

Exploring Practical Village Planning in the Context of Territorial Spatial Planning - An Example of Baozi Village in Baihe Town

Peng Lu¹, Wanying Zhang^{1,*}

¹ School of Architecture, Henan Polytechnic University, Jiaozuo, CO 454003, China

Abstract: While the country is formulating and implementing the rural revitalisation strategy, China's territorial spatial planning system has been initially established, new opportunities for rural development and construction have emerged, and great changes and challenges have emerged in rural planning. Under the dual influence of the rural revitalization strategy and the construction of the territorial spatial planning system, the need for the preparation of rural planning has also changed. The article takes the planning of Baozi Village in Baihe Town as an example, analyzes the problems through the current situation from the perspective of "multi-regulation", and proposes corresponding solutions to explore some experiences for future practical village planning.

Keywords: Baozi village, Practicality, Territorial spatial planning, Village planning.

1. Introduction

As a key part of the country's development and the realisation of a well-off society, the development and construction of rural areas are gradually receiving the attention of the state and various industries. The earliest source of village planning can be traced back to the Regulations on the Planning and Construction Management of Villages and Market Towns issued by the State Council in 1993, which was initially understood to mean that "village and market town planning is generally divided into two stages: village and market town master planning and village and market town construction planning". The implementation of the Urban and Rural Planning Law in 2008 marked the formal extension of traditional urban planning to rural areas, making it clear that rural areas compile township plans and village plans, and that village planning was elevated from an administrative regulation to a legal level. Village planning is the ultimate task of territorial planning at all levels and is the basis of territorial spatial planning, and practicality is the lifeblood of village planning[1,2].

As a key component in determining the level of development of a country and achieving a well-off society, the development and construction of rural areas are gradually receiving attention from the state and various industries[3,4]. In recent years, the state has issued several policies and central documents to promote the development of rural areas, while emphasising the need to strengthen the management and construction of rural areas, and has repeatedly mentioned the important role of village planning in promoting and leading rural development, affirming the importance of rural planning. However, the reform of China's spatial planning system is still in the exploratory stage[5,6]. Since 2014, when the State proposed to carry out the pilot project of "integration of multiple regulations" and elevated the "integration of multiple regulations" from a local practice to a national strategy, many cities and counties have completed. Since 2014, when the State proposed to launch the pilot project of "multi-planning" and elevated it from a local practice to a national

strategy, several cities and counties have completed the preparation of "multi-planning" and summed up their experience in relevant preparation techniques and methods^[9,10]. From the current situation, the preparation of village plans in the mode of "multiple norms in one" will also become an inevitable trend. For the village planning of Baozi Village, the article proposes solutions from the perspective of "multiple norms in one", taking the current problems of the village as the guide, and taking into account the wishes of the villagers, in order to explore some experiences for future practical village planning.

2. Rural Planning in the Context of Territorial Planning

2.1. Territorial Space Planning System

Territorial spatial planning is a long-term plan that builds on the "unification of multiple regulations" and addresses many of the problems and contradictions in past spatial planning. In 2019, the National Development and Reform Commission issued the Opinions on Establishing and Supervising the Implementation of the Territorial Spatial System, which divided the five levels and three categories into a unified national-territorial spatial system. (Figure 1).

2.2. Orientation and Task of Practical Village Planning

Practicability of village planning under the background of territorial spatial planning, including village global space from the scope of planning, is a comprehensive deployment and planning arrangement for village global land use, industrial development, ecological resources, etc., is a systematic integration of village planning and village-level land use planning in the past, and its practicability is mainly reflected in two aspects: firstly, the planning contents shall be focused, and different formulation frameworks and schemes shall be focused on the four types of villages determined under the background of rural revitalization strategy in accordance with the actual conditions and actual requirements;

secondly, the implementation of the planning shall be strong, the former village planning, as an important indicator for government performance appraisal, is formulated in batches in a certain mode to a large extent, and is influenced by the subjective awareness of leaders or developers, the formulation of village development goals is often too advanced and seriously divorced from the actual situation, which causes it is difficult to implement the planning projects;

the practical village planning under the background of territorial spatial planning, as a statutory planning, shall be based on the actual conditions of the village, and different planning rules and implementation strategies shall be formulated in accordance with the different needs of village development, to guide the effective implementation of the planning.

