

SKRIPSI 54

**URBAN MORPHOLOGY TRANSFORMATIONS IN
GEMPOL: HOW THE F&B INDUSTRY INDUCED
FORMAL, SPATIAL, AND USAGE PATTERN
CHANGES IN URBAN RESIDENTIAL AREAS**



**NAME : FRISTO APRILANO SASMITO
NPM : 6111901042**

**ADVISOR: DR. IR. ANINDHITA NUGROHO SUNARTIO,
S.T., M.T.**

**UNIVERSITAS KATOLIK PARAHYANGAN
FAKULTAS TEKNIK JURUSAN ARSITEKTUR
PROGRAM STUDI SARJANA ARSITEKTUR**
Akreditasi Institusi Berdasarkan BAN Perguruan Tinggi No: 1998/SK/BAN-
PT/Ak.Ppj/PT/XII/2022 dan Akreditasi Program Studi Berdasarkan BAN
Perguruan Tinggi No: 10814/SK/BAN-PT/AK-ISK/S/IX/2021

**BANDUNG
2023**

SKRIPSI 54

**URBAN MORPHOLOGY TRANSFORMATIONS IN
GEMPOL: HOW THE F&B INDUSTRY INDUCED
FORMAL, SPATIAL, AND USAGE PATTERN
CHANGES IN URBAN RESIDENTIAL AREAS**



**NAME : FRISTO APRILANO SASMITO
NPM : 6111901042**

ADVISOR

Dr. Ir. Anindhita Nugroho Sunartio, S.T., M.T.

PANEL OF JURY :

Dr. Ir. Y. Karyadi Kusliansjah, M.T.

Dr. Ir. Yasmin Suriansyah, M.S.P.

**UNIVERSITAS KATOLIK PARAHYANGAN
FAKULTAS TEKNIK JURUSAN ARSITEKTUR
PROGRAM STUDI SARJANA ARSITEKTUR**

**Akreditasi Institusi Berdasarkan BAN Perguruan Tinggi No: 1998/SK/BAN-
PT/Ak.Ppj/PT/XII/2022 dan Akreditasi Program Studi Berdasarkan BAN
Perguruan Tinggi No: 10814/SK/BAN-PT/AK-ISK/S/IX/2021**

**BANDUNG
2023**

PERNYATAAN KEASLIAN TULISAN SKRIPSI
(Declaration of Authorship)

Saya yang bertanda tangan di bawah ini :

Nama : Fristo Aprilano Sasmito

NPM : 6111901042

Alamat : Jl. Duri Nirmala VI/7
DKI Jakarta 11520

Judul Skripsi : *Urban Morphology Transformations in Gempol: How F&B Industry Induce Formal, Spatial, and Usage Pattern Changes in Urban Residential Areas*

Dengan ini menyatakan dengan sungguh-sungguh bahwa :

1. Skripsi ini sepenuhnya adalah hasil karya saya pribadi dan di dalam proses penyusunannya telah tunduk dan menjunjung Kode Etik Penelitian yang berlaku secara umum maupun yang berlaku di lingkungan Universitas Katolik Parahyangan.
2. Jika di kemudian hari ditemukan dan terbukti bahwa isi di dalam Skripsi ini, baik sebagian maupun keseluruhan terdapat penyimpangan-penyimpangan dari Kode Etik Penelitian antara lain seperti tindakan merekayasa atau memalsukan data atau tindakan sejenisnya, tindakan plagiarisme atau autoplajarisme, maka saya bersedia menerima seluruh konsekuensi hukum sesuai ketentuan yang berlaku.

Bandung, Juli 2023

A 10,000 Rupiah revenue stamp (Meterai Tempel) with a signature over it. The stamp features the Garuda Pancasila emblem and the text '10000', 'METERAI TEMPEL', and the serial number '5642FAKX487774309'.

F. Sasmito

Abstract

URBAN MORPHOLOGY TRANSFORMATIONS IN GEMPOL: HOW THE F&B INDUSTRY INDUCED FORMAL, SPATIAL, AND USAGE PATTERN CHANGES IN URBAN RESIDENTIAL AREAS

by

Fristo Aprilano Sasmito
NPM: 6111901042

Bandung has always been a prime tourist destination in West Java and Indonesia. The growth of the F&B industry could be clearly seen by the conversion of residential buildings into commercial venues throughout Bandung for all kinds of market segments. The municipality of Bandung encouraged the practice of converting previously residential areas into commercial areas in the city center by creating zoning laws for commercial functions to be built upon the existing urban residential areas.

