

European post-war retail revolution: reshaping the shopping culture in the Netherlands and abroad

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Abstract

A transformation in urban planning, city layout and city organization occurred in the case of some cities following their bombardments during the Second World War. Following their destruction, some city centers were rebuilt adopting more contemporary approaches and distanced themselves from traditionality. An example is the Lijnbaan shopping center in Rotterdam, The Netherlands, and that of the Coventry Precinct in the United Kingdom. This thesis investigates the driving forces behind the designs of new retail areas for these two cities and focuses on many aspects like its historical context, one of the key elements responsible for their redesign. After discussing the design of both shopping centers, a comparative analysis is conducted and differences and similarities in designs are examined. Although both precincts share common points and urban goals, their design approaches and urban atmospheres differ. This study highlights their impact on the society they belong to and on how they shaped Europe's 20th century shopping experience.

Key words

Post-war reconstruction, post-war retail redevelopment, Lijnbaan winkelcentrum, Coventry shopping precinct, pedestrianization, modernist urban planning, car-free urban environment

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1. Introduction

This chapter introduces the thesis topic and its geographical location considering the historical context in which the complexes were designed and built in. The research questions are stated, and the methodology and structure of the paper is presented.

I. Introduction

Urban redevelopment in the period following World War II had a significant influence on how cities appear nowadays. One example is the city of Rotterdam, The Netherlands, whose city center sustained significant damage during the war period. The rebuilding allowed for those involved to explore different approaches and directions for the preservation, restoration and reorganization of the entire area by adopting new design principles. One example is the Lijnbaan shopping center. Lijnbaan was, during its time, a modern shopping center in the heart of Rotterdam Centrum, one of the neighborhoods of the Dutch port city of Rotterdam. Designed by Dutch architects Van den Broek en Bakema in 1949 following the destruction of some areas of the city in 1940, this was considered one of the first leading examples of car-free and pedestrian-focused shopping centers around the world. This architectural thesis will discuss Lijnbaan's features whilst comparing the center to the precinct of Coventry (UK). As they both belong to similar historical periods, they share similar key design principles. By investigating the differences and similarities between these two precincts, this research aims at determining whether the Lijnbaan in Rotterdam served as an inspiration for the British Coventry Precinct or whether these similarities emerged because of common post-war reconstruction plans and ideologies.

II. Research question and sub-questions

As mentioned above, the main objective of this architectural thesis is to analyze the methods adopted during the design process of the Lijnbaan winkelcentrum and compare this example with the Coventry Precinct located in the United Kingdom.

This architectural thesis will answer the following research question

What key factors influenced the design, function and development of the Lijnbaan shopping center in Rotterdam, and how did it establish itself as an innovative reference model during the post-war reconstruction period?

Furthermore, the following sub-questions will be explored to answer the main research question

In what ways did urban planning and innovative and modernist architectural principles in the post-war era influence the design of a pedestrian-focused shopping center in the heart of Rotterdam?

In what ways did the design and function of Lijnbaan reflect the ambitions of the Basisplan at a larger scale?

How does the Coventry shopping center in the United Kingdom compare to Lijnbaan within the same post-World War II historical context and how do these two align or differ in design principles?

In what way did the Coventry shopping area reflect or contrast from Lijnbaan's approach to modern urban shopping environments?

III. Methodology and structure

Sources have completed research on the Lijnbaan center and Coventry Precinct, as well as for their relative historical period. For instance, Wahl (2002)¹ discusses how the second world conflict caused emergency shops to be rapidly rebuilt to repair the economy and on how this transformed into the conception of the Lijnbaan. The urban renewal of the Lijnbaan area, instead, is discussed by Van Traa (1953)² in which the city planner presents evidence on how the city's structure on a residential and commercial scale was transformed and partly separated. On the other hand, the events of Coventry's reconstruction are discussed by Couperus (2015)³ in which his paper highlights how Donald Gibson as city architect aimed at reconstructing the city *for the better* and by involving the local community for a bottom-up approach, different from Rotterdam's case. Gould (2009)⁴ instead discusses the variations of the original reconstruction plan from 1940 showing how the Precinct rerouted the traffic into the city through an outer ring. This paper also discusses the different squares and areas that compose the shopping center, their development, environment and architecture.

This information, therefore, is used to provide background information on both situations whilst allowing for new research to be done in the comparison chapter.

