 Ensure sensitive design around cave environs in terms of signage and other structures. Objective 5: Identify, conserve and protect the biodiversity values of the area. Undertake the necessary technical investigations to identify the biodiversity values of the area and, apply the E4 appropriate laws and regulations to protect these values.





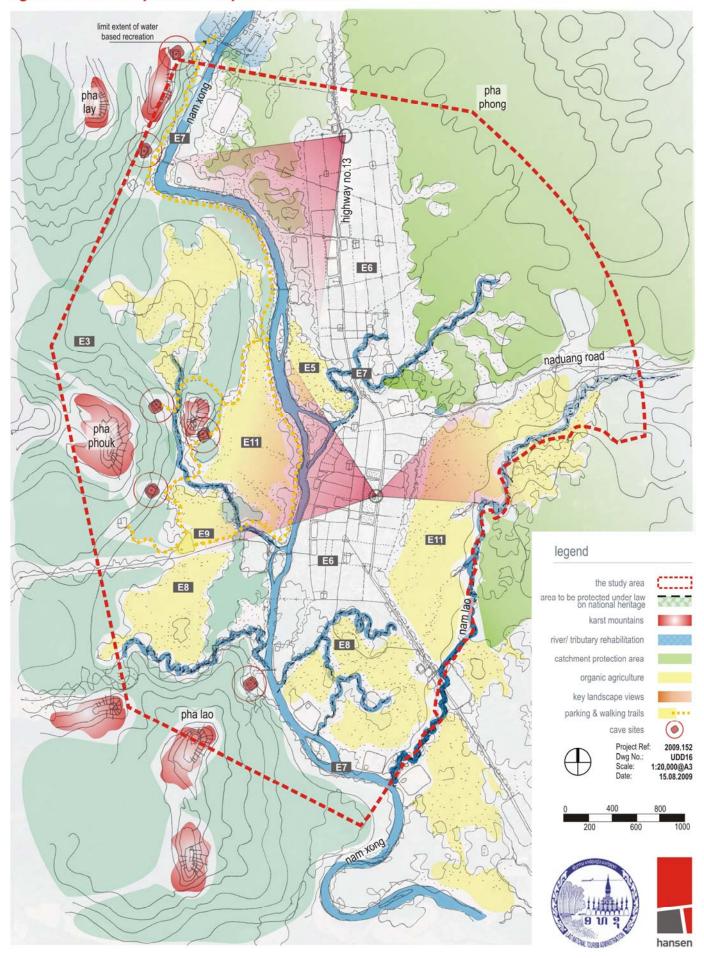






Environmental and cultural elements

figure 19 masterplan concept: environment



9.4 Tourism

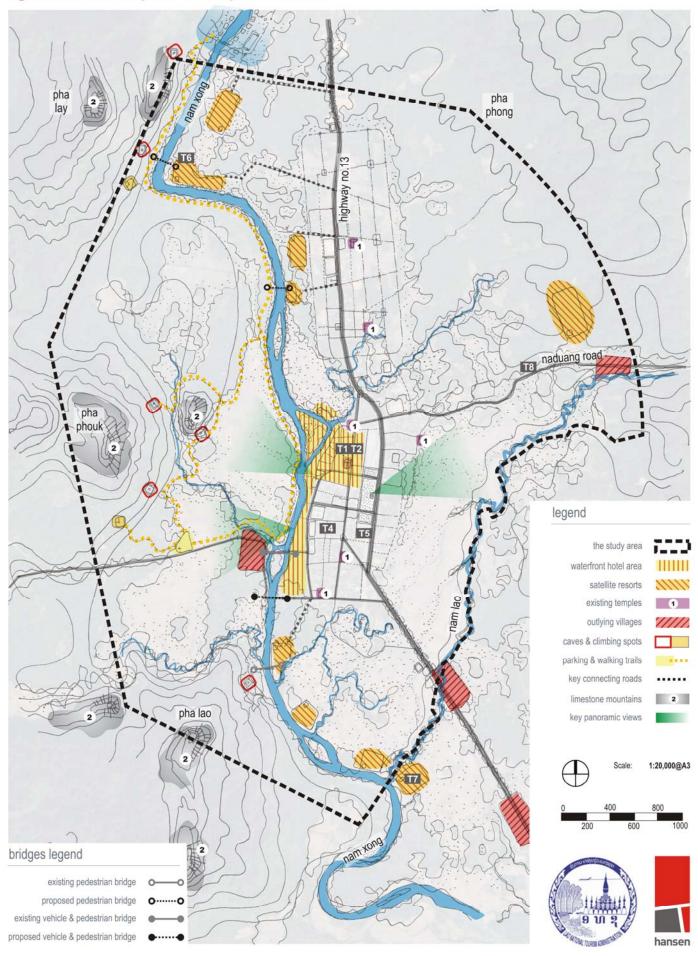
Tourism is the backbone of the Vang Vieng economy. It generates jobs, creates wealth, places Vang Vieng on the international tourist trail and sustains numerous small businesses, many of which are owned by members of the local community. The *'Tourism to Vang Vieng Strategy for Staying Longer – Spending More'* 2009 report by Dr Paul Rogers, Heritage Tourism Specialist provides a clear strategy for diversifying the tourist industry in Vang Vieng Town and its environs, as well as other recommendations for improving the quality and richness of the tourist experience. The objectives and actions for tourism outlined below are consistent with the strategic directions of Dr Roger's report noting that he worked closely with the Master Plan Project Team.

Vang Vieng and Environs will develop as a diverse tourism destination.					
Objective 1	Strengthen the role and functions of the Town and its environs as a tourist destination.				
Objective 2	Diversify the types of attractions, experiences and accommodation offered to international and domestic tourists to the Town.				
Objective 3	Consolidate existing tourist accommodation and entertainment activities into well-defined, contained and responsibly managed tourist precincts.				

The **Actions** identified for achieving the Tourism Objectives are as follows noting that the number beside each action reflects the order of priority in terms of implementation of the actions. Figure 20 is the Master Plan Concept for Tourism.

and functions of the Town and its environs as a popular tourist destination. special tourism entertainment precinct within the northern area of the Urban Core and undertake works improvements enhancing the appearance and amenity of this precinct. Irism training and education precinct in the southern portion of the old airstrip land which aims to andard of services in the hospitality, food and beverage sector as well as other tourist related
works improvements enhancing the appearance and amenity of this precinct. Irism training and education precinct in the southern portion of the old airstrip land which aims to
e new bridges across the Nam Xong river providing safe, easy and free access between the did the tourist attractions and villages to the west.
of attractions, experiences and accommodation offered to international and domestic
at bazaar/market in Crossroad No.1 at specified times and eventually extend this activity into ad.
ang Road connecting visitors to the Keang Nyui Waterfall at Ban Duong.
g tourist accommodation and entertainment activities into well-defined, contained and ecincts.
nd contain the riverside hotel precinct on the eastern side of the Nam Xong river within the no more than 3 storeys in height with landscaped setbacks to the Nam Xong river frontage.
igned new guesthouse development to the established guesthouse and residential area south of mmercial area.
Il designed satellite eco-resort nodes outside the Vang Vieng Urban Core with farmland se nodes and the provision of appropriate local road access.

figure 20 masterplan concept: tourism







Cross Road No. 1

Riverside bar and activities



Landscaped setbacks to the Nam Xong frontage

9.5 The Master Plan for Vang Vieng Town and Environs

Each of the actions identified in the Master Plan will contribute to the realisation of the Vision Statement in an orderly, sustainable and efficient manner. Many of these actions will rely upon close collaboration between national and provincial government agencies, between the public and private sectors, and between government and the community. Some actions will take longer than others to implement due to issues associated with funding, current government regulations or time for pre construction investigations. Every effort needs to be made to ensure that eventually all of these actions are implemented or at least commenced in the next ten year period given that actions such as the redevelopment of the old airfield are major projects extending over a 10-15 year horizon.

The culmination of the four strategic themes underpinning the Master Plan are shown in Figures 21 and 22. These plans overlay each of the themes across the Master Plan area to create a succinct plan for both the Urban Core and the Area Surrounding the Urban Core.