Gempol is one of the historic urban residential blocks experiencing sporadeous land-use changes due to the growth of the F&B industry. Developed under colonial rule in the 1920s, Gempol was a densely populated block designed for the lower-middle class with the concept of urban pocket, with smaller houses inside the block surrounded by larger villas on the main streets.

This non-uniform changes in land use inevitably brings tension between owners of neighboring parcels, due to the different needs and interests of commercial and residential areas. From parking and noise disturbance to complains about the visual cohesiveness of the block, it is clear that this fragmented zones is a problem of urban design. The objectives of this research are to identify the physical and non-physical effects of land use changes in Gempol as an urban residential area and to identify the focus of development of Gempol in the present era.

The type of methodology chosen for this specific research is a descriptive research, as the research intends to answer questions of how land-use changes impact the residential community in which it is located. It intends to examine the correlation between building functions and the urban environment through observation. Hence, a reconstruction of the transformations in different eras in Gempol is required to be able to create a valid comparison. 3 layers of information were used to recreate what the environment might have looked like before homes started to be converted to commercial spaces: a CAD Base-map of Bandung, the Prospectus voor de Uitgifte van Gronden, and Satellite View from Maxar Technologies. The CAD base map and the Prospectus was used to identify the figure-ground plan of the building, and satellite imagery was used to identify the roof forms accurately. For current situation, the Prospectus is replaced by a plot map from the BPN.

Both the on-field findings on 2023 and the findings from literature of similar transformation capture on the 1990s and the early 2000s show a difference of the transformation process taking place in Gempol. The focus of development in 1990 was densification, development on 2004 focused on consolidation, but developments on 2023 focused on commercialization and maximization of land value – which leads to the fragmentation of urban elements and architectural quality.

Keywords: Gempol, land-use changes, transformation

PEDOMAN PENGGUNAAN SKRIPSI

Skripsi yang tidak dipublikasikan ini, terdaftar dan tersedia di Perpustakaan Universitas Katolik Parahyangan, dan terbuka untuk umum dengan ketentuan bahwa hak cipta ada pada penulis dengan mengikuti aturan HaKI dan tata cara yang berlaku di lingkungan Universitas Katolik Parahyangan.

Referensi kepastakaan diperkenankan dicatat, tetapi pengutipan atau peringkasan hanya dapat dilakukan seizin pengarang dan harus disertai dengan kebiasaan ilmiah untuk menyebutkan sumbernya.

Memperbanyak atau menerbitkan sebagian atau seluruh Skripsi haruslah seizin Rektor Universitas Katolik Parahyangan.



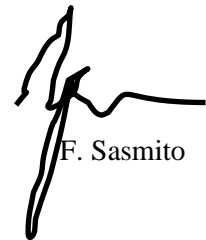
ACKNOWLEDGEMENTS

Author's gratitude is given to God the Father, the Son, and the Holy Spirit for the completion of this study. The study is done to fulfill the final project on the Architecture Program at the Technic Faculty of Parahyangan Catholic University. Throughout the writing process, the author was assisted and encouraged by lecturers at the faculty and which he likes to express his gratitude for:

- Advisor, Dr. Anindhita Sunartio for his ever-growing knowledge transferred to the author by discussions and assistance.
- Panel of Jury, Dr. Karyadi Kusliansyah and Dr. Yasmin Suriansyah for the insights and inputs given to sharpen and refocus the study.



Bandung, June 2023



F. Sasmito

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION	1
1.1. Background.....	1
1.2. Research Questions	2
1.3. Objectives of Study	3
1.4. Benefits of Study.....	3
1.5. Scope of Study	4
1.6. Framework	8
CHAPTER 2 LITERATURE ON URBAN MORPHOLOGY & ZONING	9
2.1. Historical Background.....	9
2.2. Urban Morphology.....	10
2.2.1. Land Use	10
2.2.2. Building Form & Massing.....	10
2.2.3. Circulation & Parking.....	10
2.2.4. Open Space.....	11
2.2.5. Pedestrian Ways	11
2.2.6. Activity Support	11
2.2.7. Signage.....	11
2.2.8. Preservation.....	11
2.3. Zoning Types	12
2.3.1. Single-Use Zoning.....	12
2.3.2. Mixed-Use Zoning.....	13
2.3.3. Form-based Zoning.....	15
CHAPTER 3 RECONSTRUCTIONAL RESEARCH METHOD	17
3.1. Research Methodology.....	17
3.2. Timeframe and Location of Study.....	18
3.3. Data Collection Methods.....	18
3.3.1. Field Observation	18
3.3.2. Literature Studies.....	18
3.3.3. Map Tracing	19