This architectural thesis is conducted by using a multidisciplinary approach ranging from historical, architectural and urban planning perspective and documentation to answer the research questions stated above. The first chapter of this thesis discusses the historical period in which the Lijnbaan is situated in, as well as the reconstruction era with Cornelis van Traa's Basisplan. This will establish a connection between Lijnbaan and its temporal context.

To understand how post-war reconstruction plans have inspired the rise of Lijnbaan as a modernist design, primary sources are used in this second chapter. These include architectural drawings, photographs, zoning plans and public records like those by

¹ Wahl, A. (2002). *Die Lijnbaan in Rotterdam*. Wahl, B-35534.

² Van Traa, C. (1953). *Rotterdams nieuwe winkelpromenade*. BOUW : Centraal Weekblad Voor Het Bouwwezen, 8(41), B-110414.

³ Couperus, S. (2015). *Experimental Planning after the Blitz. Non-governmental Planning Initiatives and Post-war Reconstruction in Coventry and Rotterdam, 1940–1955*. *Journal of Modern European History*, 13(4), 516–533. <https://doi.org/10.17104/1611-8944-2015-4-516>

⁴ Gould, J. (2009). *Coventry Planned: The architecture of the Plan for Coventry 1940-1978*.

Bakema, J. (1954)⁵. The book on the Lijnbaan by Aarsen, A. (2013)⁶ also contains them. To establish a connection with what the original plan from the Basisplan for Rotterdam was, documentation from Cornelis van Traa, architect responsible for the Basisplan itself, is also analyzed. This includes historical documentation and annotations, as well as supporting architectural drawings which are found in the Het Nieuwe Instituut, the national archive system of The Netherlands. Consequently, to determine whether the concept of the Lijnbaan and that of the Basisplan aligned, a comparative analysis is conducted. This focuses on aspects of pedestrian routing, greenery and a balance between these two abovementioned aspects with building blocks of housing and retail.

The discussion of Coventry's retail development within its historical context follows. A comparison between Lijnbaan and the shopping center located in Coventry (UK) follows. As a result of both retail centers having similar societal and cultural backgrounds reflecting the post-war period yet differing in locations across Europe, this comparison serves to identify similarities and differences based on local regulations and requirements, architectural influences and spatial planning, as well as similarities and differences in needs for its users. This is done by analyzing case studies and primary sources based on the British Coventry.

To conclude this thesis, the main findings from all resources are synthesized to define the inspiration of Lijnbaan winkelcentrum especially focusing on the Coventry shopping precinct and a potential relationship between the two. This contributes to more historical knowledge of how modernist urban planning developed as a response to post-war needs and how this translated into design concepts for emergency retail stores.

⁵ Bakema, J. (1954). *Winkelpand van H.H. de Klerk en Zonen C.V. te Rotterdam*. Bouwkundig Weekblad, 7(5-6), 33-42, B-124578.

⁶ Aarsen, A. G. J. (2013). *Zestig jaar lijnbaan: het hart van de Rotterdamse wederopbouw*. Architectuurzaken.

2. Rotterdam's historical context

This chapter focuses on the historical context in which the Lijnbaan is situated. A brief discussion of the German bombing of the city center of Rotterdam is presented and this is followed by the introduction of the reconstruction plans according to Witteveen and van Traa. The vision of the Basisplan in the period following the 1950's is also discussed.

I. World War II bombing

One of the tragic events that occurred during World War II was the bombing of the city center of Rotterdam on May 14th, 1940, alongside other Dutch cities like Arnhem, Nijmegen and Middelburg. The attack took only under 12 minutes and significant damage was done (*Post-War Reconstruction*, n.d.)⁷. This extended to a total of approximately 11'000 buildings being damaged or destroyed ranging from apartment buildings to governmental institutions and churches, and a total of nine hundred casualties and leaving over 75'000 locals homeless. The city did not immediately engage into mass reconstruction until after the occupation ended in 1945, but instead actively set up operations for the removal of rubble with a workforce of 25'000, as Robben (2021)⁸ discusses. Following the first bombing, as Rotterdam was subject to continuous bombardments until mid-1945, city planner Willem Witteveen drew up the initial reconstruction plan.



Figure 1: Rotterdam during the 1940 bombings (Stadsarchief Rotterdam, n.d.)