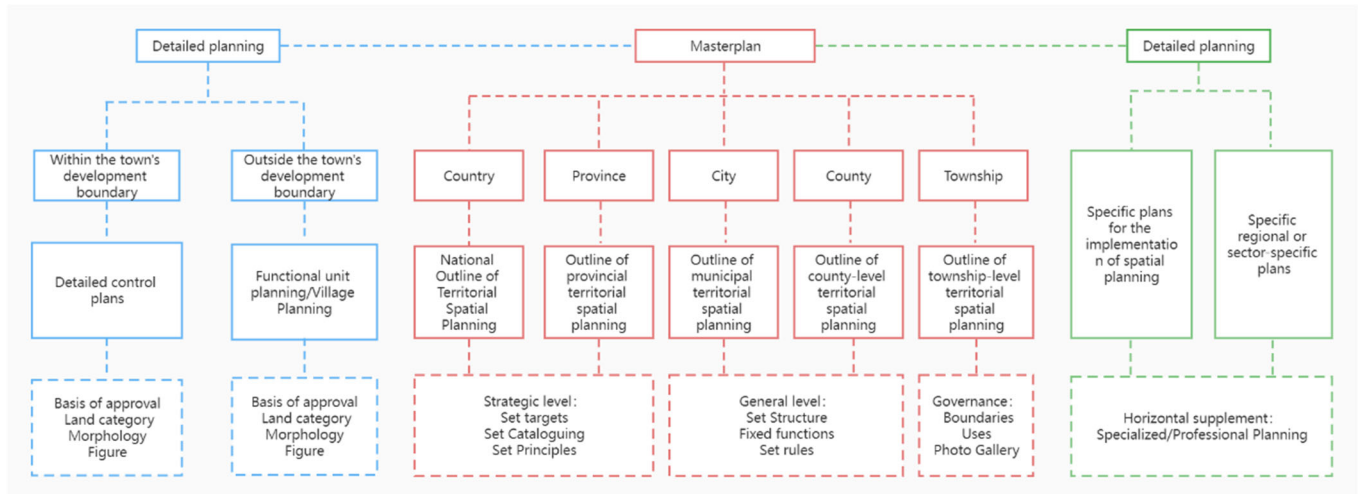


Figure 1. The division of the territorial spatial planning system

2.3. Practical Village Planning Principles

2.3.1. Putting People First and Giving Priority to The Demands of Villagers

People-oriented is not only the basic principle of urban and rural development but also the basic principle of territorial space planning. For the vast rural areas, the villagers are the masters of the village, so in the future practical village planning, it is necessary to first consider the interests of the villagers, give priority to the most urgent problems that the villagers need to solve and take them as the key points of planning and recent construction. Secondly, it is necessary to enhance the enthusiasm of the villagers to participate in the planning, guide the villagers to participate in the planning, and highlight the important role of the public participation in the village planning, so as to formulate the village planning with the villagers' identity, participation and satisfaction.

2.3.2. Urban and Rural Planning to Achieve Coordinated Development

For a long time, the concept and practice of "heavy city and light countryside" and "separation of urban and rural areas" is one of the important factors leading to the backward development of rural areas. The village planning under the background of territorial space planning shall deeply implement the policy requirements of urban-rural integration and coordinated development of urban-rural areas, coordinate and optimize the allocation of urban-rural development space and planning resources, and systematically consider the village spatial control, village planning and construction, industrial development research, planning implementation and management, public resource allocation and other aspects in rural areas, so as to achieve the coordinated development pattern featuring urban-rural integration and coordination, the constraint of main functions, equalization of public services, and sustainability of the ecological environment.

2.3.3. Plan According to Local Conditions and Classification

As mentioned above, in the implementation of the territorial space planning, in the implementation of the rural practical planning, the corresponding planning may be carried out according to different characteristics, the corresponding protection planning may be formulated, and the characteristic protection measures shall be put forward. For the relocation, evacuation and merger of villages, priority shall be given to the preparation of the residential site selection planning and the relocation, evacuation and merger plan, etc.; secondly, for the same type of villages, the planning with unified "paradigm" that is "large and complete" shall be avoided as far as possible, and it is suggested that the planning contents be arranged and selected according to the respective characteristics and current development level of the villages, for example, for the villages with relatively complete infrastructure, the planning length may be reduced at discretion, the planning contents may be simplified, and the pertinent planning suitable to the village conditions shall be prepared; finally, for the villages with similar development background, the planning shall fully excavate their respective village characteristics, such as historical culture, resource advantages, etc., and the innovative development path as far as possible, so as possible, to avoid the "homogeneity" of village planning.

2.3.4. Giving Priority to Ecology and Intensive and Economical Development

In the context of the implementation of territorial spatial planning, when implementing practical rural planning, it is necessary, firstly, to respect rural ecological resources, strictly control the ecological red line and protect the ecological environment. Thirdly, the planning of the construction of buildings, building renovation, road construction, municipal network laying, etc. should be carried out on the basis of adapting to the villagers' lifestyle, highlighting the

characteristics of the village and reflecting the regional culture, and implementing the principle of economic aesthetics.

3. Baozi Village Status and Research Methodology

3.1. Status of Baozi Village

Baizi Village belongs to Mengjin County, Luoyang City, and is located in the central north of Baihe Township, north of the Yellow River, Xixiyuan Dam, south of Mangling, east of Xixiyuan Village, west of Wangzhuang Village and Changqiu Village, 5 kilometres from Baihe Township in the west and 25 kilometres from Mengjin District in the south.

There are 10 groups of villagers in the village, with 821 households and a total population of 3,172.

The area of the village is 278.76 hectares, of which 14.28 hectares are ecological land, accounting for 5.12% of the total land area of the village; 157.11 hectares are agricultural land, accounting for 56.36% of the total land area of the village; and 107.37 hectares are construction land, accounting for 38.52% of the total land area of the village (Figure 2). Two roads, County Road Huixiao Line and County Road Menghe Line, pass through the middle of the village, the Yellow River Ecological Corridor is to the north, and the Jiao Liu Line, a special coal transportation line, passes through the village area, making the area convenient for traffic and good conditions for external transportation.