3.3.4. Field Surveys	19
3.4. Data Analysis	19
CHAPTER 4 EFFECTS OF LAND-USE CHANGES IN GEMPOL.....	21
4.1. Reconstruction of Original Environment.....	21
4.1.1. Streets	21
4.1.2. Plots	23
4.1.3. Building Forms	25
4.2. Transformation in the 1990s.....	27
4.2.1. Streets	27
4.2.2. Building Forms	29
4.3. Transformation in the Early 2000s	33
4.3.1. Streets	33
4.3.2. Building Forms.....	36
4.4. Transformation in the Present Era - 2023.....	41
4.4.1. Streets.....	41
4.4.2. Plots.....	45
4.4.3. Building Forms.....	47
4.5. Effects of the Changes on the Urban Environment.....	47
4.5.1. Formal Effect.....	48
4.5.2. Spatial Effect	50
4.5.3. Usage Patterns Effect.....	54
CHAPTER 5 CONCLUSION	55
5.1. Conclusion	55
5.2. Recommendation.....	56
 REFERENCES.....	 55
ATTACHMENTS.....	57

TABLE OF FIGURES

Figure 1 Plot Map of Gempol	1
Figure 2 Changing Uses and Degrading Living Environments in Gempol	2
Figure 3 Location of Gempol (in Dark Blue) Within Bandung–	4
Figure 4 Diagram of Street Hierarchy in Gempol	7
Figure 5 Research Framework	8
Figure 6 Thomas Karsten’s Plan for Bandung	12
Figure 7 New York City’s Mixed-Use Zones (CNU).....	13
Figure 8 Form-based Codes in Different Areas (<i>Congress of New Urbanists</i>).....	15
Figure 9 Reconstruction Method of Situations.....	18
Figure 10 Isometric Illustration of 3 Street Hierarchy.....	21
Figure 11 <i>Kaart van de Gemeente Bandoeng</i>	22
Figure 12 Plots System in the <i>Prospectus voor de Uitgifte van Gronden</i>	24
Figure 13 Left: <i>Het Gesloten Bebouwing</i> , Right: <i>Het Open Bebouwing</i>	26
Figure 14 Sketch of Jl. Trunojoyo & Jl. Cilamaya from Siregar (1990).....	28
Figure 15 Sketch of Jl. Sultan Tirtayasa & Jl. Gempol Kulon.....	28
Figure 16 Roof Plans of the original ‘garden estate’ concept from Siregar (1990)	29
Figure 17 Sketches of Transformations of Old Buildings from Siregar (1990).....	29
Figure 18 Renovation of a Coupled House from Siregar (1990).....	30
Figure 19 Excerpt of Row-house from Siregar (1990).....	31
Figure 20 Satellite Imagery of Bandung on 2007 – Maxar Technologies	33
Figure 21 Street Profile of Jl. Trunojoyo – 2004 from Ignasia (2007).	34
Figure 22 Pinus Photo –Jl. Sultan Tirtayasa 19 – 2004 from Ignasia (2007).....	35
Figure 23 Jl. Sultan Tirtayasa – 2004 from Ignasia (2007).	35
Figure 24 Jl. Gempol Kulon – 2004 from Ignasia (2007).....	36
Figure 25 Jl. Trunojoyo 66 – 2004 from Ignasia (2007)	37
Figure 26 Jl. Trunojoyo 29 – 2004 from Ignasia (2007)	37
Figure 27 Jl. Trunojoyo 64 – 2004.....	38
Figure 28 Jl. Sultan Tirtayasa 12-13 – 2004 from Ignasia (2007)	39
Figure 29 Jl. Sultan Tirtayasa 19 – 2004 from Ignasia (2007)	39
Figure 30 Six Row House on Jl. Gempol Kulon – 2004 from Ignasia (2007).	40
Figure 31 Illustration of Street Profile Changes on Jl. Trunojoyo.....	42

