JOURNAL OF GREENSCIENCE AND TECHNOLOGY

SPATIAL DEVELOPMENT OF CILIMUS MARKET AREA KUNINGAN DISTRICT

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ABSTRACT

Cilimus Market is located in Desa Cilimus, Kecamatan Cilimus, Kabupaten Kuningan-Jawa Barat. For Cilimus Market conditions, it’s now starting to become irregular, such as parking lots being used as a place to sell, spaces in the stuffy market, air circulation is not good, types of traders are not separated according to the block, market space capacity is not in accordance with the number of visitors and traders. And often experience traffic jams around the Cilimus Market area due to vehicles parked along the road.

So that to overcome these problems needed a solution. First, to determine the determination of market development strategies using the analysis method of Strengths Opportunities Aspirations Results (SOAR), both projections of the number of traders are projected for 2023. Then planning the market building becomes 3 (three) floors with the addition of facilities and infrastructure facilities and market spatial plans based on SNI 8152: 2015 regulation on the People's Market designed with Autocad and SketchUp. And for the Cilimus Market area such as Taman Cilimus and Terminal Cilimus developed by adding infrastructure facilities in accordance with RDTR Kecamatan Cilimus Tahun 2014 and Peraturan Direktorat Perhubungan Tahun 1996.

The results of this thesis research are Cilimus Market was developed into a Modern Market with it’s constructed 3 floors and to Cilimus Market area added other facilities according to existing regulations.

Keywords: Market Development, Market Spatial Planning, SOAR Analysis.
1. INTRODUCTION

1.1 BACKGROUND

Cilimus Market has been established since the Dutch and Japanese colonial times to date. Since the beginning of the Cilimus Market, there have been changes made, the first area of Cilimus Market which was originally from the back of the Market which has a very large land area, but in 2009 to 2010 the Cilimus Market was moved to the front of the Market only. So that the market space in the area behind the market is emptied, with some local government policies. And now Cilimus Market is built with 2 floors, the first floor is for traders of vegetables, meat, fruit and basic needs. Whereas for the second floor is used for clothes and shoes traders.

Since the construction of Cilimus Market in 2010 to date, the condition of Cilimus Market has begun to disorganize again. Like a parking lot that is intended to park vehicles, traders are used as a place to sell. While the conditions in the market, the space in the stuffy market, the air circulation is not good, the type of each trader is not separated according to the block, then the density of buyers in the market is not in accordance with the available space capacity so that there is a good density between buyers and traders jostling each other.

Because of the limited number of kiosks and stalls available in Cilimus Market, many traders sell around Cilimus Market, causing traffic jams around Cilimus Market. For vehicle parking lots, it is not comparable to the number of vehicles parked so that vehicles are forced to park beside Cilimus market building. Then the parking space and loading and unloading of the vehicle are not separated so that many vehicles that will carry out loading and unloading are forced to park in Cilimus Park which is precisely in front of the Market. And for the entrance and exit of the vehicle is not clearly regulated, so the entrance and exit are not separated.

In addition to parking and merchant problems, there are congestion problems caused by vehicles parking at Cilimus Market and public transport vehicles parked along the shoulders of Cilimus Market road which is supposed to park in Cilimus Terminal. Then for the landfill in the market, there is no reservoir, only the place is provided and this is integrated with the parking lot. This causes inconvenience for both visitors and traders and this waste is not managed by the market itself. For drainage inside the Market or outside the market, blockages often occur in the drainage channels.

Cilimus Market is a very crowded market for visitors, but for the provision of facilities in the Market is very lacking. Like the unavailability of toilets / toilets, poultry slaughterhouses, visitor resting places, etc. With the existence of some of these problems, the title is "Spatial Development of Cilimus Market Area, Kuningan District".

1.2 FOCUS PROBLEMS

Development strategy, structuring the market area and designing Cilimus Market area, Kuningan Regency.

1.3 FORMULATION PROBLEM

Based on the background above, there are several problem formulations, including:

1. How is the layout and design of the Cilimus Market area, especially the Cilimus Market part, a comfortable, clean and orderly area?
2. How is the analysis of spatial development in Cilimus Market area?

1.4 RESEARCH PURPOSES

1. Planning the spatial plan and designing the Cilimus Market area, especially the Cilimus Market to be a comfortable, clean and orderly market.
2. Analyzing the development of Cilimus Market area, especially Cilimus Market as an economic support activity.

2. LITERATURE REVIEW AND THEORETICAL BASIS

2.1 MARKET

The market in the sense of economic theory is a situation where buyers (consumers) and sellers (producers and traders) make transactions after both parties have taken an agreement about the price of a number (quantity) of goods with a certain quantity that becomes the object of the transaction. (Menteri Perdagangan. 2004-2009. Pemberdayaan Pasar Tradisional (Dalam Rangka Peningkatan Daya Saing Pasar Tradisional)).
2.2 SPATIAL PLANNING

Spatial planning is a structural form and pattern of space use, whether planned or not.