This followed a conservative idealism and aimed at restoring the entire city to its original condition without any major alterations. This system was still relying on boulevards and building blocks that were characteristic of Rotterdam's pre-conflict era; this represented form and monumentality. Therefore, hardly any changes into the city's structure were initially made. The restoring period began with the collection of large volumes of ruins from the inner city, also known as *de puin*, to make room for rebuilding. The rubble, in fact, did not go to waste as this was sold to governmental agencies like the Ministry of Water Management that employed it for the reinforcement of public infrastructure, for example. The following period, still

⁷ Post-War reconstruction. (n.d.). *Post-war Reconstruction Community Rotterdam*.

<https://wederopbouwrotterdam.nl/en/articles/post-war-reconstruction>. Accessed on 18-02-2025

⁸ Robben, A. C. (2021). *Metonyms of destruction: Death, ruination, and the bombing of Rotterdam in the Second World War*. *Journal of Material Culture*, 26(3), 324–343. <https://doi.org/10.1177/13591835211016488>

preceding the Basisplan, was dedicated to restoring the image of several of the damaged buildings. In 1946, however, Cornelis van Traa followed Witteveen, who was forced to abandon due to illness, defining a new development of the city's future based on the original plans that were made (Paalman, 2015)⁹.

II. Reconstruction plans according to the Basisplan

As mentioned above, the official reconstruction of the city did not start until after the liberation from the German forces in May 1945. This began with van Traa's Basisplan, a re-elaboration of Witteveen's initial plan. It was executed starting May 28th, 1946, and translated into a scheme allowing flexibility and division of the city into different zones, thus ensuring adaptability over the course of time. The destruction of the city allowed for a complete reorganization of the old structure, thus removing almost every trace of the old and making space for the new. This method can be best identified and described as *tabula rasa*. This defined a new starting point for the city.

The old image of the city's triangle, the *Stadsdriehoek* composed of the Coolsingel, Schiedamsevest, Goudsevest and Nieuwe Maas which contained the historic city center, was abandoned in favor of streets with the role of major connectors throughout the different zones of the city. In fact, the plan entailed the separation of the city into different functions: living, working, retail and recreation.



Figure 2: Stadsdriehoek in Rotterdam (Het Nieuwe Instituut, 1946)

⁹ Paalman, F. (2015). *Visions of reconstruction*. VIEW Journal of European Television History and Culture, 4(8), 91. <https://doi.org/10.18146/2213-0969.2015.jethc096>

The core with the *Stadsdriehoek* as shown in *Figure 2* above would be entirely dedicated to retail practices, different forms of entertainment and work, whilst the larger industrial facilities would be relocated on the outskirts of the city, removing a large number of industrial vehicles transiting through the urban areas. Consequently, the issue of excessive traffic congestion in Rotterdam would

be partly solved.

Housing, instead, would be relocated in the current neighborhoods of Overschie and Schiebroek on the north of the river, and south in Pendrecht and Zuidwijk (*The Basic Plan by Van Traa, n.d.*)¹⁰. Locating residential neighborhoods on the outskirts of the center meant quieter living and larger urban spaces (*Binnenstadsplan Rotterdam, 1984*)¹¹.

According to the zoning plan, governmental buildings were grouped in the adjacent Town Hall area. The Coolsingel became a major artery of the city as it hosted several hotels, restaurants and cafes, as well as the Town Hall on the northern side and the Stock Exchange just at the end of it. The Lijnbaan was in direct connection with the artery as well with the Korte Lijnbaan. Despite the intention of zoning the city based on functions, Van Traa believed that some mixing of functions would contribute to the livelihood and variety of the areas and increase its attractiveness. This meant that the center was not exclusively for shopping and entertainment, but also combined with residential units thus introducing mixed-use buildings into the urban fabric of the city. In fact, *Figure 3* and *Figure 4* above show how the integration of such functions within the center of the city would later be approached in 1984, a few decades after the original *Basisplan*. This shows how the future adaptability of the original masterplan was considered about 40 years before, leaving room for changes.