The following chapter outlines more detail on the implementation of these actions in the context of timeframes, who is responsible for undertaking the action, who should pay and an indication of cost based on the categories of high, medium and low cost.

figure 21 urban core master plan concept

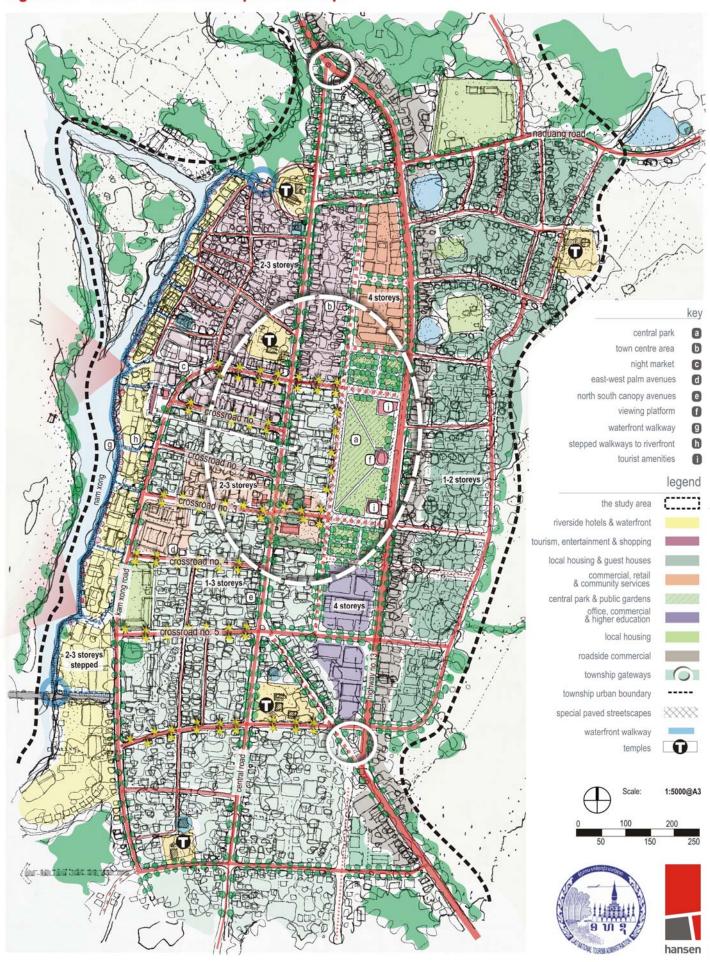
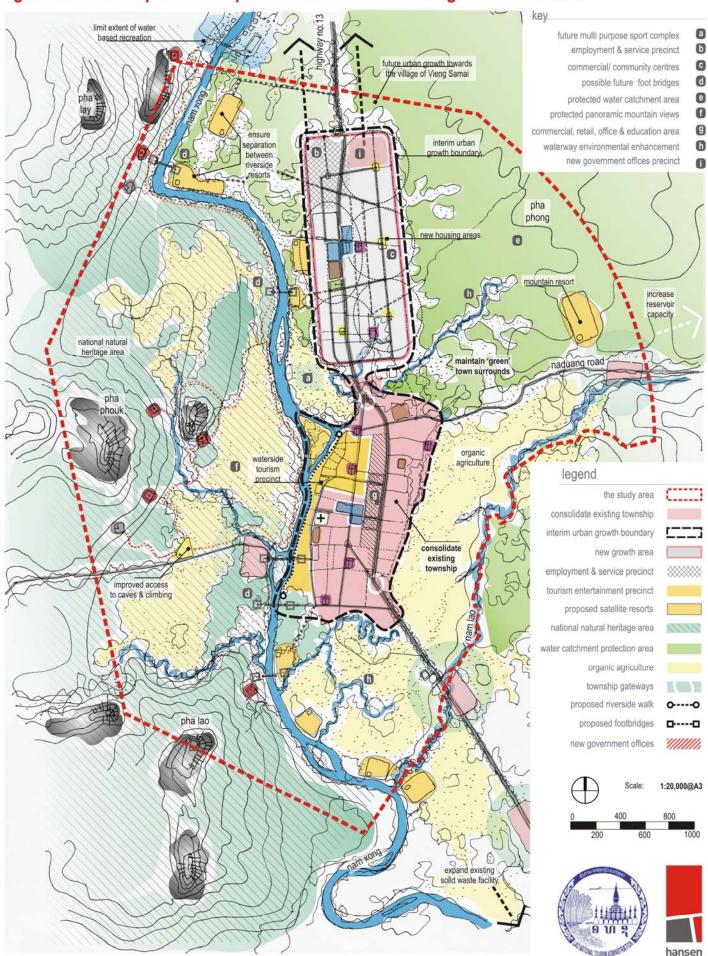


figure 22 master plan concept for the area surrounding the urban core





Implementing the Master Plan



10 Implementing the Master Plan

One of the key challenges when master planning a town such as Vang Vieng and Environs is to provide an implementation program which articulates clearly:

- what action is to be undertaken in order of priority;
- who will be responsible for that action being implemented;
- the timeframe for implementing the action;
- who will pay for the implementation of the action; and
- a guestimate of cost involved in the implementation of the action based on an initial assessment of low, medium and high cost.

Three categories of cost have been identified they being

- Low (no more than USD50,000)
- Medium (from USD50,001 to USD1,000,000)
- High (from USD1,000,001 to USD5,000,000).

More detailed costings are required from the agencies responsible for implementation of these action.

The Vang Vieng and Environs Master Plan applies to the ten year period, 2010-2020. Some of the identified actions will be on-going beyond 2020 as they are actions which, in effect, do not have a completion date. These actions include the provision of urban infrastructure ('hard' and 'soft') as the town expands and grows, regular monitoring of the health of the Nam Xong river and associated works to upgrade the river and its environs etc. Most actions however have set time frames within which to commence and complete the action.

The costs associated with actions in an implementation program are subject to a range of factors ranging from the cost of labour and materials to project management costs, fluctuations in monetary markets etc. The agencies responsible for each action will need to determine the likely cost of implementation as the next step in determining budgets and, as part of fund raising from the public and/or private sectors, as well as appropriate donor agencies.

10.1 Implementation Program

Tables 9 to 12 outline the Implementation Program for the future growth and development of Vang Vieng Town and Environs for the period 2010-2020.

Table 9 Implementation Program for Town Character

TOWN CHARACTER					
Action	Timing	Responsible agency(ies)	Who pays?	Level of cost	
TC1 Develop a network of 'Green Streets'	2011 and ongoing	Agriculture and Forestry Office Information and Culture Office Village Head Office	Public sector	Low	
TC2 Establish the Nam Xong river walkway	2011 - 2013	Water Resources and Environment Office Public Works and Transport Land Management Office Head Village Office District Administration Office	Public sector Private sector Donor agency	High	
TC3 Establish Inner Township and Outer Township 'Gateways' to Vang Vieng.	2011 (outer gateways) 2012 (inner gateways)	Office of Culture and Information District Administration Office Urban Development Authority	Public sector	Medium	
TC4 Continue drainage improvements program within urban areas	2010 and ongoing	Urban Development Authority Head Village District Administration Office Water Resources and Environment Office Land Management Office	Public sector Donor agency	Medium	
TC5 Improve all directional and tourist signage	2010 and on going	Tourist Authority Office Information and Culture Office Urban Development Authority	Public sector Private sector Donor agency	Low	
TC6 Establish a new Central Park with a viewing platform on the old airstrip land	2013-2014	Urban Development Authority Land Management Office District Administration Office	Public sector Private sector	High	
TC7 Amend the current construction regulations to ensure the incorporation of sustainability measures in all new development	2010 - 2011	All government agencies at District, Provincial, and Central	Public sector Private sector	Low	
TC8 Establish a yearly calendar of events to celebrate Lao culture and up date annually.	2010-2011	Tourist Authority Office Information and Culture Office Urban Development Authority District Administration Office	Public sector Private sector	Low	

Table 10 Implementation Program for Urban Growth

URBAN GROWTH					
Action	Timing	Responsible agency(ies)	Who pays?	Level of cost	
UG1 Establish a clear Urban Growth Boundary around the town	2010	District Administration Office Land Management Office Other government offices providing infrastructure	Public sector	Low	
UG2 Upgrade and improve the existing solid waste landfill facility and establish transfer station. Purchase additional garbage trucks. Instigate waste recycling program.	2010 -2014	Urban Development Authority Education Office Village Head Office Water Resources and Environment Office	Public sector Donor agency	Medium	
UG3 Improve capacity of the existing water reservoir to meet current and future water needs of the community.	2011	Water Supply Office Water Resource and Environment Office	Public sector Donor agency	Medium to High	
UG4 Develop the old airstrip land to either side of the proposed Central Park as a commercial/business, office and higher education precinct.	2012-2020	Urban Development Authority Education Office	Public sector	High	
UG5 Establish a new Employment and Service Industry Precinct and a new Government Offices Precinct in the northern part of the new Urban Expansion Area.	2012	District Administration Office Planning and Investment Office Trade Office Industry and Commercial Office Other government offices	Public sector Private sector	Medium	
UG6 Prepare and implement an appropriate growth area neighbourhood development model.	2012 and ongoing	District Administration Office Land Management Office Other government offices providing infrastructure	Public sector Private sector	Medium	
UG7 Provide a well designed multi-purpose sports and recreation facility.	2015	Urban Development Authority Sport Office	Public sector or Joint venture (public private partnership)	High	
UG8 Commence planning for the installation of a reticulated waste water treatment plant and implement in stages.	2015 and ongoing	Urban Development Office Water Resources and Environment Office Land Management Authority Public Health Office		High	