2.2.1 THEORY OF SPATIAL PLANNING

1. Concentric Theory (Burgess, 1925) which states that the Central City Region (DPK) or Central Business District (CBD) is the center of the city which is located right in the middle of the city and in the form of a round that is the center of social, economic, cultural and political life, and is a zone with a high degree of accessibility in a city.

2. Sectoral Theory (Hoyt, 1939) states that the Central City Region (DPK) or Central Business District (CBD) has the same meaning as that expressed by Concentric Theory.

3. Multiple Center Theory (Harris and Ullman, 1945) states that the Central City Region (DPK) or Central Business District (CBD) is a city center that is located relatively in the middle of other cells and serves as one of the "growing points".

4. Theory of Building Height (Bergel, 1955). This theory states that the development of the city structure can be seen from the variable height of the building. The Central City Region (DPK) or Central Business District (CBD) is generally an area with high land prices, very high accessibility and there is a tendency to build urban structures vertically.

5. Consectoral Theory (Griffin and Ford, 1980). The consular theory is based on the urban space structure in Latin America. In this theory it is stated that the City Center Area (DPK) or Central Business District (CBD) is the main place of trade, entertainment and employment.

6. Historical Theory (Alonso, 1964). The Central City Region (DPK) or Central Business District (CBD) in this theory is the center of all city facilities and is an area with its own charm and high accessibility.

2.3 SOAR ANALYSIS

SOAR analysis is an analysis of the Appreciative Inquiry (AI) approach. This analysis puts forward the aspiration and results factors, thus giving rise to positive feelings for its members and eliminating negative feelings such as Weakness and Threat.

3. RESEARCH METHODOLOGY

3.1 RESEARCH METHODS

In this study the methods used are quantitative methods and qualitative methods.

1. Quantitative method is a method that is done by collecting and studying literature and references related to the research.

2. Qualitative method is a method that is done by collecting field data needed and will be used as data from the research.

3.2 DATA COLLECTION METHODS

There are several data collection methods that were carried out in this study, namely:

1. Observation
   Observation is a method of data collection that is done by surveying directly in the field or down directly to the object of the problem.

2. Questionnaire / Questionnaire
   Questionnaire / Questionnaire is a method of data collection which is done by compiling and making several questionnaires on the problems related to the research to the respondents.
3.3 PLANNING METHODS

![Flowchart Research]

3.4 THE TYPES AND SOURCES OF DATA

In the study there are two types and sources of data used, namely:

1. **Primary Data**
   - Primary Data is data obtained directly in the field taken by survey and field observation. The primary data taken in this study are the number of traders in the current market and the number of vehicles parked on the market carried out on the peak day of the market. To find out the peak day the researcher asked the market parking manager.

2. **Secondary data**
   - Secondary data is data obtained indirectly, such as through government agencies or related institutions. The secondary data that has been obtained includes:
     a. Cilimus Market Management Office:
        1. Area of Cilimus Market
        2. Number of traders in Cilimus Market in 2014
        3. Area of Cilimus Market parking area
        4. Number and Size of Stalls in Cilimus Market
     b. Office of the Office of PUPR Kab. Kuningan is the RDTR of Cilimus District.

3.5 LOCATION

The location of the research conducted was in Cilimus Market, Jalan Raya Cilimus, Desa Cilimus, Kecamatan Cilimus, Kabupaten Kuningan, West Java.

![Location of Cilimus Market](Source: Google Map, 2018)
4. RESULTS OF RESEARCH AND DISCUSSION

4.1 ANALYSIS CONDITION OF EXISTING MARKET

In the regulation of SNI 8152:2015 concerning the People's Market, to manage the market must be in accordance with the type of the people's market. Cilimus Market belongs to type I because the number of traders is 867 people, which are in > 750 people.