Figure 32 Illustration of Street Section Changes on Jl. Trunojoyo	42
Figure 33 Illustration of Street Profile Changes on Jl. Sultan Tirtayasa	43
Figure 34 Illustration of Street Section Changes on Jl. Sultan Tirtayasa	43
Figure 35 Illustration of Street Profile Changes on Jl. Gempol Kulon	44
Figure 36 Illustration of Street Section Changes on Jl. Gempol Kulon	44
Figure 37 Current Plot Distribution from the Bandung Smart Map.....	45
Figure 38 Diagram of Pavilion Behind Historic Building	49
Figure 39 Kedai Nyonya Rumah (Google Earth)	50
Figure 40 Shrinking of Urban Scale	50
Figure 41 Street Section of Jl. Trunojoyo.....	51
Figure 42 A Section of Jl. Sultan Tirtayasa	51
Figure 43 Interruption of Urban Space.....	52
Figure 44 Shrinking of Urban Scale.....	53
Figure 45 Isometric Illustration of Jl. Gempol Kulon in the Past	53

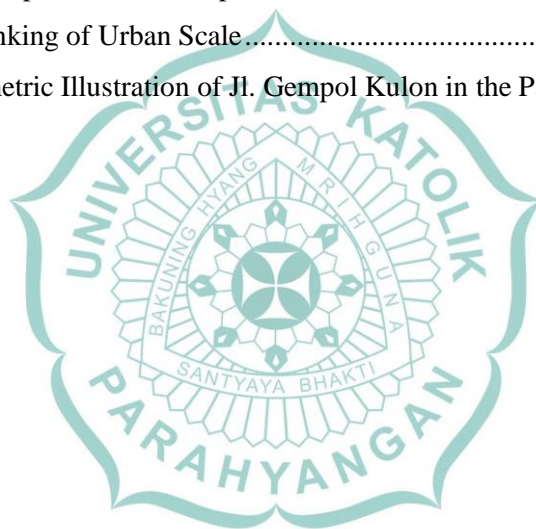


TABLE OF TABLES

Table 1 Number of Plots of Gempol (BSM, 2023)	5
Table 2 Number of Converted Plots Gempol, personal documentation	5
Table 3 List of Converted Buildings in Gempol, personal documentation–.....	6
Table 4 List of Street Profiles	23
Table 5 List of Average Plot Sizes and Regulations	25
Table 6 List of Street Profile Changes - 1990	27
Table 7 List of Street Profile Changes – 2004.....	33
Table 8 List of Street Profile Changes	41
Table 9 List of Plot Number and Size Changes.....	46
Table 10 List of Building Form Changes is Gempol.....	47
Table 11 List of F&B Industry-Caused Building Form Changes	48

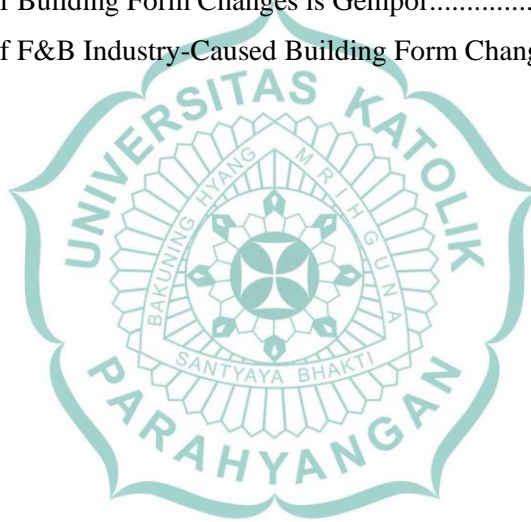


TABLE OF ATTACHMENTS

Attachment 1 Drawings of Original Villa Houses from Siregar (1990)	59
Attachment 2 Densification of Inner Compound in Gempol 1990	60
Attachment 3 Isometric Illustration of 1930 Situation in Jl. Gempol Kulon	61
Attachment 4 Illustration of 1990 Situation in Jl. Gempol Kulon	61
Attachment 5 Illustration of 2005 Situation in Jl. Gempol Kulon	61
Attachment 6 Illustration of 2023 Situation in Jl. Gempol Kulon	61
Attachment 7 Illustration of 1930 Situation in Jl. Sultan Tirtayasa	62
Attachment 8 Illustration of 1990 Situation in Jl. Sultan Tirtayasa	62
Attachment 9 Illustration of 2005 Situation in Jl. Sultan Tirtayasa	63
Attachment 10 Illustration of 2023 Situation in Jl. Sultan Tirtayasa	63
Attachment 11 Illustration of 1930 Situation in Jl. Trunojoyo	64
Attachment 12 Illustration of 1990 Situation in Jl. Trunojoyo	64
Attachment 13 Illustration of 2005 Situation in Jl. Trunojoyo	65
Attachment 14 Illustration of 2023 Situation in Jl. Trunojoyo	65