Table 11 Implementation Program for the Environment

ENVIRONMENT					
Action	Timing	Responsible agency(ies)	Who pays?	Level of cost	
E1 Introduce Design Guidelines and Building Height controls for new development.	2010	Urban Development Authority District Administration Office Land Management Office Village Head	Public Sector	Low	
E2 Enforce existing regulations and introduce new regulations for riverside entertainment and waster based activities.	2010 - 2012	Tourist Authority Office Urban Development Authority Tourist Police Office Information and Culture Office	Public sector Private sector	Low	
Undertake the necessary technical investigations into the natural and scenic values of the limestone karst mountains and the Nam Xong river and apply appropriate protection.	2011-2012	Agriculture and Forestry Office (District; Provincial; Central) District Administration Office Water Resources and Environment Office (District; Provincial; Central) Village Head Information and Culture Office (District; Provincial; Central)	Donor agency e.g. UN World Tourism Organisation	Low	
Undertake the necessary technical investigations to identify the biodiversity values of the area and, apply the appropriate laws and regulations to protect these values.	2011-2012	Agriculture and Forestry Office (District; Provincial; Central) District Administration Office Water Resources and Environment Office (District; Provincial; Central) Village Head	Donor agency e.g. UN World Tourism Organisation	Low	
Enforce existing regulations and, where appropriate, amend these regulations in respect to development creating air, water and noise pollutions problems.	2010-2012	Urban Development Authority District Administration Office Land Management Office Water Resources and Environment Office (District; Provincial; Central) Village Head	Public sector	Low	
Identify places of cultural heritage importance within and around the Town and ensure adequate legal protection of these places.	2010-2012	Information and Culture Office Urban Development Authority Village Head	Donor agency e.g. UN World Tourism Organisation Public sector	Low	
E7	2011 and on going	Water Resources and Environment Office Agriculture and Forestry Office	Donor agency e.g. UN World Tourism	Medium	

Protect and improve the health of Nam Xong river and other tributaries.		Village Head Urban Development Authority Public Works and Transport Office (District, Provincial, Central)	Organisation, ADB etc Public sector	
Retain agricultural land (flood prone) to the north of Don Khang Island until it is developed (in part) as a major multipurpose recreational facility surrounded by farming.	2010 and on going	Agriculture and Forestry Office Land Management Office District Administration Office Head Village Office	Public sector	Low
Establish network of walking trails to caves and other places of natural and cultural significance.	2011 -2012	Tourist Authority Office Village Head District Administration Office Agriculture and Forestry Office Water Resources and Environment Office	Donor agency e.g. UN World Tourism Organisation, ADB etc Public sector	Medium
Ensure sensitive design around cave environs in terms of signage and other structures.	2010 and on going	Tourist Authority Office Urban Development Authority Public Works and Transport Office Agriculture and Forestry Office Head Village Land Management Authority Water Resources and Environment Office	Public sector Private sector	Low
E11 Surround the town with organic agriculture activities compatible with the area's natural setting.	2012 and on going	Agriculture and Forestry Office Public health Office Village Head Industry and Commercial Office Education Office	Public sector Private sector	Low

Table 12 Implementation Program for Tourism

TOURISM					
Action	Timing	Responsible agency (ies)	Who pays?	Level of cost	
Consolidate and upgrade a special tourism entertainment precinct within the northern area of the Urban Core.	2010 - 2020	Information and Culture Office Office of Finance Trading Office Urban Development Authority Water Resources and Environment Office Tourist Police Head Village Office	Private developers Public agencies for additional public infrastructure	Medium	
T2 Operate a night bazaar/market.	2010/ 2011 and on going	Information and Culture Office Office of Finance Trading Office Urban Development Authority Water Resources and Environment Office Tourist Police Head Village Office	Private sector Public sector	Low	
Consolidate and contain the riverside hotel precinct on the eastern side of the Nam Xong river.	2010 and on going	Information and Culture Office Office of Finance Trading Office Urban Development Authority Water Resources and Environment Office Tourist Police Head Village Office	Private sector	Low	
T4 Direct well designed new guesthouse development to the established guesthouse and residential area south of the Town's commercial area.	2010 and on going	Information and Culture Office Office of Finance Trading Office Urban Development Authority Water Resources and Environment Office Tourist Police Head Village Office	Private sector	Low	
T5 Establish a tourism training and education precinct in the southern portion of the old airstrip land.	2012-2015	Urban Development Authority Tourism Office Education Office Land Management Office	Public sector or joint venture with public and private sectors	High	
T6* Construct three new bridges across the Nam Xong river.	2013-2015	Public Works and Transport Office Urban Development Authority Water Resources and Environment Office Head Village Office	Private sector Public sector	Medium to High	

Encourage well designed satellite ecoresort nodes outside the Vang Vieng Urban Core.	2010 and on going	Information and Culture Office Office of Finance Trading Office Urban Development Authority Water Resources and Environment Office Tourist Police Head Village Office Public Works and Transport Office	Private sector	High
T8 Improve Naduang Road connecting visitors to the Keang Nyui Waterfall at Ban Duong.	2015	Urban Development Authority Head Village Office Land Management Office District Administration Office	Public sector	Medium

^{*}T6: Government to negotiate with owner of bridge for local access at no cost and if the owner of the bridge does not agree then proceed with the construction of a new vehicle and pedestrian bridge just south of this existing bridge crossing with free public access.

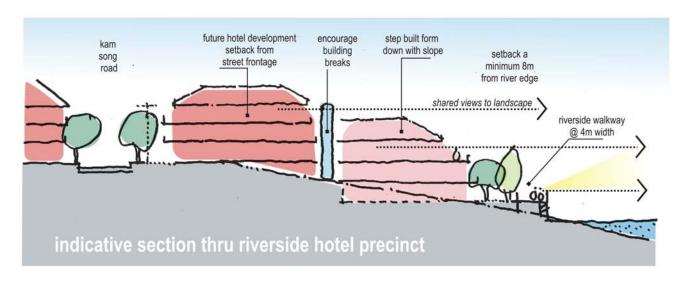
10.2 Indicative Sections for Future Development

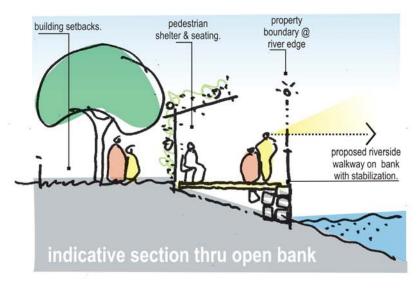
To assist with the implementation of the Master Plan indicative sections accompany the Plan for the following actions:

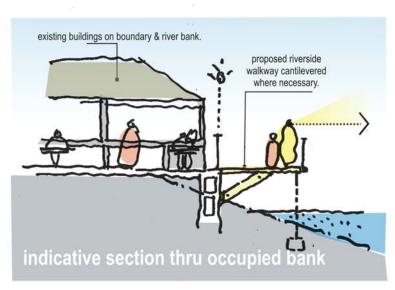
- 1. **Action TC2:** The Nam Xong river walkway incorporating sections through the river bank for the installation of the public walkway, setbacks of new development to the river edge and building height of future riverside development along the walkway corridor. See Figure 23;
- 2. Actions TC1 and T2: A network of 'Green Streets' based on a Road Hierarchy for land within the Urban Growth Boundary (UGB). The north-south roads include spreading canopy trees for shade and shelter and the east-west roads include taller, more slender trees such as palm trees to retain views towards the karst landscape to the west and the sandstone ridges to the east. Footpaths would be constructed within the road reserves with adequate street lighting and drainage. The plan also addresses the proposed night market with the installation of removable market stalls located within the centre of the road(s) designated for this activity and the road space plus the footpaths becoming pedestrian spaces during the operation of the night market. See Figure 24; and
- 3. **Actions TC6 and UG4:** The Redevelopment of the Old Air Strip with a new Central Park and viewing platform, attractively landscaped public open space for festivals, ceremonies and other special events as well as informal recreation and new 4 storey development to the north and south of this green parkland. See Figure 25.