Table 1. Facilities in Cilimus Market

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria</th>
<th>Type I</th>
<th>Existing Cilimus Market</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number of Registered Traders</td>
<td>&gt;750 People</td>
<td>867 People</td>
<td>Corresponding</td>
</tr>
<tr>
<td>2</td>
<td>Size of the Trading Room</td>
<td>Minimum 2 m2</td>
<td>Minimum 2,25 m2</td>
<td>Corresponding</td>
</tr>
<tr>
<td>3</td>
<td>Number of Measure Post</td>
<td>Minimum 2 Posts</td>
<td>-</td>
<td>Not Corresponding</td>
</tr>
<tr>
<td>4</td>
<td>Zoning</td>
<td>Wet Food</td>
<td>Dry Food</td>
<td>Not divided according to zoning</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fst Food</td>
<td>Non Food</td>
<td>Minimum 60 cm</td>
</tr>
<tr>
<td>5</td>
<td>Parking Area</td>
<td>Proportional to the market land area</td>
<td>Not in accordance with the land area</td>
<td>Not Corresponding</td>
</tr>
<tr>
<td>6</td>
<td>Loading and unloading area</td>
<td>Special Available</td>
<td>Unified with Parking Area</td>
<td>Not Corresponding</td>
</tr>
<tr>
<td>7</td>
<td>Access to enter and exit the vehicle</td>
<td>Separate</td>
<td>Merges</td>
<td>Not Corresponding</td>
</tr>
<tr>
<td>8</td>
<td>Waste Corridor / Gangway</td>
<td>Minimum 1,8 m</td>
<td>Not clear</td>
<td>Not Corresponding</td>
</tr>
<tr>
<td>9</td>
<td>Management Office</td>
<td>Inside the Market Location</td>
<td>Inside the Market Location</td>
<td>Corresponding</td>
</tr>
<tr>
<td>10</td>
<td>Toilet and bathroom location / separate between men and women</td>
<td>At least four different locations</td>
<td>Hanya ada 1 lokasi toilet</td>
<td>Not Corresponding</td>
</tr>
<tr>
<td>11</td>
<td>Number of Toilet in one location</td>
<td>At least four men's toilets and four women's toilets</td>
<td>There is only one male toilet and one female toilet</td>
<td>Not Corresponding</td>
</tr>
<tr>
<td>12</td>
<td>Wet food storage area with low temperature / coolant here</td>
<td>There is</td>
<td>There is no</td>
<td>Not Corresponding</td>
</tr>
<tr>
<td>13</td>
<td>Hand washing facilities</td>
<td>At least four different locations</td>
<td>There is no</td>
<td>Not Corresponding</td>
</tr>
<tr>
<td>14</td>
<td>Nursing Room</td>
<td>At least two spaces</td>
<td>There is no</td>
<td>Not Corresponding</td>
</tr>
<tr>
<td>15</td>
<td>CCTV</td>
<td>Minimum of two different locations</td>
<td>There is no</td>
<td>Not Corresponding</td>
</tr>
</tbody>
</table>

(Source : SurveiLangsun (Primery Data))

Based on the table above, Cilimus Market does not meet the standards of technical requirements in accordance with the type of market that has been determined by SNI 8152:2015 concerning the People's Market. With the existence of existing conditions like this, there is a need for a comprehensive development in Cilimus Market.
4.2 PROJECTION ANALYSIS NUMBER OF MARKET TRADERS

Tabel 2. Development of Cilimus Market Stalls

<table>
<thead>
<tr>
<th>Kind of Stall</th>
<th>Amount in Years</th>
<th>Difference/Addition</th>
<th>Rating Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kiosk</td>
<td>489</td>
<td>630</td>
<td>141</td>
</tr>
<tr>
<td>Los</td>
<td>378</td>
<td>378</td>
<td>0</td>
</tr>
<tr>
<td>Lemprakan</td>
<td>0</td>
<td>82</td>
<td>82</td>
</tr>
<tr>
<td>Total</td>
<td>867</td>
<td>1090</td>
<td>223</td>
</tr>
</tbody>
</table>

Increase Presentation (%) 25.72%
Year (%) 6.43%

(Source: Cilimus Market Management Office and Direct Survey)

In the spatial development of Pasar Cilimus area, for the projection process of the number of traders in 2018-2023 can be used to calculate exponential functions.

\[ P_t = P_0 \left(1 + \frac{r}{100}\right)^{t-1} \]

Information:
Pt = Number of traders in year t
P0 = Number of early-year traders
r = Trader's growth rate

So, the calculation results are obtained, namely:

Table 3. Cilimus Market Number of Projectors

<table>
<thead>
<tr>
<th>No</th>
<th>Kind of Stall</th>
<th>Years</th>
<th>Projection in 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kiosk</td>
<td>2018</td>
<td>630</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2023</td>
<td>808</td>
</tr>
<tr>
<td>2</td>
<td>Los</td>
<td>378</td>
<td>485</td>
</tr>
<tr>
<td>3</td>
<td>Lemprakan</td>
<td>82</td>
<td>105 (Changes to Kiosk and Los)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>1090 1399</td>
</tr>
</tbody>
</table>

4.3 ANALYSIS OF MARKET DEVELOPMENT

4.3.1 ANALYSIS OF INTERNAL AND EXTERNAL FACTORS

Table 4. Weight of Assessment of Respondents Traders

<table>
<thead>
<tr>
<th>No</th>
<th>Factors</th>
<th>Rating Weight</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5 4 3 2 1</td>
<td></td>
</tr>
<tr>
<td>Internal Factors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>The strategic location of Cilimus Market</td>
<td>0.5 0.43 0.05 0.02</td>
<td>0 S</td>
</tr>
<tr>
<td>2</td>
<td>Cilimus as one of the centers of development of trade and services</td>
<td>0.38 0.57 0.05</td>
<td>0 0 S</td>
</tr>
<tr>
<td>3</td>
<td>The Cilimus community has the spirit of trading / entrepreneurship</td>
<td>0.21 0.5 0.29</td>
<td>0 0 S</td>
</tr>
</tbody>
</table>