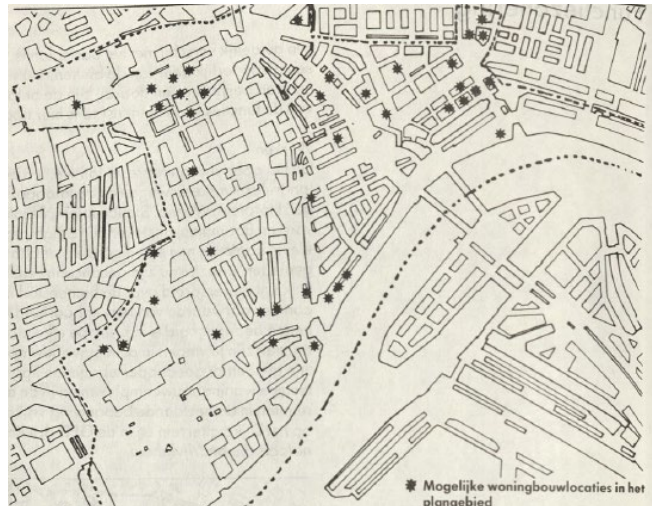


Figure 3: Possible residential building location in the center of Rotterdam (Het Nieuwe Instituut, 1984)

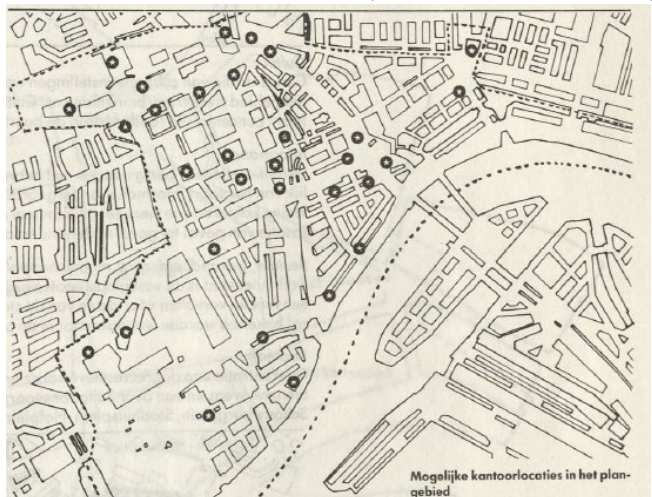


Figure 4: Possible commercial buildings location in the center of Rotterdam (Het Nieuwe Instituut, 1984)

¹⁰ The Basic Plan by Van Traa. (n.d.). *Post-war Reconstruction Community Rotterdam*.

<https://wederopbouwrotterdam.nl/en/articles/basic-plan-van-traa>. Accessed on 18-02-2025

¹¹ *De Binnenstadsplan Rotterdam 1985 : bijstelling van het Basisplan 1946*. (1984). Stadsontwikkeling, Grondbedrijf en Verkeerdienst. B-9459

Part of the living qualities of the inner city focused on slow traffic: pedestrian and cyclist movements. A variety of paved areas created boundaries between different transport modes and, given the restructuring of streets, the width of these was calculated based on the wanted function. Narrower streets were of pedestrian access only and were characteristic of the inner city,

whereas wider streets were found in proximity of the arteries, were located on the outskirts, and facilitated vehicles and mixed-use buildings. For instance, the Coolingsingel had an original width of forty-four meters in the pre-war era, whereas this was later adapted to eighty meters during the Basisplan as the street hosted a mixed function of transport and retail.

A series of arteries were connected to each other via a larger ring structure which circled the city center, as shown in *Figure 5* above. This included streets like the Coolingsingel, the Westersingel, the Stationsboulevard (now Rotterdam Centraal area), introducing a hierarchy in car transit. Even though in van Traa's vision vehicles shifted into a secondary sphere, these could still access the city's core at any point.

Figure 6, instead, represents the mixed-use streets surrounding the *Stadsdriehoek*.

With Stationsboulevard being the grand entrance to the city, this meant a higher volume of vehicular transit. Rotterdam's first impression was given here, therefore the design had to be flawless and convey the message of a powerful and leading city. The planning of that area, therefore, allowed for further adaptations in the East-West traffic in the event of higher influx of vehicles.