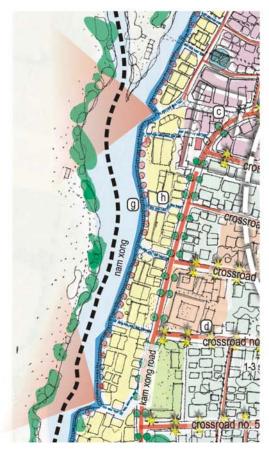
Whilst these sections are <u>indicative only</u> they demonstrate how these important initiatives could be implemented, subject to further detailed design and feasibility studies.

figure 23 indicative sections: nam song river











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figure 24 indicative sections: urban road network

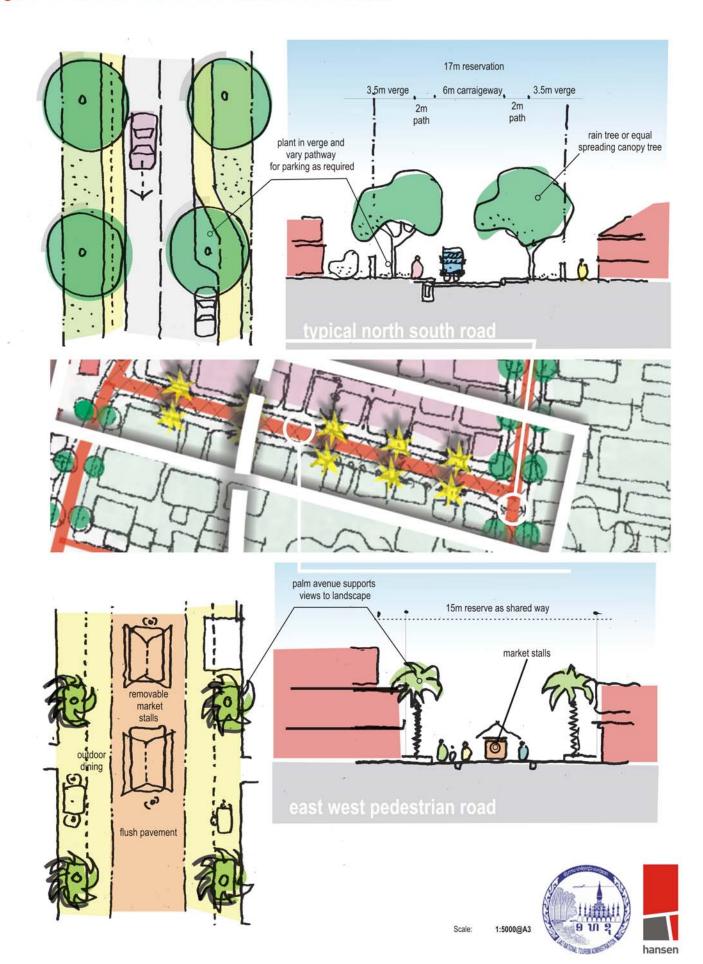
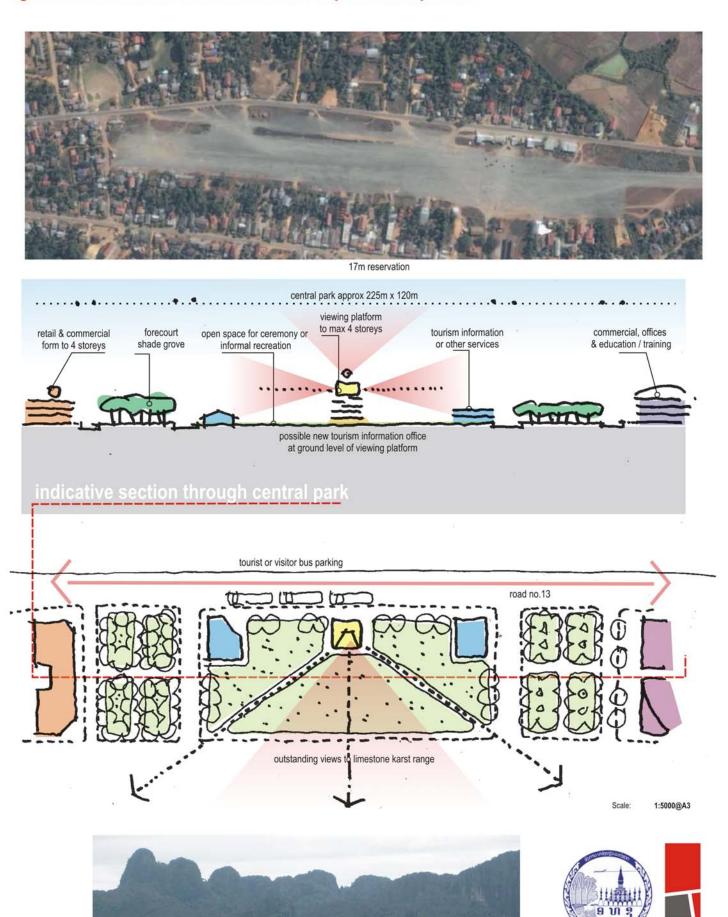


figure 25 indicative sections: old air strip redevelopment



10.3 Zoning Plan

Taking into consideration the zoning pattern identified in the 1997 Town Plan (Figure 26) a new zoning plan has been prepared for the Master Plan. Unlike the 1997 Plan which identifies 6 zones the new zoning plan as shown in Figure 27 adopts three zones using the relevant zones of the earlier town plan but rationalising these zones as follows:

- 4. **Uba Zone Current Urban Core** which is earmarked for continued consolidation via new development of vacant urban land and redevelopment of under utilised urban land;
- 5. Na Zone Urban Expansion Area which is currently experiencing new development and will continue to do so over the next 10+ years. This area to the north of the Urban Core accommodates the new Market Complex and the Bus Terminal with new housing and employment opportunities encouraged in this area; and
- 6. **Nc Zone Agricultural Conservation Area** outside the UGB including all river flats, mountains and environmental features that contribute to the visual amenity and natural setting of the Town. This land is set aside for Agriculture and Environmental Conservation purposes.

In essence the Master Plan favours two clear urban areas within the Urban Growth Boundary (UGB). Each area provides for residential, commercial and employment based development, combined with the integration of new soft and hard infrastructure to meet community needs as they arise and change over time. The third zone (Nc Zone) covers all that land outside the UGB which is to remain as predominantly farmland and land of natural/environment conservation value. For the Nc zoned land west of the Nam Xong river the only new buildings permitted in this area are temporary structures for agricultural purposes and other buildings and structures within the designated villages.

The proposed zoning pattern provides for a mix of land uses noting that in the Nc Zone there is scope for some 'resort style' development separated by farmland given that this type of tourist development often benefits from a more serene and peaceful rural setting free from the hustle and bustle of a busy town.

The zoning plan does not encourage any more tourist accommodation or tourist entertainment development on the west side of the river. This area to the west will continue to be used predominantly for agriculture with small traditional villages intermingled within the landscape. Low impact tourist activities can also operate within this area to the west of the Nam Xong river but of a type and scale which is compatible with the protection and conservation of the environmental values of the area including the karst landscape.

The proposed zoning for Vang Vieng Town and Environs ensures consolidation and containment of urban growth within a well defined UGB thus protecting the environmental assets of the area such as the Nam Xong river, the rich and fertile floodplain and the scenic mountain ranges to the east and west of the Town. The land set aside for future urban growth and development is sufficient to accommodate anticipated growth for the 2010-2020 period with scope beyond that timeframe to investigate further long term growth to the north and/or east of the Town, if required.

10.4 Building Height Controls

Related to the introduction of three land use zones for the area is the introduction and enforcement of Building Height Controls for all new urban development. Whilst there are currently regulations dealing with building height in the Town these heights have been reviewed in the context of social, economic and environmental factors.