4.3.2 External Factors

<table>
<thead>
<tr>
<th>No</th>
<th>Factors</th>
<th>Rating Weight</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5 4 3 2 1</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Available kiosks and stalls have been fulfilled</td>
<td>0.38 0.31 0.26</td>
<td>0 0.05 R</td>
</tr>
<tr>
<td>10</td>
<td>Facilities in Pasar Cilimus need to be improved such as entry, waiting areas, breastfeeding rooms, etc.</td>
<td>0.38 0.36 0.21</td>
<td>0 0.05 A</td>
</tr>
<tr>
<td>11</td>
<td>Adding parking space</td>
<td>0.43 0.4 0.07</td>
<td>0.1 0 A</td>
</tr>
<tr>
<td>12</td>
<td>Drainage channels and landfills function optimally</td>
<td>0.07 0.17 0.43</td>
<td>0.31 0.02 R</td>
</tr>
<tr>
<td>13</td>
<td>Distribution of zoning for each type of stall</td>
<td>0.31 0.45 0.17</td>
<td>0.07 0 R</td>
</tr>
<tr>
<td>14</td>
<td>Food court area for food traders and as a resting place</td>
<td>0.31 0.45 0.19</td>
<td>0.05 0 R</td>
</tr>
<tr>
<td>15</td>
<td>The need to increase the Cilimus Market area</td>
<td>0.31 0.5 0.14</td>
<td>0.05 0 A</td>
</tr>
<tr>
<td>16</td>
<td>The concept of Market building must be clear, to make it look comfortable, clean, and neatly arranged</td>
<td>0.31 0.43 0.19</td>
<td>0.07 0 A</td>
</tr>
<tr>
<td>17</td>
<td>The concept taken must characterize the regional identity</td>
<td>0.21 0.48 0.29</td>
<td>0.02 0 A</td>
</tr>
<tr>
<td>18</td>
<td>The terminal in front of Cilimus Market functions optimally</td>
<td>0.02 0.12 0.45</td>
<td>0.29 0.12 A</td>
</tr>
<tr>
<td>19</td>
<td>The need for transfer / expansion / development of terminal / transportation infrastructure</td>
<td>0.29 0.4 0.31</td>
<td>0 0 R</td>
</tr>
<tr>
<td>20</td>
<td>Congestion factors around Cilimus Market occur because parking areas do not meet the number of vehicles and public transportation vehicles parked on the shoulder of the road.</td>
<td>0.4 0.33 0.14</td>
<td>0.12 0 R</td>
</tr>
<tr>
<td>21</td>
<td>In order to be a comfortable, clean and well-organized area, development is not carried out in the market</td>
<td>0.36 0.43 0.12</td>
<td>0.1 0 A</td>
</tr>
</tbody>
</table>
4.3.2 SOAR ANALYSIS

<table>
<thead>
<tr>
<th>Strengths (S)</th>
<th>Opportunities (O)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The strategic location of Cilimus Market</td>
<td>1 Increase regional income sources</td>
</tr>
<tr>
<td>2 Cilimus as one of the centers of development of trade and services</td>
<td>2 Providing business opportunities for the community</td>
</tr>
<tr>
<td>3. The Cilimus community has the spirit of trading / entrepreneurship</td>
<td>3 Attract investors (investors)</td>
</tr>
<tr>
<td>4. Congestion factors around Cilimus Market occur because parking areas do not meet the number of vehicles and public transportation vehicles parked on the shoulder of the road</td>
<td>4 Regency Regulation Kuningan No.26 of 2011 concerning the Kuningan Regency 2011-2031 Spatial Plan as an accommodator of the rapid growth in Kuningan Regency</td>
</tr>
<tr>
<td>5. In order to be a comfortable, clean and well-organized area, development is not carried out in the market</td>
<td>5. Cilimus District RDTR in 2014 as a spatial planning effort in Cilimus District</td>
</tr>
</tbody>
</table>