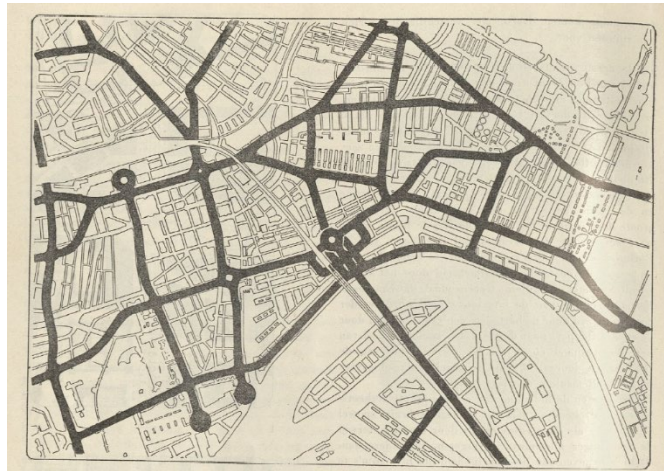


Figure 5: Arteries for mobility according to the Basisplan (Het Nieuwe Instituut, 1946)

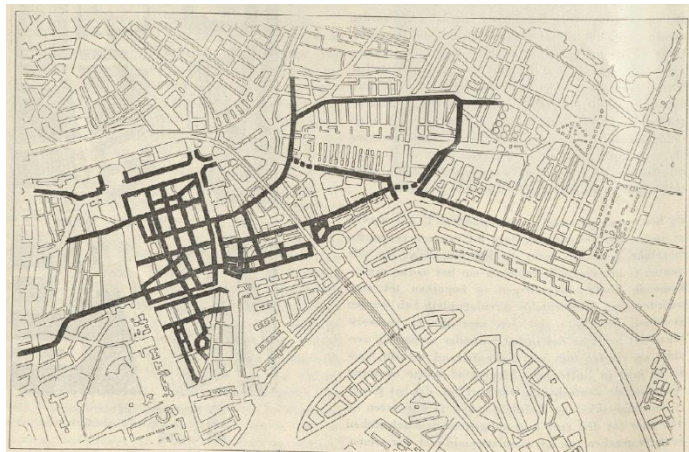


Figure 6: Mixed-use streets in the center of Rotterdam (Het Nieuwe Instituut, 1946)

Pedestrian routing was also considered, ensuring that the flow within the three districts forming the old triangle – Coolsingel, Westersingel, Oostplein – would be connected by continuous and seamless shopping streets. In terms of retail architecture, all shops were located on the ground floor of establishments and shopping centers leaving room for residential units to be located above (Van Ditmar, et al., 1946)¹².

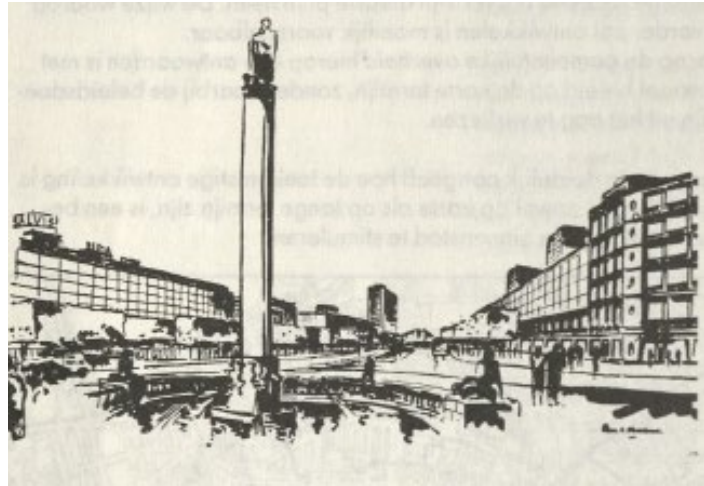


Figure 7: Rotterdam station's entrance to the city. (Het Nieuwe Instituut, 1946)