More specifically, the emerging adverse visual impacts of development higher than the prevailing 1 to 2 storey scale of existing development within the Urban Core and Urban Expansion Area to the north highlights the need to impose new restrictions on building heights. Important views of the surrounding landscape are being lost or severely compromised due to new buildings which are too high and too bulky in scale and form. This is especially evident along the east bank of the Nam Xong river where there has been a clustering of 4-6 storey hotel and guesthouse development. This scale of development has not only prevented views into the Town from the Nam Xong river but, blocked views of the river and the mountains beyond when viewed from within the road network and from key public spaces in the Town itself.

figure 26 existing zoning

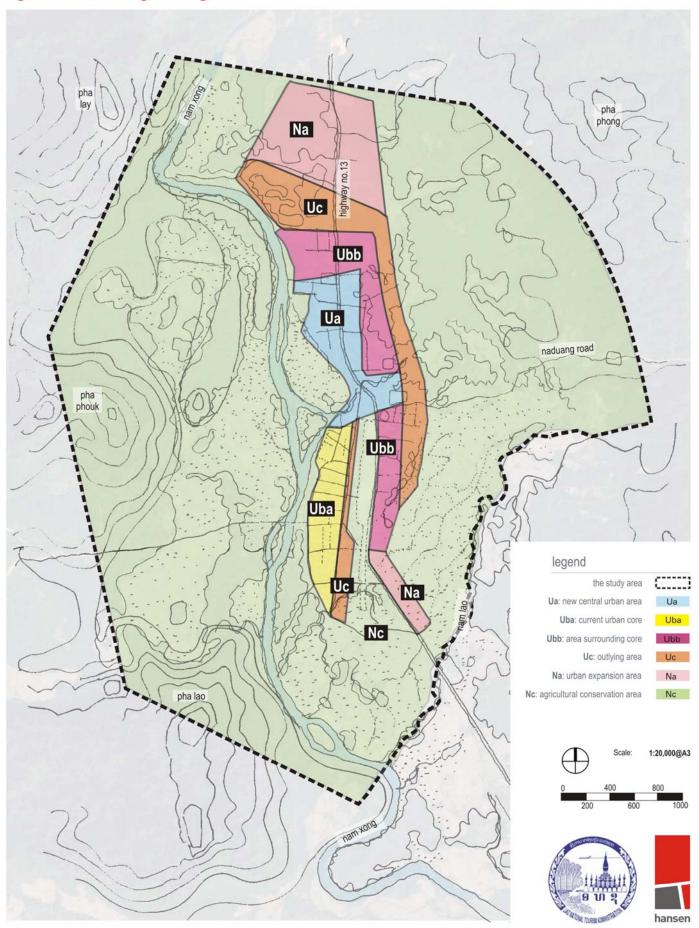


figure 27 proposed zoning

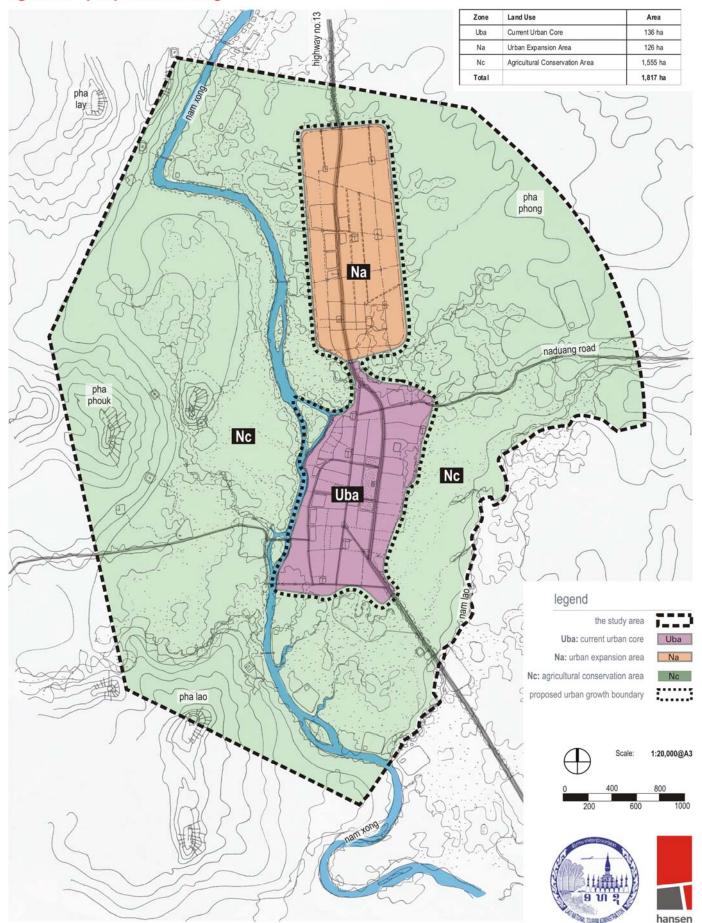


Figure 28 identifies the Proposed Building Height Controls for all new development, including additions to existing buildings. Given that the existing character of Vang Vieng Town is primarily 1 to 3 storeys there is scope within the Urban Core for development of 3 and even 4 storeys in respect to the redevelopment of the old air strip. Development higher than 3 storeys to the river edge is no longer permitted under the Master Plan as it undermines the character of the town and the riverscape. New development along Highway No.13 has a height limit of 3 storeys for land which has direct frontage to this main road. The new Government Offices Precinct located in the northern part of the Urban Growth Area has a building height control also of 3 storeys. Further east and west of the Highway No.13 linear corridor which will accommodate a mix of land uses, the building height is limited to no more than 2 storeys.

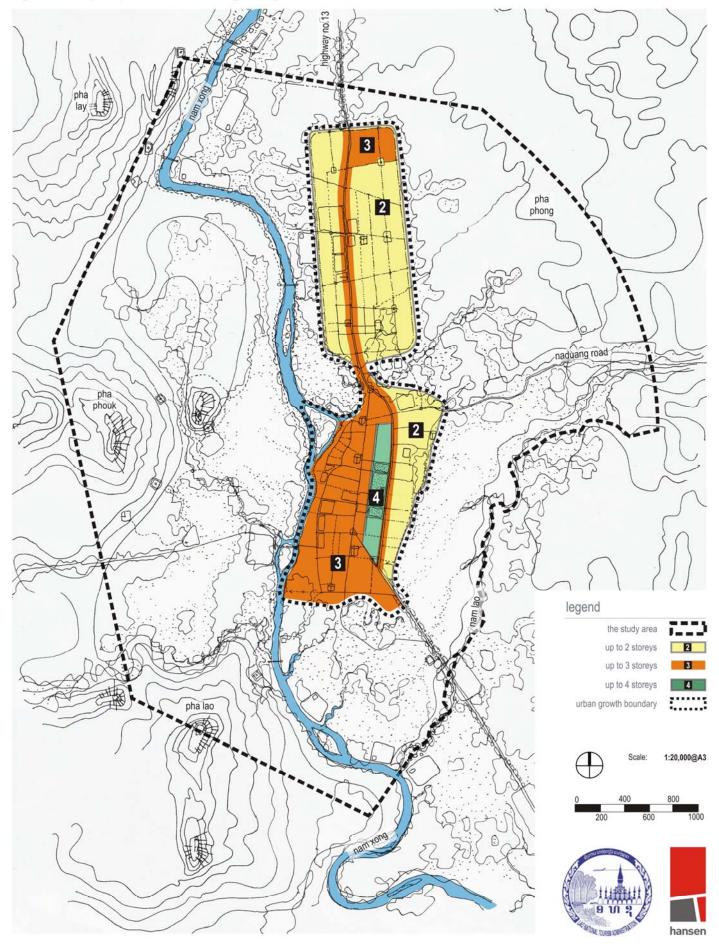
Resort style development in the surrounding farming area is to be no higher than 2 storeys, but preferably single storey to minimise its impacts on the landscape.

For the purposes of identifying actual heights of all new development (including additions/alterations to existing development) the following definitions apply:

- 1 storey = no higher than 6m
- 2 storey = no higher than 9m
- 3 storey = no higher than 12m
- 4 storey = no higher than 15m

Building height is measured from the natural ground level to the top of the roof of the building and, in the case of sloping land, it is measured from the mid point of the allotment at its street/road frontage or river frontage (if relevant) at natural ground level to the top of the roof of the building.

figure 28 proposed building height controls



10.5 Proposed Road Hierarchy

Vang Vieng Town and Environs accommodates an existing hierarchy of roads serving different functions, of different road reservation widths (inclusive of road pavement, drainage, footpaths, street lighting and tree planting) and of varying quality in terms of pavement surface and drainage.

Figure 29 identifies a suitable road hierarchy having due regard to other elements of the Master Plan. The hierarchy is as follows noting that the road reservation widths are inclusive of road pavements, footpaths, landscaped verges and hard infrastructure:

- Highway: Type A 40 metres wide road reserve;
- Main Road: Type B 21 metres wide road reserve;
- Secondary Road: Type C 18 metres wide road reserve; and
- Local Road: Type D 14 metres wide road reserve.

It is noted that in addition to this hierarchy is the proposed road bypass edging the eastern side of the proposed UGB. Whilst no detailed plans or funding has as yet been secured for this new road, its eventual construction will alleviate through vehicle traffic volumes (especially trucks and other heavy vehicles) in the Town.

Due consideration should be given to the use of different road pavement surfaces for the proposed night market area and, for the roads edging the new Central Park making these access routes easily identifiable within the urban environment. Further details of the road hierarchy are addressed in the Design Guidelines discussed in Section 10. 6.