**Table 5. Percentace of Assessment of Respondents Traders**

<table>
<thead>
<tr>
<th>No</th>
<th>Factors</th>
<th>Score Presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The strategic location of Cilimus Market</td>
<td>50 42.9 4.8 2.4 0</td>
</tr>
<tr>
<td>2</td>
<td>Cilimus as one of the centers of development of trade and services</td>
<td>38.1 57.1 4.8 0 0</td>
</tr>
<tr>
<td>3</td>
<td>The Cilimus community has the spirit of trading / entrepreneurship</td>
<td>21.4 50 28.6 0 0</td>
</tr>
<tr>
<td>4</td>
<td>Increase regional income sources</td>
<td>35.7 50 11.9 2.4 0</td>
</tr>
<tr>
<td>5</td>
<td>Providing business opportunities for the community</td>
<td>31 45.2 21.4 2.4 0</td>
</tr>
<tr>
<td>6</td>
<td>Attract investors (investors)</td>
<td>23.8 40.5 26.2 9.5 0</td>
</tr>
<tr>
<td>7</td>
<td>Regency Regulation Kuningan No.26 of 2011 concerning the Kuningan Regency 2011-2031 Spatial Plan as an accommodator of the rapid growth in Kuningan Regency</td>
<td>31 59.5 9.5 0 0</td>
</tr>
<tr>
<td>8</td>
<td>Cilimus District RDTR in 2014 as a spatial planning effort in Cilimus District</td>
<td>26.2 57.1 16.7 0 0</td>
</tr>
<tr>
<td>9</td>
<td>Available kiosks and stalls have been fulfilled</td>
<td>38.1 31 26.2 0 4.8</td>
</tr>
<tr>
<td>10</td>
<td>Facilities in Pasar Cilimus need to be improved such as cctv, toilets, breastfeeding rooms, cutting rooms, etc.</td>
<td>38 36 21 0 5</td>
</tr>
<tr>
<td>11</td>
<td>Adding parking space</td>
<td>43 40 7 10 0</td>
</tr>
<tr>
<td>12</td>
<td>Drainage channels and landfills function optimally</td>
<td>7 17 43 31 2</td>
</tr>
<tr>
<td>13</td>
<td>Distribution of zoning for each type of trader</td>
<td>31 45.2 16.7 7.1 0</td>
</tr>
<tr>
<td>14</td>
<td>Food court area for food traders and as a resting place.</td>
<td>31 45 19 5 0</td>
</tr>
<tr>
<td>15</td>
<td>The need to increase the Cilimus Market area</td>
<td>31 50 14 5 0</td>
</tr>
<tr>
<td>16</td>
<td>The concept of Market building must be clear, to make it look comfortable, clean, and neatly arranged</td>
<td>31 43 19 7 0</td>
</tr>
<tr>
<td>17</td>
<td>The concept taken must characterize the regional identity</td>
<td>21.4 47.6 28.6 2.4 0</td>
</tr>
<tr>
<td>18</td>
<td>The terminal in front of Cilimus Market functions optimally</td>
<td>2.4 11.9 45.2 28.6 11.9</td>
</tr>
<tr>
<td>19</td>
<td>The need for transfer / expansion / development / terminal lebh luang</td>
<td>28.6 40.5 31 0 0</td>
</tr>
</tbody>
</table>

**Table 6. SOAR Analysis Diagram**

- **Strengths (S)**
  - The strategic location of Cilimus Market
  - Cilimus as one of the centers of development of trade and services
  - The Cilimus community has the spirit of trading / entrepreneurship
  - Increase regional income sources
  - Providing business opportunities for the community
  - Attract investors (investors)

- **Strategic Inquiry**
  - Regency Regulation Kuningan No.26 of 2011 concerning the Kuningan Regency 2011-2031 Spatial Plan as an accommodator of the rapid growth in Kuningan Regency
  - Easy Access to Location Access
  - Cilimus District RDTR in 2014 as a spatial planning effort in Cilimus District

- **Aspirations (A)**
  - Facilities in Pasar Cilimus need to be improved such as cctv, toilets, breastfeeding rooms, cutting rooms, etc.
  - Procurement of kiosks and booths on the Market
  - Drainage Channels and landfills optimally functioned
  - The terminal in front of Cilimus Market functions optimally
  - The concept of the building taken must characterize the regional identity and must be clear, so that it looks comfortable, clean, and neatly arranged
  - Further terminal transfer / expansion / development is needed

- **Results (R)**
  - Fulfillment of kiosks and booths on the Market
  - Divide zoning for each type of trader
  - Procurement for food court areas for food traders and as a resting place
  - Creation of a sense of order, comfort, safety and cleanliness both within the Market and outside the Market
  - Increase the level of security, the comfort of order and cleanliness both inside and outside the Market

Based on the SOAR matrix above it can be concluded that:

a. Cilimus Market Kuningan Regency needs to be developed in the direction of the Modern Market in accordance with the concept and

b. Fixing / adding supporting facilities located in Cilimus Market in accordance with SNI regulations on People's Markets and RTRW / RDTR regulations in Cilimus District, Kuningan Regency. So there is no need to develop strategies or diversify strategies to increase market popularity or fame because the location of Pasar Cilimus is very strategic.