CHAPTER I

INTRODUCTION

1.1. Background

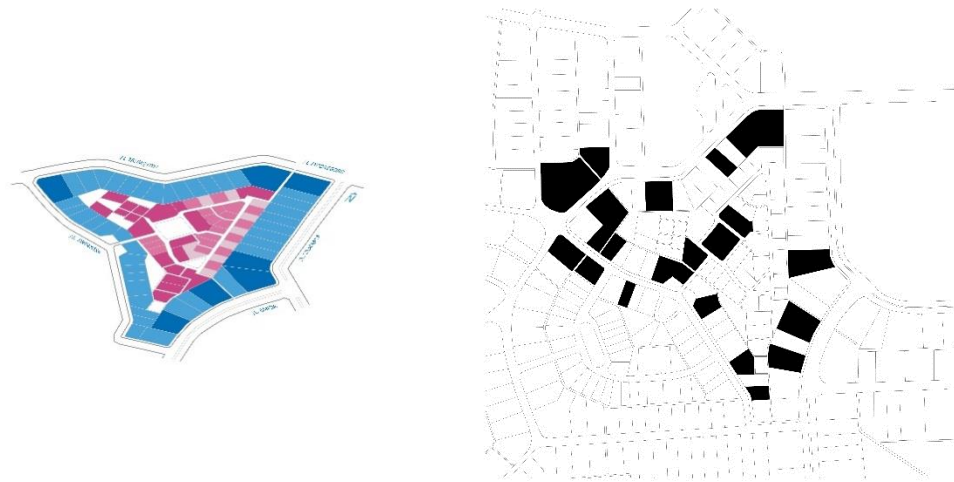


Figure 1 Plot Map of Gempol

Bandung has always been a prime tourist destination in West Java and Indonesia. In 2019 alone, the BPS estimated a record number of 8,428,063 tourists visited Bandung (BPS, 2020). As the tourism market expands, the food and beverages industry experienced significant growth over the years. The number of registered F&B outlets almost doubled in the last decade – from 625 locations in 2012 to 1041 locations in 2020 (Disbudpar, 2021). The growth of the F&B industry could be clearly seen by the conversion of residential buildings into commercial venues throughout Bandung for all kinds of market segments.

The municipality of Bandung encouraged the practice of conversing previously residential areas into commercial areas in the city center by creating zoning laws for commercial functions to be built upon the existing urban residential areas. Plots in commercial zones are given higher floor-area and building coverage ratios for maximizing sellable area, which in turn leads to higher taxes being applied to the property (Distaru, 2022). With high taxes on large property in the city center, some owners have no choice other than to lease or convert their properties into commercial sites.

However, being a historically urban residential area, a significant number of plots are still functioning as active and well-maintained residential areas. Its proximity to key

locations and amenities in the city makes it a desirable location to reside in. Hence, the conversion of land-use happens sporadically and gradually plot by plot, not block by block. A restaurant situated across a house in a common sight in Bandung. The block becomes a fragmented block, patched with commercial functions here and there, without a comprehensible order of any sort.

Gempol is one of the historic urban residential blocks in Bandung experiencing sporadic land-use changes due to the growth of the F&B industry. Developed under colonial rule in the 1920s, Gempol was a densely populated block designed for the lower-middle class with the concept of urban pocket, with smaller houses inside the block surrounded by larger villas on the main streets (Siregar, 1998). In Outer Gempol, the percentage of land-use changes related to the F&B industry reaches 31%, while in the denser Inner Gempol the number is 11%. The combined land-use percentage for Gempol is 17%.



Figure 2 Changing Uses and Degrading Living Environments in Gempol (Permana, 2019)

This non-uniform changes in land use inevitably brings tension between owners of neighboring parcels, due to the different needs and interests of commercial and residential areas. From parking and noise disturbance to complains about the visual cohesiveness of the block, it is clear that this fragmented zone is a problem of urban design.

1.2. Research Questions

While land-use changes and conversion of residential plot to commercial areas are becoming ever common, it is unwise to assume that whole blocks would eventually be transformed into commercial districts. Even in highly commercialized corridors like Jl. Riau or Jl. Dago, which were early adopters of commercialization,

a number of buildings still functions as prestigious single-family dwellings until the present day.