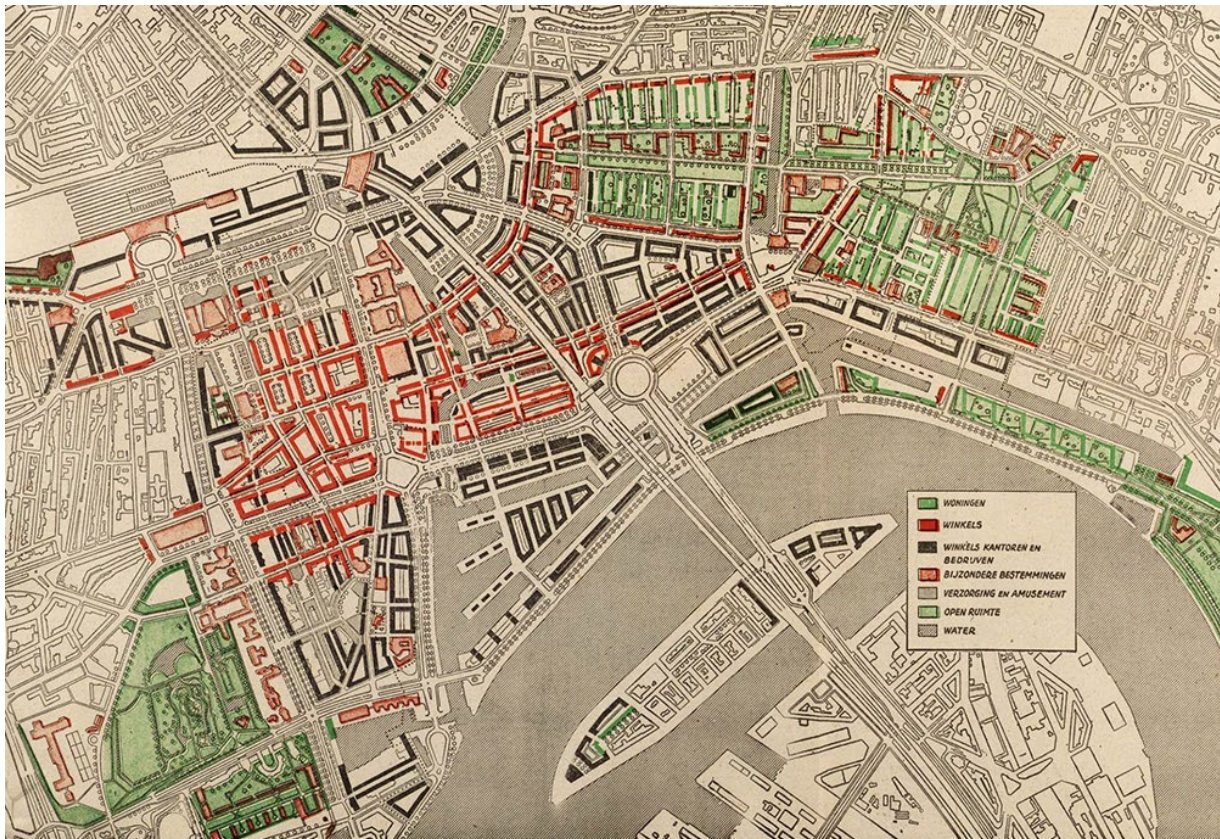


Figure 8: Van Traa's zoning plan according to the BasisPlan (Rotterdam City Archive, n.d.)

III. Post-implementation adaptations of the Basisplan

The Basisplan was conceived and executed in a way that later adaptations would be possible. In fact, following the 1950's, the economy was subject to a positive growth,

¹² *Het nieuwe Hart van Rotterdam : toelichting op het basisplan voor den herbouw van de binnenstad van Rotterdam.* (1946). Nijgh & Van Ditmar. B-48989

generating a higher demand for commercial spaces and port activities. As a result, the port area expanded into Rotterdam-west and large corporate offices later began to appear in the city center. This was a major deviation from Cornelis van Traa's original idea as corporate spaces were not to be present in that area.

By having a center extend over multiple shopping streets seamlessly connected, the core of Rotterdam gradually shifted towards the Coolsingel area. The rigid scheme of partitions within the city elaborated by van Traa gradually changed and adapted to the booming economy. Whereas the center was seen as a rather unsuitable place to live in in the original reconstruction plan, after the mid-1970's an increasing number of people started relocating here, giving birth to a more dominant and permanent group of users contributing to the functioning of the inner core of the city. Instead, retail expansion occurred to facilitate an increased number of residents. This was achieved through densification and floorspace expansion.

The road infrastructure was also subject to modifications. In the original Basisplan the arteries, known as boulevards, had a dual function: residential function and traffic function. These also created barriers to delineate the inner city and its outskirts. In the 1970's these translated into mixed streets in which commercial and residential had a higher degree of integration with each other. This also provided a seamless transition between the different sub-areas with the addition of retail stores. Therefore, retail units gradually expanded and were no longer limited in being located exclusively in the center.

Pedestrian infrastructure was also revised. This involved adding immediate shelter, under the form of roofs, pagodas or overhangs, in transition areas between retail stores. This is also one of the key design principles of the Lijnbaan. The plinth of commercial areas remained unchanged: retail stores on the ground floor were supported by cafes and restaurants. Retailing acquired a double structure: separation of shopping streets from car traffic like the Lijnbaan, but also arteries having a variety of commercial practices. This can conclude that larger stores would be integrated into the traffic arteries whereas the smaller shops would be included into the car-free pedestrian shopping streets (De Binnenstadsplan Rotterdam, 1985)¹³.