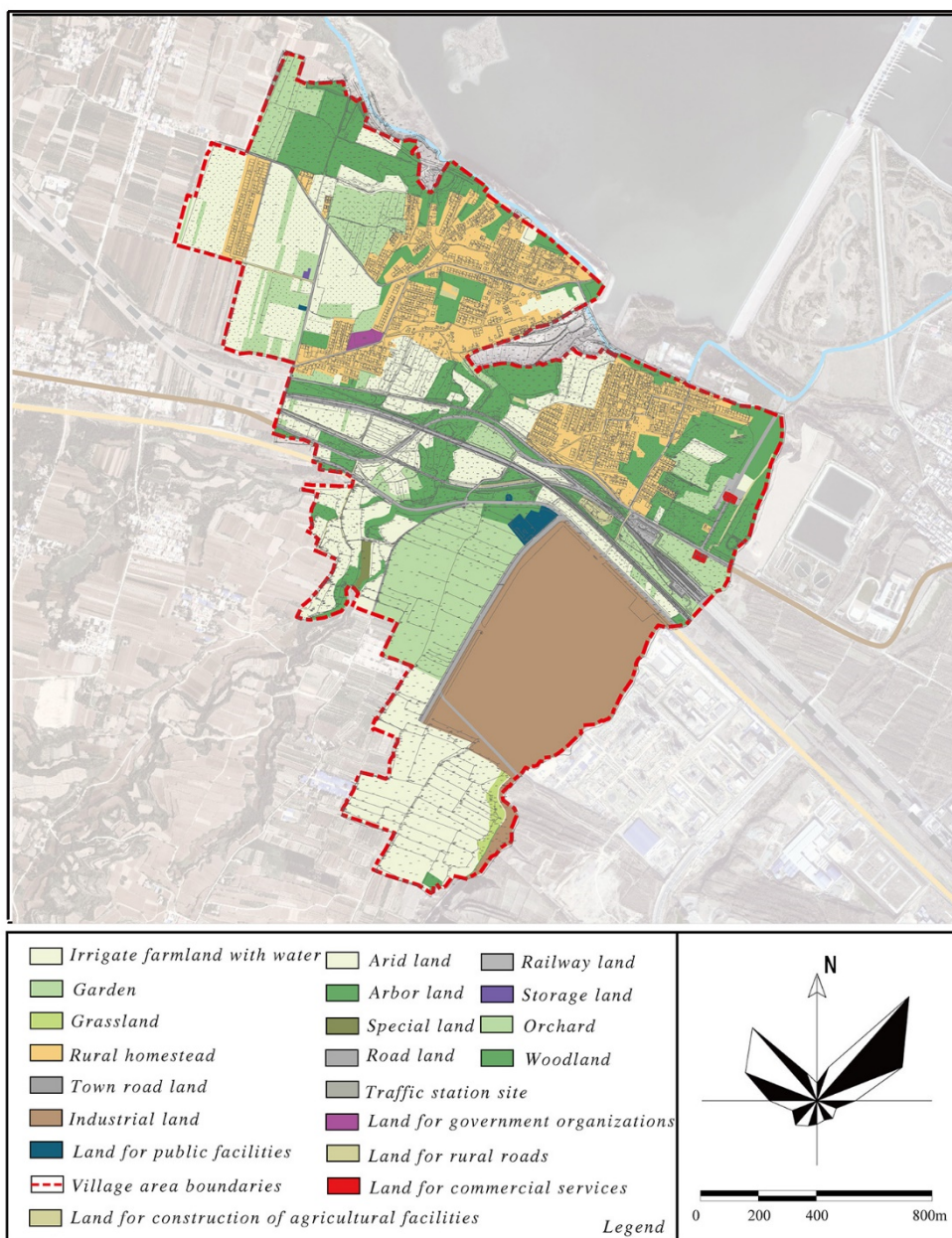


Figure 2. Current land use in the village area

3.2. Research Methods

In this study, the cadres and villagers of the village committee of Fortress Village were used to collect the actual situation of Fortress Village by recording, photography,

interviews and questionnaires to find out whether they are willing to carry out village planning and construction. There were 50 questionnaires, 8 invalid questionnaires, 15 missing questionnaires and 27 valid questionnaires, with an effective rate of 54%.

4. Analysis of the Present Situation of Baozi Village and the Will of Villagers

4.1. Villages Are Rich in Water and Ecological Resources

The topography of Baozi Village is semi-hilly with high east-west and central washouts and undulating terrain. The surface water in Baozi Village is mainly the Yellow River, which runs for 25km in Baihe. The Xixiyuan anti-seasonal regulating reservoir, which has been built, is located in the north of Baozi village and is the last reservoir on the Yellow River, and is also a supporting project for the Xiaolangdi hydroelectric power station. The village is located to the north of the Yellow River and is near the Yellow River Wetland, a national wetland nature reserve that protects waterfowl and their wetland ecosystems. Baihe town area has a complex topography, extensive waters, numerous mudflats and rich aquatic flora and fauna.

4.2. The Village Is Rich in Cultural Resources.

The village of Fortress has been known as Peach Blossom Dock for a long time. It is a house, a courtyard, a village. The village has a breeze and a sunny aspect, hiding the wind and gathering air, solid and guardable, hidden and not sent, secret and rhyming, elegant and charming, enough to be called a dock. In the old days, Dong Zhuo had Meiwu, Jiyuan had Polygon, Mengjin had Bailewu, Tang Bohu and Zhu Zhishan had Peach Blossom.