This reality of the existence of fragmented blocks and the tension that resides the residential block. In order to pinpoint the consequences of land use changes to the urban environment, it is necessary to ask:

- How did land use changes in Gempol (of residential dwellings to F&B outlets) affect its urban elements (plots, building typology)?
- Do the changes bring more advantage or disadvantage to the environment?

1.3. Objectives of Study

Based on the questions mentioned above, the objectives of this research are:

- To identify the physical and non-physical effects of land use changes in Gempol as an urban residential area.
- To objectively pass judgement on whether the current scale of land use changes is tolerable in Gempol based on its effects

In order to achieve the objectives of the study, several related issues to the problem could be brought up:

- **Urban Morphology Reading**
Effects of land use changes are most clearly visible in the physical changes that it brings. Urban morphology plays an important part in categorizing the changes to different urban elements; from elements in which private parties could make significant changes (building typologies) to elements in which residents have the least control of – the streets. By setting urban morphology as a categorizing system, the process of documenting, cataloging, and interpreting findings would be well-structured and legible.
- **Historical Reading**
As an area with history dating back to the 1920s, understanding the original design intention of the block would be useful in identifying important physical features that gives the area a specific characteristic or identity. Identifying physical changes could only be done by studying the original structures in the first place.

1.4. Benefits of Study

The study in itself would present an assertion of whether commercialization in Gempol have more negative or positive impacts to its community. However, in the broader sense of urban planning, other urban residential areas facing the challenges of commercialization could look into the case study as a precedent before deciding to embrace commercialization at a certain scale or preserving the residential nature of the area. Future research questioning how much intensity of land-use changes is tolerable / sustainable in urban residential areas could use this research as a case study out of many case studies in Bandung.

1.5. Scope of Study

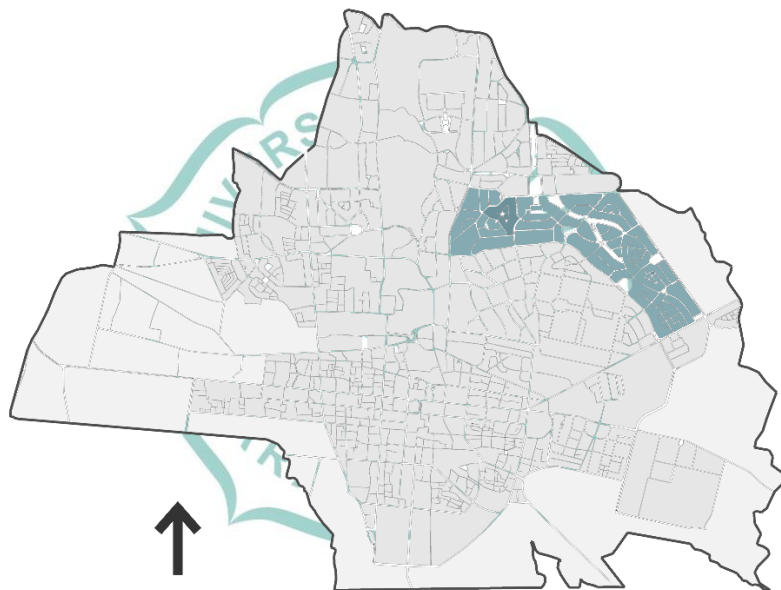


Figure 3 Location of Gempol (in Dark Blue) Within Bandung

Gempol is divided into two dwelling quarters: inner and outer Gempol. The inner dwelling quarter is the quarter usually referred to when discussing about Gempol, but the scope of this study will include outer Gempol and the four street corridors surrounding it: Jl. Trunojoyo, Jl. Banda, Jl. Bahureksa, and Jl. Wira Angun-angun. The number of plots in the block are as listed in the table below:

Number of Plots in Gempol

193

Outer Gempol	61
Jl. Trunojoyo	19
Jl. Cilamaya	11
Jl. Banda	11
Jl. Sultan Tirtayasa	20
Inner Gempol	132
Jl. Gempol	5
Jl. Gempol Kulon	67
Jl. Gempol Wetan	60

Table 1 Number of Plots of Gempol (BSM, 2023)

The study will target specific land-use changes of residential building to commercial buildings used for the F&B industry, and not into other commercial uses like offices. Land-use changes into public service buildings such as schools will not be the focus of this research. The reason for the limitation is that the issue of converting homes into cafes and restaurants is the big and common phenomenon in Bandung as a city. Conversion of homes into office generally do not bring physical changes to the neighborhood and do not get much resistance from residents. Conversions into schools and other public services are less common. Hence, the study will focus on conversions into cafes, restaurants, or other F&B outlets. The number of plots that fit into the scope of study is as follows:

Number of Converted Plots in Gempol	33	17%
Outer Gempol	19	31%
Jl. Trunojoyo	9	
Jl. Cilamaya	0	
Jl. Banda	2	
Jl. Sultan Tirtayasa	8	
Inner Gempol	14	11%
Jl. Gempol	0	
Jl. Gempol Kulon	5	
Jl. Gempol Wetan	9	

Table 2 Number of Converted Plots Gempol, personal documentation from (BSM, 2023)

It should be noted that the Pasar Gempol and its numerous tenants are registered as a single plot in Bandung's Spatial Planning Department's database. However, this report will list the tenants in Pasar Gempol as an independent plot. The list of plots that fit into the criteria of study is listed on the table below:

List of Converted Buildings in Gempol

	No.	Current-use
Jl. Trunojoyo		
	38	Bakery - Bolen Lilit
	40	Restaurant - Etcetera
	46	Restaurant - Ampera
	48	Restaurant - Gijon Steakhouse
	58	Foodcourt - Centro 58
	62	Restaurant - Hittobitto
	64	Restaurant - Sambara
Jl. Banda		
	31	Café - Loy Café
	35	Restaurant - Sky Wings
Jl. Sultan Tirtayasa		
	17	Outlet - Sari-Sari
	19	Restaurant - Laksa 63
	27	Hawker - Seblak Sultan Tirtayasa
	29	Bakery - Lily Patisserie
	31	Restaurant - Midori
		Hawker - Mie Ayam
	33	Cipaganti
	45	Bakery - Foursunday
	49	Hawker - Bubur Ayam Mang Oyo
Jl. Gempol Kulon		
	5	Hawker - Bakmi Laris
	20	Café - Los Tropis
	53	Hawker - Kupat Tahu Gempol
	87	Hawker - Mie Ong
	95	Bodega - Sogan
Jl. Gempol Wetan		
	1	Bodega - Kedai Mama Ella
	2	Hawker - Gado-gado Gempol
	3	Bodega - Warung Nasi Kamojang
	4	Bodega - Rumah Makan Masunda
		Hawker - Warung Sate
	5	Gempol
	12	Cafe - Kopi Kang Kamal
	14	Bakery - Roti Gempol
	16	Café - Little Contrast
	18	Bakery - Roti Cane Gempol

Table 3 List of Converted Buildings in Gempol, personal documentation

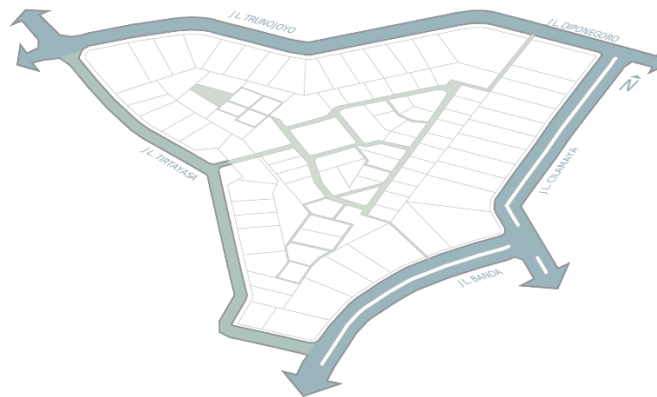
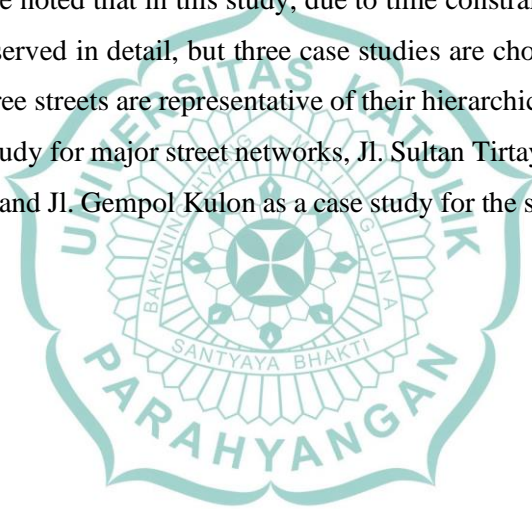


Figure 4 Diagram of Street Hierarchy in Gempol

It also should be noted that in this study, due to time constraints, not all streets will be documented or observed in detail, but three case studies are chosen for more thorough observation. These three streets are representative of their hierarchical scale in Gempol: Jl. Trunojoyo as a case study for major street networks, Jl. Sultan Tirtayasa as a case study for minor street network, and Jl. Gempol Kulon as a case study for the smallest street network.