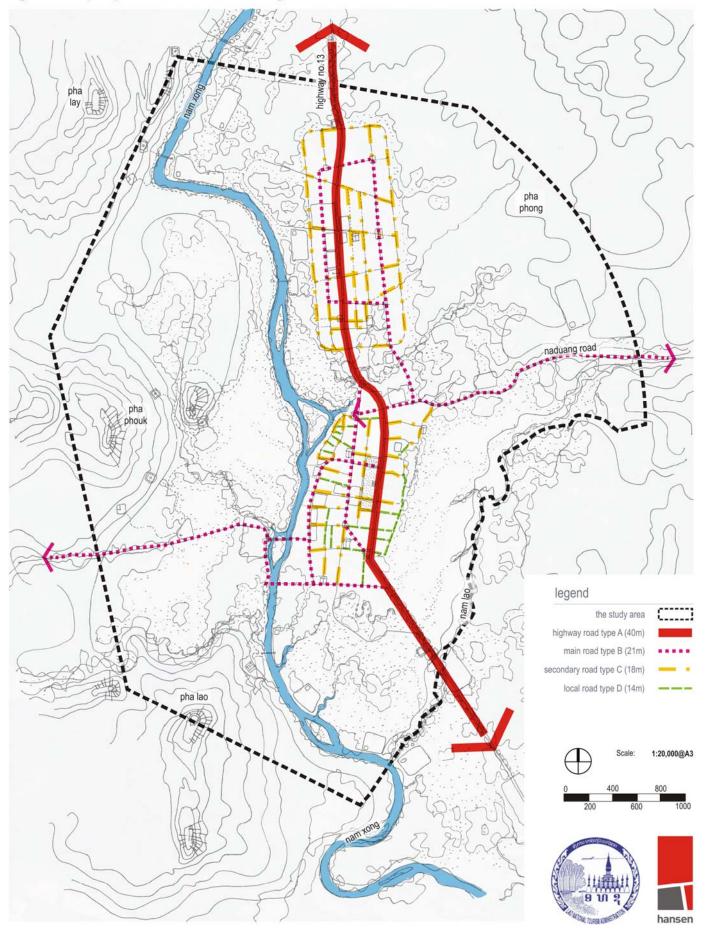
It is emphasized that in the Na - Urban Expansion Zone to the north of the Urban Core an appropriate growth area *neighbourhood development model* will need to be developed with a finer web of local roads interconnecting to the main road and secondary road network. All roads are to include street tree planting, constructed footpaths, and adequate street lighting as part of a town-wide *'safe communities program'*. Appropriate sanitary drainage within the road reservations will also be provided with the installation of gross pollution traps, as required. These newly developing urban areas also need to provide for the future installation of a town reticulated sewerage system and may, depending on the timing of land release for urban development, integrate this important infrastructure as part of the hard infrastructure package required eventually in all urban areas in Vang Vieng Town.

10.6 Master Plan Design Guidelines

A set of Design Guidelines have been prepared to assist in the development of Vang Vieng Town and Environs in an integrated and sustained manner. These guidelines address the following matters and are contained in Appendix 1.

- Road Access Hierarchy
- Urban Expansion Area Development
- Building Height, Scale and Design
- Public and Private Landscape
- Signage
- Street Furniture
- Pedestrian Access
- Gateways/Entries
- Central Park
- Caves

figure 29 proposed road hierarchy



These Design Guidelines will need to be formally adopted by Government as part of the existing regulatory framework dealing with new development. The Guidelines also form an important part of the assessment of new development by the relevant government agency (ies) and apply to both public and/or private sector funded projects. Scope exists to add more design guidelines adopting this illustrative format as deemed fit by Government.

10.7 Vang Vieng Master Plan Co-ordination Committee (VVMPCC)

When implementing, monitoring and reviewing the performance of a master plan it is imperative there is one agency responsible for the overall co-ordination of that plan. Although there will be a diverse range of public and private sector entities responsible for the actual implementation of identified actions contained in the master plan, as is the case with the Vang Vieng and Environs Master Plan, one organisation to oversee this process is vital to the success of the Master Plan. In the case of Vang Vieng Town and Environs the Urban Development Authority (UDA) should operate as the main agency responsible for the implementation of the Master Plan. This will require substantial additional resources being provided to the UDA in terms of additional office space, additional human resources in both technical and administrative staff and an annual operating budget commensurate with this important role.

Within this framework it is recommended that a co-ordination committee also be established by Government namely, the Vang Vieng Master Plan Co-ordination Committee (VVMPCC) with its composition being approximately 70% of members from key government agencies and 30% from private sector organisations/companies. The role of the VVMPCC would be to advice Government on policy matters pertaining to the future growth and development of Vang Vieng Town and Environs, guidance on emerging issues or problems facing the town in terms of such growth and development and, offering feedback on other matters as requested by Government.

It is important <u>not</u> to have a committee which is too large in numbers. Advice needs to be provided in the most expeditious manner for development projects and other public works to be properly assessed within the context of the Master Plan and other relevant regulations and, then implemented. Too many members on such a committee is likely to slow the overall decision-making process by Government, introduce issues which are not pertinent to the implementation of the Master Plan itself and, create a process which is complex and cumbersome to implement.

Suggested composition of members of the VVMPCC is as follows:

Table 13 Composition of the VVMPCC

•	
Public (total of 10 members)	Private (total of 5 members)
District Governor (Chairman of Committee)	Two representatives from the business community
Urban Development Authority ⁴	Restaurant Union
Tourist Authority	Guesthouse and Hotel Union
Land management Authority	Transportation Union
Planning and Investment Office	
Water Resources and Environment Authority	
Information and Culture Office	
Public Works and Transport	
District Administration Office	
Chief of Village*	

^{*} The chief of a village would be invited to attend only those meetings where a matter on the Committee agenda related to land within that village and his/her input and advice was sought. Hence the village chief representation on the Committee would be interchangeable.

⁴ The Urban Development Authority (UDA) will act as the lead government agency responsible for the implementation of the Vang Vieng Town and Environs Master Plan, 2010-2020

Administrative staff will be required to service the VVMPCC as well as technical staff in the fields of planning, architecture, engineering, environmental science and financial management in the UDA. It may be that the staff of the UDA also service the needs of the VVMPCC, with additional human and fiscal resources and office accommodation, to perform this new role.

Advice from other government agencies ('referral authorities') would be sought on an 'as-needs' basis depending on the matter being considered by the Committee. However these agencies would not have voting rights on the Committee. Similarly, a budget will need to be secured for the operation of the VVMPCC in terms of staff and overhead costs etc. There are various possible sources of funding for the Committee which are discussed later in this section of the Master Plan.

The actual role and responsibilities of the VVMPCC will need to be clearly stated in the establishment of the Committee with adequate financial and human resources provided by Government to ensure its efficient and effective operation. These responsibilities should include the following:

- Establish and administer a digital data base of key indicators monitoring growth and development within Vang Vieng Town and Environs with the UDA as the key agency collecting and analysing this data;
- Regular review of the performance of the Master Plan in terms of Actions implemented and whether or not the
 agencies and organisations responsible for the delivery of actions in the Implementation Program are fulfilling their
 obligations under the Plan;
- Providing comment on development projects but particularly projects at or above a specified construction/investment value. The actual threshold level wherein the VVMPCC would provide comment will need to be established in consultation with other relevant government agencies. It may be that, over time, the Committee becomes the actual approval issuing agency for such developments similar to the concept of a one stop shop approval agency where all approvals required for projects at or above a specified value are processed by the Committee. Alternatively, the UDA would act as the single approval agency for all development in the Master Plan area with comments sought from the relevant agencies on such developments within specified time frames. Further investigation and discussion of this option is warranted;
- Securing funds from the public and private sector, as well as relevant donor agencies, for specific actions listed in the Implementation Program with assistance from government generally in capital fund raising initiatives; and
- Disseminating information to the community about the on-going implementation of the Master Plan on a regular basis and seeking community input, where required, on specific actions or initiatives.

10.8 Capital fund raising options

Raising capital to fund several of the actions in the Implementation Program will be a challenge. It will rely on public and private sector sources of funding, as well as submissions to donor agencies for funds, where relevant. Options for capital fund raising need to be more fully explored by Government in the context of the implementation of the Vang Vieng Town and Environs Master Plan.

10.8.1 Taxes

Already a bed tax applies to tourist accommodation establishments in Vang Vieng Town and Environs. Some stakeholders at the community consultation meetings expressed concern that the bed tax was too high and, that the tax being collected was not being invested back into the provision of good quality tourist infrastructure. Invariably taxations systems are unpopular with the community and not just developers and investors. Mention has been made of a system which recognises not only the scale of the tourist accommodation being one criteria influencing the required bed tax, with small scale guesthouses and home stays being charged a relatively low tax and larger tourist accommodation establishments paying more tax but also the application of a star rating for tourist accommodation and that rating being a further consideration in the amount of tax to be paid to government for funding tourist infrastructure.