In the Ming Dynasty, the poet Xu Ben was the left minister of Henan Province, on his way to his hometown through the village of Mengjin Baihebaozi encountered rain, after the rain on the Yellow River to see the cold clouds indifferent, peach blossom with dew, poetic ideas wrote "after the rain over the peach blossom dock" a poem: forest late with the city shade, slanting light in the lane deep. I was thinking of the swallows when I passed by, but I felt that I was not able to sing. The butterflies are in the borders for a while, and the birds are outside the willows. Although there is hatred for the chaos of separation, it is still a pleasure to be there.

4.3. Village Industry and Public Service Facilities to Be Upgraded

The primary industry is mainly plantation, mainly wheat and corn crops, with a plantation area of 71.01 hectares, followed by pear, peach, walnut and other fruit trees with a plantation area of 43.17 hectares; the development of the secondary industry is limited by the conversion of the old flour mill in the village into a factory, which is willing to develop the secondary industry in the future. The existing service industry in the village is mainly: small shops and restaurants serving the village. To the south of the railway in the village is the Huayang Industrial Zone, which is a provincial industrial cluster.

There is a cultural stage, two clinics and two public toilets, but there is no primary school and no kindergarten. At present, there are only two small shops and one e-commerce service point in the village, and the commercial service facilities need to be upgraded. The municipal infrastructure also meets only the most basic needs of the villagers, however, the villagers are still using bottled LPG and no natural gas.

In general, the advantages of the village are outstanding: firstly, the traffic location is excellent, the east of the village

is only 3 kilometres away from the Luoji Expressway, 30 minutes to Luoyang city, 20 minutes to Mengjin district; and there are highways within the village will be a small line, Menghe line, along the yellow corridor, the regional traffic is convenient. The Yellow River is the mother river of China and is one of the important birthplaces of mankind, and Luoyang is the capital of the 13th dynasty, with a long history and rich culture. The Yellow River reservoir area, the Xixiyuan Dam, the hilly terrain, the curved and continuous corridor along the Yellow River, and the ecological and cultural advantages together constitute the tourism resources of the village. Fourthly, the ecological base is strong, with the Yellow River Ecological Reserve to the north, a large wetland area and rich biodiversity.

However, there are many shortcomings: firstly, the primary industry is the main industry, and the traditional agriculture has low economic efficiency and is shrinking; the secondary industry is limited in development, and the tertiary industry has not yet become large-scale. Secondly, there is a lack of public space and a lack of living atmosphere, which is unattractive to the residents and unevenly distributed, and cannot meet the residents' daily needs such as tea-talk and communication. Thirdly, land use is not planned in a unified manner, and there is a lack of intensification and fragmented use. Fourthly, there are mixed architectural styles, free growth of greenery, unclear spatial distinctions, interlocking elevated electric wires and confusion in the overall appearance. There is an urgent need for village planning under the national spatial planning system in the context of rural revitalisation.

4.4. Will of Villagers

The feedback from the field research and questionnaires shows that the villagers have numerous needs for the future development of Fortress Village, mainly in terms of improving the waste collection and storage in the village, increasing the village green space and fitness activities, solving the traffic inconvenience and enhancing the general appearance of the village. The result is a clean and convenient quality living environment.

5. Village Planning Objectives and Strategies of Baozi Village

5.1. Planning Tasks and Objectives of Baozi Village

The main objective of this project is to address the actual problems of the village of Baizi, taking into account its development status and industrial situation, and to define it in a strict manner. At the same time, land use planning, village construction planning and land improvement planning were organically combined to realise a 'multiplicity of plans' for the village.

The first step is to solve the current problems of the village, by effectively allocating the stock of resources in the village, reintegrating the use of space and land, exploring the development of secondary industries on the basis of fruit tree cultivation, and innovating the development of tertiary industries with the advantages of unique ecological and cultural resources, improving the current industrial structure of the village, and optimising the use of land and the construction of facilities in the village. In accordance with the planning requirements, the village has been identified as a characteristic conservation village, taking into account the

actual situation of the village. The functions of the village are: "Yellow River landscape, tourism services, healthy retirement, green planting". With the theme of integrated services of special rural tourism; the integration of agriculture and tourism, healthy retirement, and supplemented by the development of agricultural products processing as the driving force, the village will be built into a charming village with a picturesque environment, industrial characteristics, and a good story of life.

5.2. Strictly delineate three lines

Ecological protection red line: According to the results of the ecological protection red line delineation program of Henan Province on the ecological protection red line delineation in Baihe Town, Luoyang City, this planning involves an ecological protection red line control area of 6.51

hectares within the village area of Baizi Village. It accounts for 2.34% of the total land area.

Permanent basic farmland protection red line: control range: according to the "Baihe township land use overall planning (2010-2020) adjustment and improvement", within the village domain to delineate the basic farmland protection red line, this delineation of basic farmland protection red line area of 6.46 hectares. It accounts for 2.32% of the total land area.

Village construction land control line: control scope: including the planning of reserved village settlements, village industrial land and land use planning to determine the new construction land, this delineation of village construction land control line area of 45.00 hectares. It accounts for 16.14% of the total land area. (Figure 3).