1.6. Framework

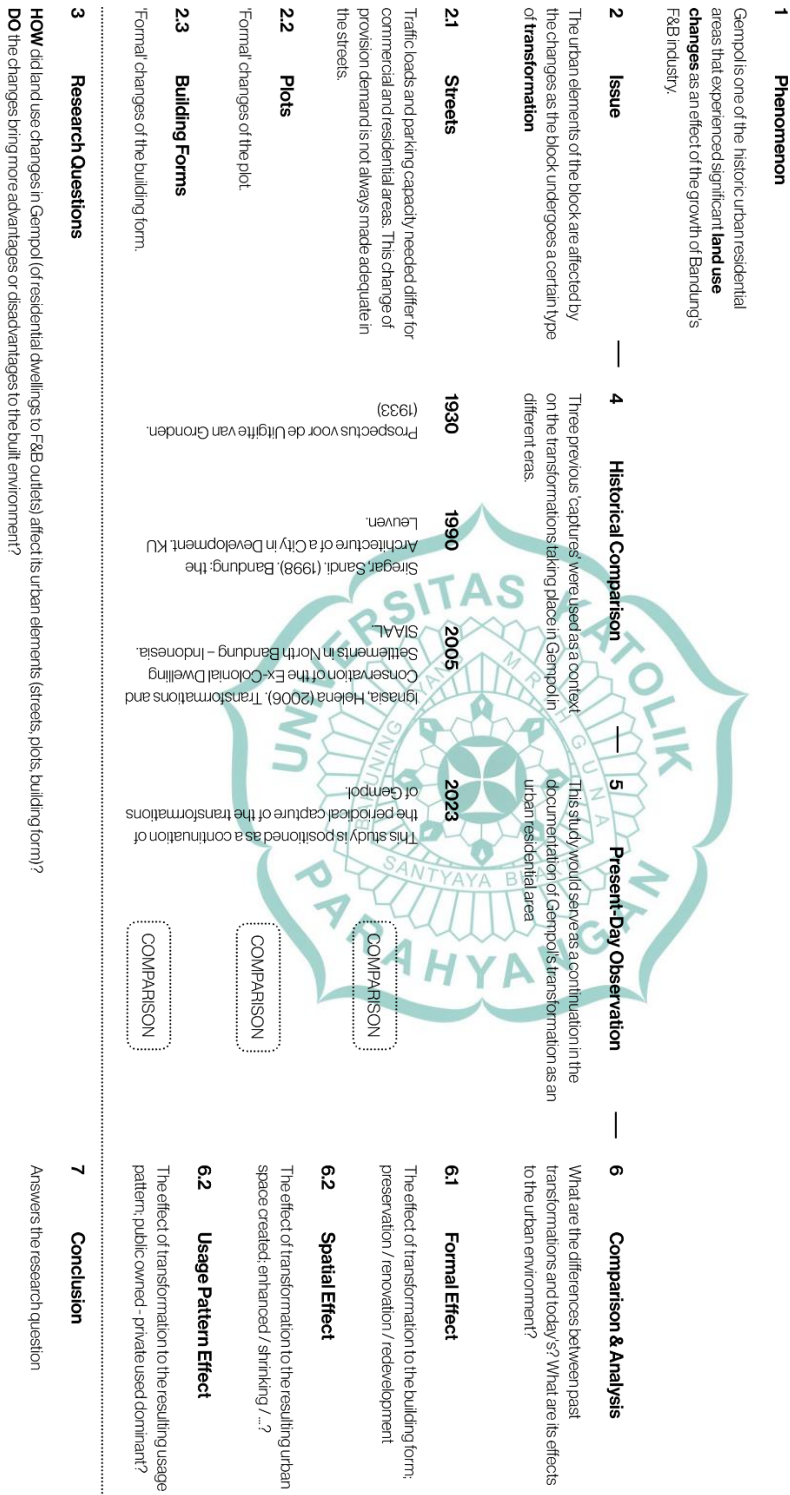


Figure 5 Research Framework