The application of a tax system for different business groups operating in Vang Vieng Town and Environs warrants further examination with the tourist sector being the most obvious focus of capital raising if the required tourist infrastructure is to be provided in the Town. This should include a review of the current bed tax system with appropriate consultation with tourist accommodation providers.

10.8.2 Developer Contribution Levy

It is not uncommon in the developed world for developers to be charged a developer contribution levy to fund necessary urban infrastructure including social and community facilities, road improvements and other urban environment improvement works. There should be a nexus between the actual development and the works being funded but there will also be new public works required for the surrounding area of which each developer in that area is required to pay a cash contribution upon completion of their project or up front prior to commencement of construction by the developer.

This approach can be applied not only to newly developing areas such as development in the Urban Expansion Area to the north of the Urban Core, but can be required of developers on land within the Urban Core be it redevelopment of existing developed land or development of vacant land. The Levy can be a flat levy which applies to all developments or a sliding scale levy based on the value of the development, the scale of development (total floor area), the type of development such as a single dwelling, factory, shop etc. The funds collected under the levy are then committed to specific actions/projects within the UGB based on the order of priority in the Master Plan.

10.8.3 Government Owned Land

Turning land into capital is a Lao PDR National Policy with the government owning land and providing leases and concessions to private entities who wish to develop that land or operate a specific service. This source of revenue can play an important role in contributing to public projects which have a net community benefit.

Government also occupies some valuable redevelopment sites within the Town of Vang Vieng which would be ideal for redevelopment by a private sector developer. An example is the site occupied by the Land Administration Office – with substantial frontage to the Nam Xong river and within the main commercial/ tourist node in the Urban Core, this land is an underutilised but valuable asset that creates an opportunity for turning that land into capital for community related projects. The former market land which has approval for a tourist hotel is a good example of implementing the policy of transferring land into capital.

There will be other fiscal mechanisms available to Government to assist in the funding of the public sector actions identified in the Implementation Program for the Master Plan. Because public works budgets will need to be prepared for the implementation of public sector actions in the Plan appropriate fiscal mechanisms need to be put in place to ensure that these actions come to fruition and the journey to realising the Vision Statement is well on its way.

10.9 Management and Monitoring Toolkit

In conjunction with the Design Guidelines which provide additional tools for assessing future development projects, a **Management and Monitoring Toolkit** has been prepared as a key output of the Vang Vieng Town and Environs Master Plan, 2010-2020. The toolkit provides information on a range of tools to be applied in the implementation of the Master Plan including:

- Key indicators for monitoring change within Vang Vieng Town and Environs;
- Annual and Tri-annual Audit Reports on the implementation of the Master Plan;
- The steps in the Development Approval Process for Public and Private Sector developments under the Master Plan;
- What information is to be included with a Development Application in a check list format;
- Establishment of a Development Application Register in a digital format; and
- The role of referral agencies in the Development Approval Process.

As mentioned already, annual audits should be undertaken by the VVMPCC to determine progress made on implementing the Master Plan with opportunities to celebrate key milestones in the implementation of the Plan. These audits or 'report cards' will track the progress on the implementation of actions and alert all stakeholders of what additional work will need to be undertaken and by whom to keep 'on track' with making the Vision a reality. Because the Master Plan relies on a strong sense of community ownership and pride in the planned development of Vang Vieng Town and Environs, the audit process is a means of assessing and recognising the performance of all stakeholders responsible for its implementation.

In addition, the audits can become a demonstration to the investment community that the Town of Vang Vieng is 'Open for Business' with a Master Plan in place to guide and direct such investment. Investors seek certainty in their investment ventures and the Master Plan is one means of providing such certainty. Similarly, a community that can take pride in the appearance, character and functionality of its Town, as well as care for its cultural heritage and landscape, will present a very appealing investment climate for the future. Vang Vieng Town will also become a more attractive place to live and work offering diversity in employment and a safe, healthy and green environment.

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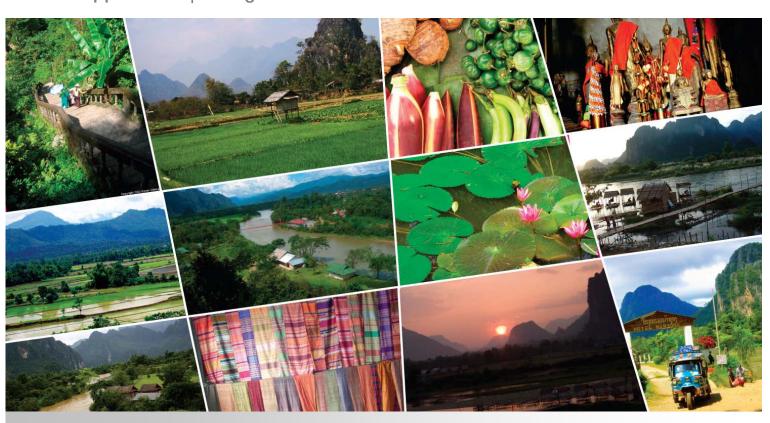
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Appendix 1 | Design Guidelines for the Master Plan

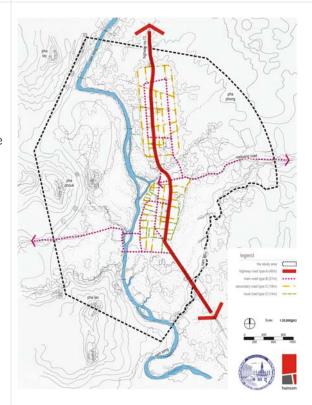


ROADS AND ACCESS HIERARCHY

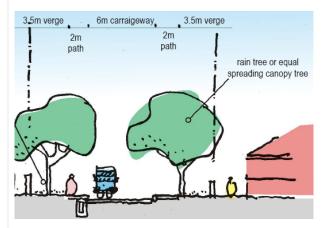
Guideline

- Establish Road Type A: Highway at a 40m cross section applying to Highway 13. This should include a 4 lane (14m carriageway), on street car parking and the opportunity for centrally aligned street lighting. It should also include footpaths to both sides and street tree planting.
- Establish Road Type B: Main Road at a maximum 21m section applying to Central Road and key north south corridors. This should include 2m footpaths to either side and parking to one side. Street tree planting is supported on each side.
- Establish Road Type C: Secondary Road at 14-18m section applying to roads servicing residential and commercial areas. These include a 6m carriageway with parking to one side only and footpaths of 2m width. Trees are encouraged to both sides.
- Establish Road Type D: Local Roads for other streets at a 12-14m section with 6m carriageway and 2m footpaths. Tree planting should apply to all streets.
- Road bridge access across Nam Xong should be realised to the south of the existing controlled crossing to enable free access for all.
- Stepped pedestrian links from Central Road down to the Nam Xong riverside walkway should be established at a minimum 3m width.
- The Nam Xong riverfront promenade is to be formed as a continuous timber deck of minimum 4.5m width.

Note: All road reservation widths are inclusive of road pavement, footpaths, landscaping and hard infrastructure.



Hierarchy of Roads

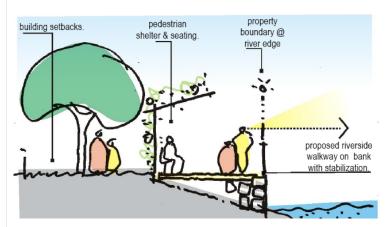


Indicative road cross section: type c

PEDESTRIAN ACCESS

Guideline

- Ensure pedestrian paths of minimum 2m width to each side of the street.
- Incorporate a timber boardwalk of minimum 4m width along the river edge, either cantilevered over the river or set within private hotel/ resort properties.
- Define pedestrian crossings at all road intersections to allow for safe crossing.
- Ensure timber handrails to all steps, ramps and water edge walkways.
- Car and motorbike parking to be concealed to the rear.