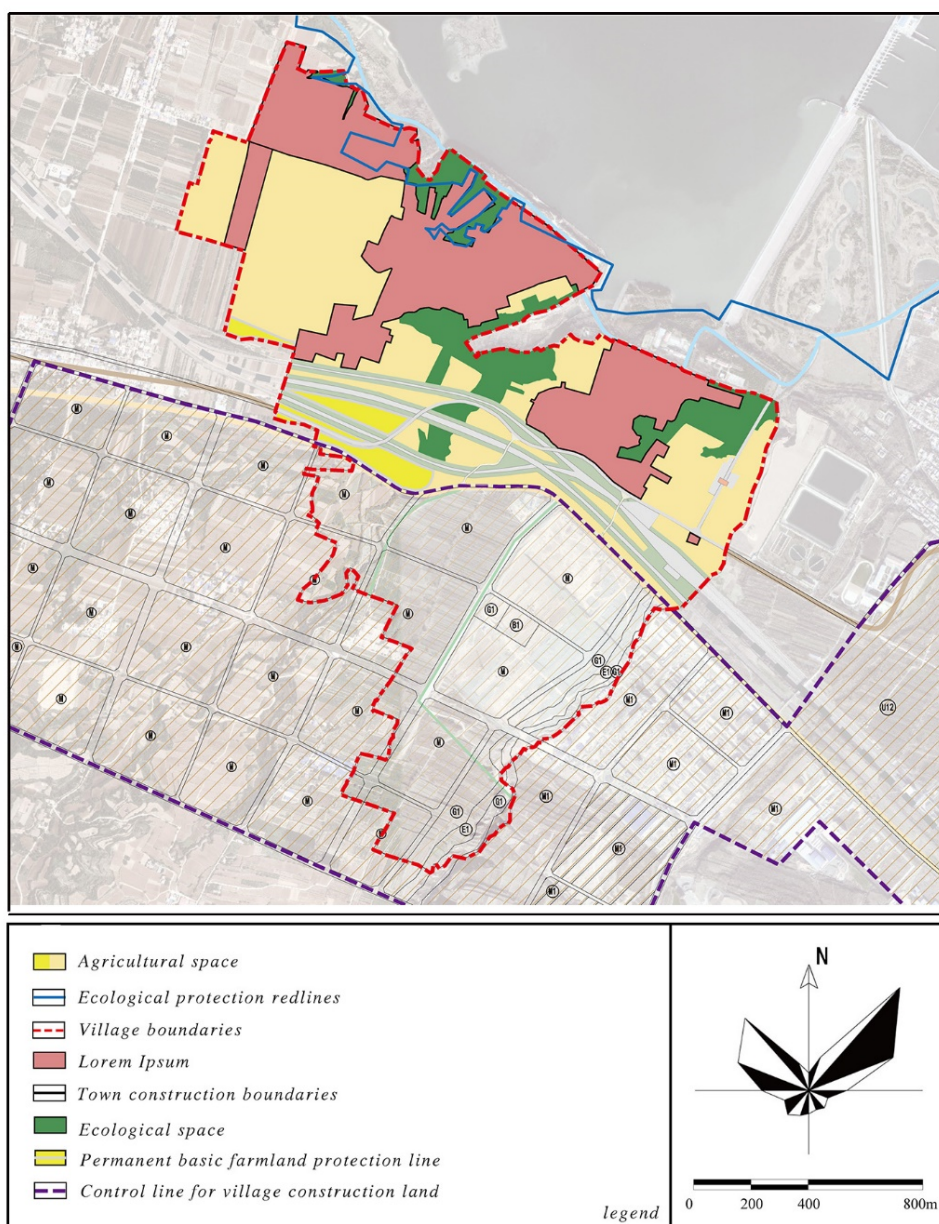


Figure 3. Village area spatial zoning control map

5.3. Village Construction Planning

The village community service centre will be built in conjunction with the village committee and the current square,

and small squares and gardens will be built in the natural village using the abandoned land in the streets to create a village space with local characteristics.

The spatial layout of the village is planned to form "one

centre and four districts". "One centre": a village community service centre centred on the village committee of Baozi Village. "Three zones": on the basis of the current development of the village, and relying on the ecological and

industrial advantages, the village will form a rural living and residential area, a regional folklore area, a comprehensive tourism service area and a youth entrepreneurship park. (Figure 4).