### 4.4 MARKET AREA DEVELOPMENT PLANNING

#### 4.4.1 BUILDING BASIC COEFFICIENTS

In the zoning regulations found in the Cilimus District RDTR 2014 Cilimus Market Area which includes trade and service areas, the intensity of the utilization of space is:

- Maximum 80% KDB in the area that functions as a trading area.
- Maximum outbreak of 4.8
- KDH 10-30% of the area of the plot

Cilimus Market which has an area of 6341.42 m², for the planned development direction with an area of 9200 m², the KDB, KLB and KDH values are:

\[
\begin{align*}
\text{KDB} &= 80\% \times 9200 = 7360 \text{ m²} \\
\text{KLB} &= 2.5 \times 9200 = 23000 \text{ m²} \\
\text{KDH} &= 20\% \times 9200 = 1840 \text{ m²} \\
\end{align*}
\]

So, the number of floors of the building:

\[
\text{KLB} / \text{KDB} = 23000/7360 = 3,125
\]

Based on the results above, the number of floors in accordance with zoning regulations in the Cilimus District RDTR 2014 is 3 floors.
4.4.2 MARKET REGION

STRUCTURE PLAN

1. Cilimus Market
   a) Zoning is made for each type of trader
   b) The creation of a good air circulation system, especially for wet traders (meat, fish, vegetables and fruit).
   c) Addition of Market supporting facilities in accordance with the market types contained in the regulations of SNI 8152: 2015 concerning the people's market.
   d) And Pasar Cilimus will be developed for the next 5 years with a number of 1400 traders, and is included in the Class I Market type.
   e) Re-plan drainage systems, parking and waste management systems in the Market.

2. Terminal Cilimus
   Complete the Terminal facilities in accordance with the Type of Terminal Based on the Directorate of Transportation regulations in 1996, Terminal facilities are in accordance with their needs.

3. Cilimus Park
   Performed by completing other supporting facilities, such as the area for food court, parking, and bus stops. The following is a depiction of the development direction of Cilimus Park:

![Figure 5. Zoning of the Development Direction of Taman Cilimus](image)

![Figure 6. Taman Cilimus Development Plan](image)

4.4.3 CALCULATION OF PARKING NEEDS

<table>
<thead>
<tr>
<th>Table 8. Car Vehicle Calculation Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

(Source: Direct Field Survey)

<table>
<thead>
<tr>
<th>Table 9. Motor Vehicle Calculation Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

(Source: Direct Field Survey)
Number of Vehicles = Area / SRP

Based on the Determination of Parking Units in the Guidelines for Planning and Operation of Parking Facilities, the SRP type of vehicle is for:

Car goal II = 2.50 x 5.00 = 11.50 m² SRP
Motorcycle = 0.75 x 2.00 = 1.5 m² SRP

So:

Area of Car Parking Area = Number of Vehicles x SRP
= 38 x 11.50
= 437 m²

Area of Motorcycle Parking Area = Number of Vehicles x SRP
= 1200 x 1.50
= 1800 m²

So the parking area is 2237 m², with a circulation of 15% to be 335.55 m². So that the total area is 2572.55 m² while the parking area is 2655 m². So that the planned plan for the parking area meets the number of vehicles in Cilimus Market.

4.4.4 DRAINAGE CHANNEL CALCULATION

Rainfall data used is the maximum rainfall data at Linggarjati Station from 2008 to 2017.

Table 10. Maximum Daily Rainfall

<table>
<thead>
<tr>
<th>No</th>
<th>Year</th>
<th>Maximum Rainfall (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2008</td>
<td>119</td>
</tr>
<tr>
<td>2</td>
<td>2009</td>
<td>105</td>
</tr>
<tr>
<td>3</td>
<td>2010</td>
<td>132</td>
</tr>
<tr>
<td>4</td>
<td>2011</td>
<td>107</td>
</tr>
<tr>
<td>5</td>
<td>2012</td>
<td>121</td>
</tr>
<tr>
<td>6</td>
<td>2013</td>
<td>147</td>
</tr>
<tr>
<td>7</td>
<td>2014</td>
<td>115</td>
</tr>
<tr>
<td>8</td>
<td>2015</td>
<td>78</td>
</tr>
<tr>
<td>9</td>
<td>2016</td>
<td>78</td>
</tr>
<tr>
<td>10</td>
<td>2017</td>
<td>102</td>
</tr>
</tbody>
</table>

(Source: Dinas PSDA Kuningan Regency; Linggarjati Station)

Calculation of Rainfall Frequency Analysis is done by Log Person III Distribution method. After the calculation is obtained the rainfall of the T-year return period plan.

Table 11. Repeat Period Analysis

<table>
<thead>
<tr>
<th>T</th>
<th>Gt</th>
<th>Log Rt</th>
<th>Rt</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>-0.010116405</td>
<td>2.034128706</td>
<td>108,1754</td>
</tr>
<tr>
<td>5</td>
<td>-0.000613115</td>
<td>2.034973863</td>
<td>108,3862</td>
</tr>
<tr>
<td>10</td>
<td>0.00950329</td>
<td>2.035873546</td>
<td>108,6109</td>
</tr>
</tbody>
</table>

Calculation of Rainfall Intensity by using the Mononobe formula:

\[
S = \frac{\Delta t}{L} = \frac{424 - 423}{310}^{0.385} = 0.00322581 \text{ m}
\]

\[
t_c = \left( \frac{0.87 x L^2}{1000 x S} \right)^{0.385}
\]

\[
= \left( \frac{0.87 x 310^2}{1000 x 0.00322581} \right)^{0.385}
= 0.245 \text{ jam}^2
\]

\[
I = \frac{R}{24} \left( \frac{\sqrt{\Delta t}}{t_c} \right)
\]

\[
= \frac{108,3861682 x 24}{24} \left( \frac{0.245}{2/3} \right)
= 58,0529 \text{ mm/jam}
\]