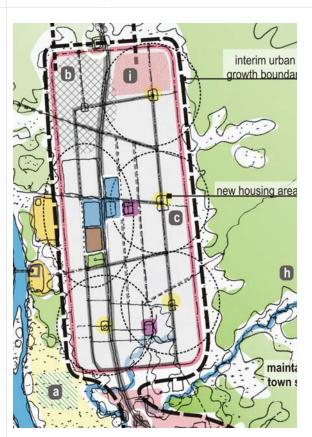
Establish linear riverside walkway



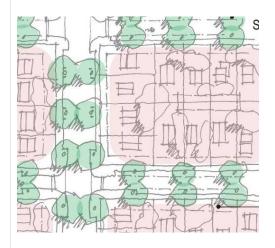
URBAN EXPANSION AREA DEVELOPMENT

Guideline

- New housing in the expansion area should be designed in such a way to ensure a linear and grid configuration of roads and subdivision of allotments that are well connected.
- New housing areas in expansion areas should be oriented around regularly spaced community or commercial facilities at approximately 800m spacing.
- New subdivision should include 14-18m road reserves for secondary roads and 12-14m road reserves for local roads.
- Standard lot sizes in the expansion areas should range between 300-400m².
- Subdivision should be formed with clear back to back lot design so all sites have frontages to roads.
- Road reserves within the expansion area should be laid out to ensure the potential for street tree planting.
- Road reservations and private lots should have the capacity for shared 'grey water' storage.
- Encourage substantial vegetation cover on lots within minimum 5m front setback and minimum 3m side setback.



Urban expansion area to north of existing urban core



Example of grid subdivision

BUILDING HEIGHT, SCALE AND DESIGN (General Guidelines)

Guideline

- Moderate development scale between 1 and 4 storeys across Vang Vieng in accordance with height controls.
- Support higher development form of up to 3 storeys along Highway 13 stepping down to 2 storeys behind.
- Ensure new buildings include clear building entry at ground level and well articulated elevations above with balconies and fenestration above.
- Ensure that new buildings incorporate visually interesting hipped or gable ended pitched roofs that contribute positively to the skyline.
- Ensure the siting and design of buildings corresponds to its particular function i.e. commercial form set to the street frontage and residential form setback behind frontage landscape.
- Ensure buildings on corners or key view points are well designed to each exposed side and setback forms when abutting heritage or temple sites.
- Ensure contemporary design that includes traditional forms and materials as appropriate.
- Buildings should be constructed with locally sourced materials where possible, such as timber, stone, woven bamboo and concrete.
- Façade materials should be of muted tones and be non-reflective.
- Service infrastructure (e.g. air conditioning units, satellite dishes) and car parking should be concealed from public view.



Well articulated traditional dwelling









Protect temple views and surroundings

BUILDING HEIGHT, SCALE AND DESIGN - COMMERCIAL/TOURISM PRECINCTS

Guideline

- Establish building profiles of 2 and 3 storeys within the commercial area, with upper level setback from the street.
- Set commercial buildings to the street frontage at the ground or upper level.
- Ensure commercial forms are attached at the street frontage to ensure a continuous street wall.
- Ground level setbacks from the frontage are acceptable only for outdoor entertainment / dining.
- Commercial buildings should include glazed frontages at ground level with weather protection over footpaths.
- Upper level balconies and glazing overlooking the street is supported.

Illustrative Example



Setbacks in commercial area to support outdoor dining



Avoid large setback forms

BUILDING HEIGHT, SCALE AND DESIGN - RIVERSIDE HOTEL PRECINCT

Guideline

- Achieve stepped development of 3 to 2 storeys on sloping land leading to the River, with lower profiles to the bank.
- Ensure setbacks of 4-5 metres from eastern street frontage and Jminimum 10 metre setback from riverbank (including 4 metre width for boardwalk).
- Ensure side setbacks off boundaries of at least 3 metres to allow pedestrian access to River (or screening).
- Incorporate visually interesting roof profile and façade treatments to the riverside, including pitched roofs and regular fenestration and balconies.
- Include building breaks to allow for view sharing where possible.



Setbacks adjacent to Nam Xong river



Side setbacks for view sharing

BUILDING HEIGHT, SCALE AND DESIGN - RESIDENTIAL AND GUESTHOUSE PRECINCT

Guideline

- Ensure that residential dwellings and guest houses are between 1-3 storeys in scale with front and side setbacks.
- Achieve front setbacks of 5m. A maximum of 50% of frontage may be used for temporary structures (for shop).
- Side setbacks in residential areas are supported and should be no less than 3m for dwelling and questhouses.
- All frontages should include articulated elevations with fenestration and outward facing balconies.
 Walls should be built in local brick or timber.
- All dwellings and guesthouses to incorporate distinguishable hipped or gable ended pitched roof form with eaves of at least 0.8m (80cm).
- Roofs should be built in locally sourced materials, be coloured to blend in with the landscape and nonreflective. Materials such as wooden tiles, corrugated iron or thatch are supported.

Illustrative Example



Ensure sensitive roof form design and material selection



Encourage generous fenestration and roof eaves

BUILDING HEIGHT, SCALE AND DESIGN - OLD AIR FIELD STRIP

Guideline

- Support development of up to 4 storeys in scale addressing each street edge, with the upper most storey setback 3m.
- Apply a front setback of 6m to all boundaries to support landscaping.
- Integrate parking underground or hidden at ground level in the complex.
- Ensure highly articulated contemporary buildings of a large format with corners strongly expressed.



Encourage visually interesting 4 storey forms to key airfield site

PUBLIC AND PRIVATE LANDSCAPE

Guideline

- All landscaping in private grounds to consist of both canopy trees and understorey planting.
- Ensure the integration of consistent 'evergreen' street trees along all roads, including spreading canopy trees to north-south aligned streets and vertically formed trees to east west streets (to support westerly views).
- Utilise locally indigenous plant materials for private and public plantings where possible.
- Locate urban services underground wherever possible and clear of street tree root zones.
- Apply a common palette of public paved surfaces that are safe, non-slip and attractive, such as exposed aggregate concrete.
- Boundary fencing between private and public areas should be no higher than 1.2m to the frontage and 1.8m to side and rear interfaces.
- Side and rear fencing may be solid and comprise bamboo, metal or timber materials.
- Front fencing should be low and permeable and may consist of solid brick and rendered surfaces in residential areas.
- Temples and other historic ground may include solid walling to a maximum height of 2m (rendered and painted only).



Landscape within setback of residential dwelling





The importance of public and private canopy plantings

SIGNS

Guideline

- All streets to be provided with clear signage identifying street name in vertical banner format.
- Key destination information to be included on signage banner.
- Display of tourism interpretation and information is to be integrated with other street signage.
- Identification of locations to be illustrated according to UNWTO signage standards.
- Sensitively incorporate illuminated signage in commercial/ tourism areas.
- No free standing internally illuminated signs are to be permitted outside the defined tourist area.
- Business identification signage to be integrated into the architecture of buildings, and where possible, be located under eaves.
- No promotional or advertising signage is to be located on side walls of buildings.
- No large freestanding billboard signs are permitted along Highway No.13 or other roads within the Master Plan boundaries.





Interpretive signage in street

Sign located under eave



Develop a contemporary interpretation of traditional street signs

STREET FURNITURE

Guideline

- Adopt a consistent set of locally designed and produced street furniture.
- Cluster furnishings including seats, bins, lighting and shelters on corners equitably across the town.
- Include new (solar powered) street lighting along main streets through the town.
- Develop public amenities, including toilets, in the commercial/ tourism core.

Illustrative Example



Rubbish bin / recycle bin



Seating

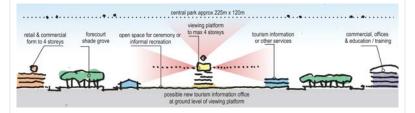
CENTRAL PARK

Guideline

- Establish a generous public parkland of at least 300m length and 150m width as a central meeting place for the Town.
- Ensure the central parkland allows for clear views to the west from ground level and from a possible future viewing platform/ lookout to 4 storeys in height.
- Ensure the central park is bound by trafficable roads on each side with well defined pedestrian pathways leading to freestanding buildings located to the eastern edge on Highway No.13.
- Shade groves of trees should be established to the north and south of central park to provide shelter and a green foreground to new administrative buildings.



Establish an open flexible parkland for recreation, ceremony & viewing



GATEWAYS/ENTRIES INTO THE TOWN

Guideline

- Develop and instal a gateway design consisting built, landscape or artwork elements on Highway No. 13 to north and south with clear entry signage.
- Develop decorative traffic islands and incorporated signage at the key Town entries at Central Road to the north and the airfield to the south.

Illustrative Example





Examples of built, landscape or signage gateway elements



CAVES

Guideline

- Define a clear 'no-build' zone within 100 metres radius of each cave entry or any cave complex boundary.
- No new works or construction can occur within this 'no build' zone except for approved restoration, repair and maintenance of existing buildings and surrounding gardens in a manner which does not detract from its cultural/environmental significance.
- These controls apply equally to cave related buildings and/or private buildings (such as homes) located within the zone.
- Upgrading or improvements to existing buildings within the 100 metre no-build zone must maintain existing footprint and be no higher than single storey.





Entry to cave – no build zone

Limit the footprint around caves