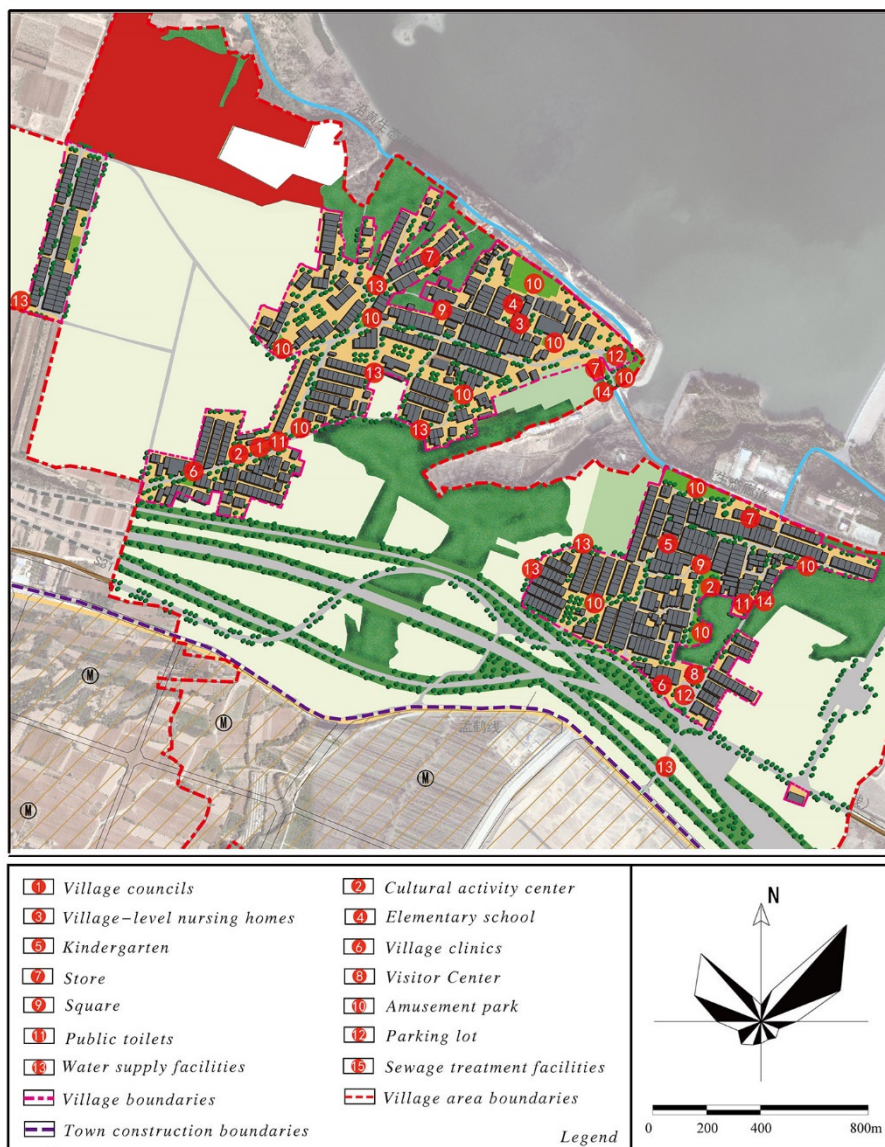


Figure 4. Village construction planning master plan

5.4. Speed up Industrial Development

The industry in Baozi is based on agriculture, with a weak and severely restricted industrial base, but the tourism industry has great potential for development. Based on agriculture, the integration of agriculture and tourism, supplemented by agricultural products processing of multi-industry joint development mode is the future development trend of the industry in Baozi village.

First of all, in the primary industry, we will develop modern organic ecological agriculture, create special industries in Baozi Village, actively carry out activities to promote agriculture through science and technology, create a brand of green and pollution-free vegetables in Baozi Village, adhere to the road of agricultural industrialisation, further improve the commercialisation rate of agricultural products, develop deep processing of agricultural products, extend the agricultural industry chain, expand sales channels, promote

the circulation of agricultural products, improve farmers' income and realise beneficial development. The development conditions of the secondary industry are limited and the foundation is weak. The planning reserves certain land for the future development of the agricultural products processing industry.

Tertiary industry: Relying on ecological agriculture, develop the tertiary industry. According to the industrial guidelines of the upper planning for the development of ecological agriculture around Baozi Village, make use of the beautiful natural environment and resource conditions in the village, as well as the driving and catalytic effect of the characteristic agriculture and forestry industry on the tertiary industry, create ecological agriculture integrating natural scenery, farming experience, ecological leisure and agricultural tourism, and encourage the villagers of the village to start their own farm caravans. Eco-tourism agriculture: make full use of the advantages of good ecology and

agricultural and forestry resources in Fortress Village to develop modern eco-tourism agriculture. Nongjiale: combined with the development of ecological agriculture, the opening of nongjiale with picking, catering, accommodation and recreation as the main items. At the same time, on the network, relying on the development of network e-commerce, expand the brand and sales channels of the products of Fortress Village, through the network purchase, express

delivery, so that Fortress Village quality agricultural products transported out of the village, for more people to enjoy, drive the village economic development. At the same time, the network effect is used to attract tourists to experience the scenic countryside, relying on the diversified development of the town and the distinctive idyllic countryside experience and sightseeing tours in Baozi Village, forming an offline and online linkage development model. (Figure 5).