Debit Plan:

\[
Q = 0.278 x C x I x A
\]

\[
= 0.278 x 0.70 x 58,0529 x 0.0057
= 0.06439347 \text{ m}^3/\text{det}
\]

Channel Dimensions

\[
n = 0.020 \text{ (Manning Coefficient of Cement Stone Surface)}
\]

\[
S = 0.003225 \text{ m}
\]

\[
b = 2h
\]

The cross section used in the planning of drainage channel dimensions is rectangular.

Area (A) = b x h

Wet Roving (P) = b + 2h

Hydraulic radius (R) = A / P

Channel Debit (Qs) = V x A

\[
= \frac{1}{n} \times \frac{1}{R^{1/3}} \times \frac{1}{S^{1/2}} \times A
\]

\[
Q = \frac{1}{n} \times \frac{1}{R^{1/3}} \times \frac{1}{S^{1/2}} \times (b \times h)
\]

\[
Q = \frac{1}{0.020} \times \frac{(b \times h)^{1/3}}{(b + 2h)} \times S^{1/2} \times (b \times h)
\]

\[
0.064 = \frac{1}{0.020} \times \frac{(2h \times h)^{1/3}}{(2h + 2h)} \times 0.00322587 x (2h \times h)
\]
\[
0,064 = \frac{1}{0,020} \times \frac{(2h \times h)^{3/2}}{(2h + 2h)} \times 0,00322582 \times (2h \times h)
\]

\[
0,064 = \frac{1}{0,020} \times \frac{2h^{3/2}}{4h} \times 0,00322582 \times (2h^2)
\]

\[
h = \left( \frac{0,064 \times 0,020}{2 \times 0,00322582^{1/2}} \right)^{3/8} = 0,546 \text{ m}
\]

Then:
Water level (h) = 0.546 m
Channel base width (b) = 2 x h
= 2 x 0.546
= 1.093 m

From the above results obtained:
Cross Section (A)
\[A = b \times h\]
\[= 1.093 \times 0.546\]
\[= 0.597 \text{ m}^2\]

Wet Circulation Channel (P)
\[P = b + 2h\]
\[= 1.093 + 2 (0.546)\]
\[= 2.186 \text{ m}\]

Hydraulic radius (R)
\[R = \frac{A}{P} = 0.597 / 2.186 = 0.273 \text{ m}\]

Flow Speed (V)
\[V = \frac{1}{n} \times R^{2/3} \times S^{1/2}\]
\[= 1 / 0.020 \times (0.273)^{2/3} \times (0.00322581)^{1/2}\]
\[= 1.196 \text{ m}^3 / \text{sec}\]

Debit Channels (Qs)
\[Qs = V \times A\]
\[= 1.196 \times 0.597 = 0.714 \text{ m}^3 / \text{sec}\]

Height (w)
\[W = 0.50.5 \times h = 0.50.5 \times 0.546\]
\[= 0.5227 \text{ m}\]

Channel height (H)
\[H = h + w\]
\[= 0.546 + 0.5227 = 1.069 \text{ m}\]

4.4.5 WASTE MANAGEMENT

SYSTEM PLANNING

![Diagram 1. Waste Disposal Scheme in Cilimus Market](image)

4.5 PLANNING AND DESIGN RESULTS

Below is a floor plan for Cilimus Market building:

1. First Floor

![Figure 8. Plan of Cilimus Market Development Design Results](image)

<table>
<thead>
<tr>
<th>No</th>
<th>Name Facilities</th>
<th>Size</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Los</td>
<td>1.5 m x 1.75 m</td>
<td>14 unit</td>
</tr>
<tr>
<td></td>
<td>Merchandise</td>
<td>2 m x 2 m</td>
<td>464 unit</td>
</tr>
<tr>
<td>2</td>
<td>Kiosk</td>
<td>3 m x 2 m</td>
<td>65 unit</td>
</tr>
<tr>
<td>3</td>
<td>Raw Material Storage</td>
<td>3 m x 2 m</td>
<td>8 unit</td>
</tr>
<tr>
<td>4</td>
<td>WC/Toilet</td>
<td>7.5 m x 8 m</td>
<td>1 unit @ 1.5 m x 2 m</td>
</tr>
<tr>
<td>5</td>
<td>Disinfectant Room</td>
<td>3.5 m x 3.5 m</td>
<td>1 unit</td>
</tr>
</tbody>
</table>

![Figure 9. Floor Plan 1](image)
Spatial Development of Cilimus Market Area Kuningan District

2. Second Floor

![Figure 10. Floor Plan 2](image)

Table 13. Floor Plan 2

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Facilities Size</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kiosk</td>
<td>3 m x 2 m</td>
<td>443 unit</td>
</tr>
<tr>
<td>2</td>
<td>WC/Toilet</td>
<td>7.5 m x 8 m 1 unit @ 1.5 m x 2 m</td>
<td>1 unit</td>
</tr>
<tr>
<td>3</td>
<td>Pray Room</td>
<td>4 m x 3.5 m</td>
<td>1 unit</td>
</tr>
<tr>
<td>4</td>
<td>Managing Office</td>
<td>4 m x 3.5 m</td>
<td>1 unit</td>
</tr>
</tbody>
</table>

3. The Third Floor

![Figure 11. Floor Plan 3](image)

Table 14. Floor Plan 3

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Facilities Size</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kiosk</td>
<td>3 m x 2 m</td>
<td>414 unit</td>
</tr>
<tr>
<td>2</td>
<td>WC/Toilet</td>
<td>7.5 m x 8 m 1 unit @ 1.5 m x 2 m</td>
<td>1 unit</td>
</tr>
<tr>
<td>3</td>
<td>Nursing Room</td>
<td>4 m x 3.5 m</td>
<td>1 unit</td>
</tr>
<tr>
<td>4</td>
<td>Smoking Area</td>
<td>4 m x 3.5 m</td>
<td>1 unit</td>
</tr>
</tbody>
</table>

So the total kiosk and kiosk planning is 922 units and 478 units of kiosks, bringing the total number to 1400 units. And below is a description of some of the facilities in Cilimus Market, Kuningan Regency:

1. In Front Of Market

![Figure 12. Front of Cilimus Market](image)

2. Kiosk

![Figure 13. Kiosk](image)

3. Los

![Figure 14. Los](image)

4. Supporting Facilities  
   a. Parking lot

![Figure 15. Motorcycle Parking](image)

![Figure 16. Car Parking](image)
Garbage Dump

Figure 17. Garbage Dump

Drainage Channel

Figure 18. Drainage Channel

Security Posts

Figure 19. Security Posts of Cilimus Market

WC/Toilet

Figure 20. WC/Toilet

Green Open Space

Figure 21. Green Open Space

ATM

Figure 22. ATM

h. Disinfectant room, worship room, management office, nursing room, and smoking area.

Figure 23. Other Facilities

5. COVER

5.1 CONCLUSION

1. Cilimus Market Land was developed by expanding the land by adding 2858.58 m², which previously had an area of 6341.42 m². So that the total area of development carried out covers 9200 m². For the concept developed at Cilimus Market, it is directed to the Modern Market with a plan for a 3-story market building covering 16,182 m².

2. Planning the amount of kiosk and booth capacity is planned for the next 5 years in accordance with the number of percentage of traders. With 922 kiosk...
units with a size of 3 mx 2 m and 478 units of booths with a size of 1.5 m x 1.75 m and 2 m x 2 m, the total number is 1400 units.

3. Supporting facilities planned in accordance with SNI regulations on the People's Market.

4. Parking plans for motorbikes covering an area of 1800 m² while for cars 437 m² with a circulation of 15% so that the total amount is 2572.55 m². And the drainage plan uses a square cross section with \( b = 1.093 \text{ m}, \ h = 0.546 \text{ m} \) and \( w = 0.5227 \text{ m} \).

5. For Cilimus Market area, namely Taman Cilimus and Cilimus Terminal, only additional facilities are planned. Taman Cilimus is planned to have a creative economic area where traders sell during the afternoons and place additional shelters. Whereas Cilimus Terminal is added to parking lots, workshops, kiosks, counters, health rooms, warehouses, administration rooms, waiting rooms, lavatories and parking lots for private vehicles.

5.2 SUGGESTION

1. Cilimus Market Development needs to be done to see the market economy that is progressing and the more crowded markets that will arise other problems.

2. The addition of the number of kiosks and stalls is adjusted to the number of traders in Cilimus Market, Kuningan Regency.

3. Adjustment of the Cilimus Market facility is seen based on the type of Market in accordance with SNI regulations on the People's Market.

4. There needs to be further study of parking in Cilimus Market so that it can accommodate the number of vehicles and does not cause traffic jams around Cilimus Market and optimization of drainage channels in Cilimus Market in Kuningan District.

5. To optimize the development of the area around Cilimus Market, namely Taman Cilimus and Terminal Cilimus, further research is needed on the transportation system that is located around Cilimus Market in Kuningan Regency.

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Pedoman Perencanaan dan Pengoperasian Fasilitas Parkir Direktorat Bina Sistem Lalu Lintas dan Angkutan Kota (Dinas Jenderal Perhubungan Darat)

Peraturan Daerah Kabupaten Kuningan No 26 Tahun 2011 tentang Rencana Tata Ruang Wilayah Kabupaten Kuningan Tahun 2011 – 2031

SNI 3242 : 2008 Tentang Pengelolaan Sampah di Pemukiman

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