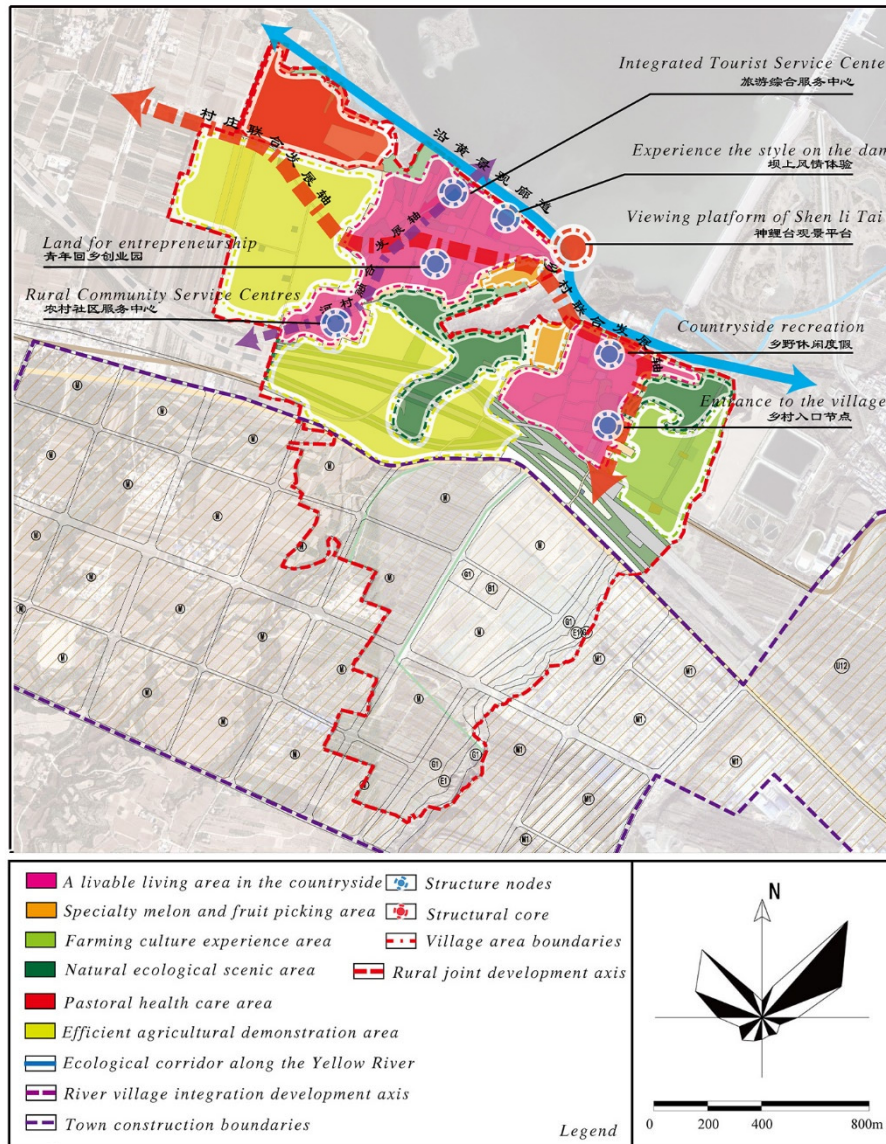


Figure 5. Industrial layout of the village area

5.5. Strengthen the Construction of Supporting Facilities

(1) Public service facilities are to be improved with a resident population of 3,172 at the end of the village planning period. In terms of administrative facilities, the village committee is planned to be retained in its original state; in terms of health care, two health rooms are planned to be retained in their original state, one on the east side of the village committee and one on the north side of the Shagu Children's Playground; in terms of cultural facilities, the original ancestral hall will be transformed into a happy home and a new cultural theatre will be built; in terms of play squares, three fitness squares are planned, two are to be retained in their current state and one is planned to be built,

and 13 playgrounds are planned to be built using vacant street space.

(2) Road traffic: Combining with the field conditions of the village of Baozi, in line with the principle of saving money and land and reducing demolition and relocation, the road system is planned according to local conditions, and the village roads are coupled with the original road system, with the main objective of meeting the villagers' daily travel and adapting to the industrial production of the village, and at the same time, the laying requirements of various types of pipeline networks should be met. The road width of the main road is 5m, the road width of the secondary road is 3m and the road width of the branch road is 2m. Two ecological car parks will be set up in conjunction with the village square and open space. (Figure 6)

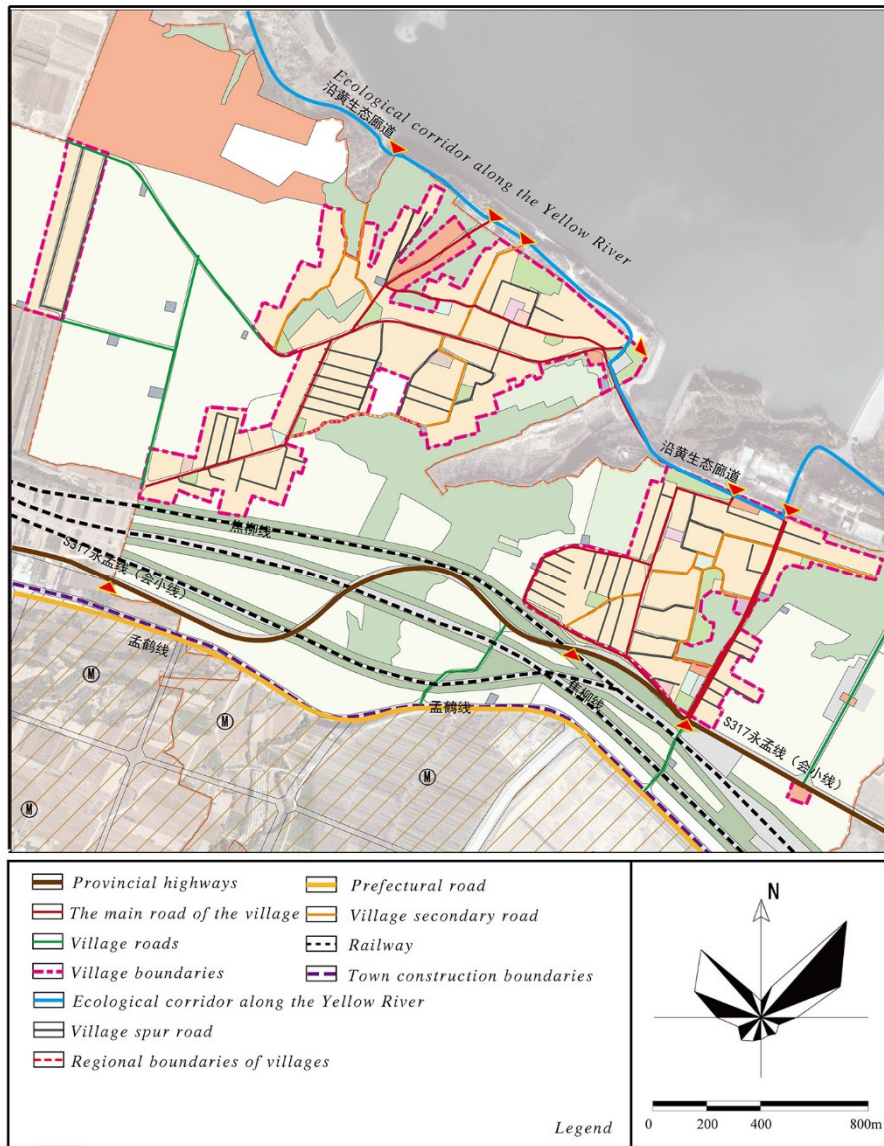


Figure 6. Village road traffic planning map

(3) Municipal public facilities: on the basis of the original water supply network, optimise the water supply system to ensure its safety and reliability; implement a rural domestic sewage treatment project, build an underground sewage treatment plant, strengthen the construction of sewers in the village, and ensure the diversion of sewage and rainwater in the village; improve the rubbish collection system in the district, set up 15 sorted rubbish collection points, arrange for regular cleaning by dedicated staff on a daily basis, and adopt In terms of flood prevention and drainage, flood prevention works should be strengthened, bridges inside and outside the village should be reinforced and river channels should be dredged to ensure safety during the flood season; at the same time, full use should be made of the topography of the village and the internal ditches and ponds, together with the rainwater drainage system, to ensure that rainwater within the village can be discharged in a timely and smooth manner. Vigorous efforts should be made to build field canals to form irrigation water systems to enhance flood and drought prevention. In terms of earthquake and disaster prevention, the level of earthquake protection of buildings such as village councils, schools, health clinics and libraries should be raised, and full use should be made of threshing floors, public greens, sports

grounds, squares and other sites with fewer buildings and larger sites as evacuation sites in the event of an earthquake.

6. Conclusion

The practical village planning under the territorial spatial planning system is not a simple "construction planning", "rectification planning" or "control planning", but detailed planning of rural areas based on the "integration of multiple regulations", and meets the comprehensive requirements of "effective, convenient and practical". The development process should be based on standard requirements, according to the situation in the village, and fully adopt the wishes of farmers. Problem-oriented, highlighting local characteristics, injecting new service functions and enhancing urban spatial activity. Strictly control the red line of rural ecological construction, basic farmland protection line and control circuit of rural industrial construction land, make long-term development planning for rural construction, do a good job in technology upgrading and transformation for industrial construction, and make a good national unified planning for infrastructure construction.

References

- [1] CHEN Meiqiu, GUO Xi. Reflections on improving the practicality of village planning [J]. China Land, 2020, (02): 18-21.
- [2] PANG Guoyu, WANG Qiumin, TONG Lei. Study on Practical Village Planning Mode Under the National Spatial Planning System: A Case of Baoan Village in Chongzuo City [J]. Journal of Human Settlements in West China, 2022, 37(01), 87-93.
- [3] YE Li. Practical Village Planning in the Context of Territorial Spatial Planning - A Case Study of Yangmen Village [J]. Housing Industry, 2021(12), 48-51+70.
- [4] FENG Junjie, WANG Ni, KE Qingfeng. The exploration of village planning in Fujian province under the background of rural revitalization [J]. Shanxi Architecture, 2021(04), 18-20.
- [5] GU Lei, YANG Nana. A Preliminary Study on the Preparation of Practical Village Planning - An Example of Village Planning for Xinxing Community in Chunhua Street, Jiangning District [J]. The Residence, 2020(07), 4.
- [6] LI Jianfeng. A Preliminary Study on Practical Village Planning in the Context of Rural Revitalization Strategy [J]. Construction Materials & Decoration, 2020(05), 99-100.
- [7] REN Xiaoxi, HUO Fenglian. Exploring the application of urban design in village planning under territorial spatial planning [J]. Management & Strategy of Qinghai Land & Resources, 2021(04): 54-60.
- [8] JIANG Dan. Study on practical village planning in the context of territorial spatial planning [D]. Northwest University, 2020.
- [9] HUA Le. Discussion on Practical Village Planning Strategy under Territorial Space Planning System [J]. Urban & Rural Planning, 2021(Z1): 69-81.
- [10] Shen Liu, D, an Shi, Danlu Li, Xiangyang Xin, Ru Li. Exploration on the Practice of Village Distribution Planning under the Background of Territory Spatial Planning System-- A Case Study of Song County, Henan Province [J]. Scientific Journal of Economics and Management Research, 2022, 4(1).
- [11] Ge Dazhuan, Lu Yuqi. A strategy of the rural governance for territorial spatial planning in China [J]. Journal of Geographical Sciences, 2021, 31(9).