¹³ *De Binnenstadsplan Rotterdam 1985 : bijstelling van het Basisplan 1946.* (1984). Stadsontwikkeling, Grondbedrijf en Verkeerdienst. B-9459

3. The emergence of the Lijnbaan

This chapter presents background information on the construction of emergency shopping centers in the Netherlands and the emergence of the Lijnbaan and its journey in reshaping the shopping culture in the country. Its design principles are stated and discussed.

I. Emergency shopping centers

The Lijnbaan shopping center was the result of a *tabula rasa* approach adopted following the bombardments of Rotterdam's city center. This allowed a higher degree of freedom in reshaping the destroyed areas and adapting them into a more contemporary context. Before Lijnbaan's existence, several emergency shopping complexes were rapidly erected starting from 1940 to reestablish order in the city from a commercial standpoint. These were built by the municipality and leased to shop owners (Gregg, 2018)¹⁴. One general design, produced by architect Cornelis Elffers, was replicated as often as needed and featured concrete foundations, small storefront windows and wooden roofs. Rubble from the city's ruins was also used as material for partition walls. The simplicity of design and rapid construction were aimed at completion as quickly as possible for shopkeepers to be operational again (Vanstiphout, 2005)¹⁵. However, the method used to make this project financially feasible faced challenges. Van Traa (1953)¹⁶ mentions that *"less than 20% of the shopkeepers were found to be owners of a building destroyed by the disaster. A relatively small part could therefore only have rebuilding facilities, belonging to a promised compensation for their destroyed building. The vast majority of shopkeepers had been tenants and were therefore again inclined to rent shop space if only it was offered, and that did not appear to be the case for the time being."* Considering the financial instability created by the war, the city architect discusses the demographic's inability to front the reconstruction expenses of retail and residential units.

II. The Lijnbaan and the Basisplan

Before Lijnbaan's existence, the initial idea was to have two shopping streets west of the Coolingsingel. The plan then evolved into having one larger street clear of any obstacle. The area used by the shopping street would have to be equal to that of residential to account for the occupied space. As a result, all homes were clustered into multiple high-rise constructions which were separated from the shopping areas. Thus, mixed-

¹⁴ Gregg, K. (2018). *Conceptualizing the pedestrian mall in post-war North America and understanding its transatlantic transfer through the work and influence of Victor Gruen*. *Planning Perspectives*, 34(4), 551–577. <https://doi.org/10.1080/02665433.2018.1437555>

¹⁵ Vanstiphout, W. (2005). *Rotterdam verdwijnt en verschijnt 1940-1948*

¹⁶ Van Traa, C. (1953). *Rotterdams nieuwe winkelpromenade*. *BOUW : Centraal Weekblad Voor Het Bouwwezen*, 8(41), B-110414

use was not present in this case as the blocks were offset from the shopping promenade (Van Traa, 1953)¹⁷.

The shopping center was designed between 1949 and 1951 by Dutch architects Van den Broek en Bakema and construction began immediately after. On October 9th, 1953, Lijnbaan officially began its commercial activities. The center has a total area of 126'000m² featuring stores, catering facilities and entertainment spaces (Sandberg, 1957)¹⁸. *"His concept for this is based on a separation of the city center' into a residential and commercial area. In three out of four designs shown in this report, a narrow, quiet shopping street is depicted, which is accompanied by a low row of buildings."* This is a statement from Wahl (2002)¹⁹ that shows how regardless of the multiple variations in the design of the Lijnbaan, the main concept of pedestrian and vehicular traffic was always separated and how each design also had a focus on the human scale with low-rise construction in the pedestrian areas.

Its name derived from its design: a long and narrow street west of the Coolsingel located on a former rope-making factory ground. For that time, this was one of the first ever car-free shopping streets in Europe, as Van Der Zee (2022)²⁰ discusses. Initial skepticism from shopkeepers related to its limited car traffic occurred, but it proved to be successful as the center was innovative and offered a wide range of activities that attracted many. Not only did the ensemble get used for shopping, but it also had a recreative function. People engaged in window shopping and, with the opening of several cafes and restaurants, terraces were used to observe the crowd and form new social interactions.

The design was not directly focused on the architectural expression, but

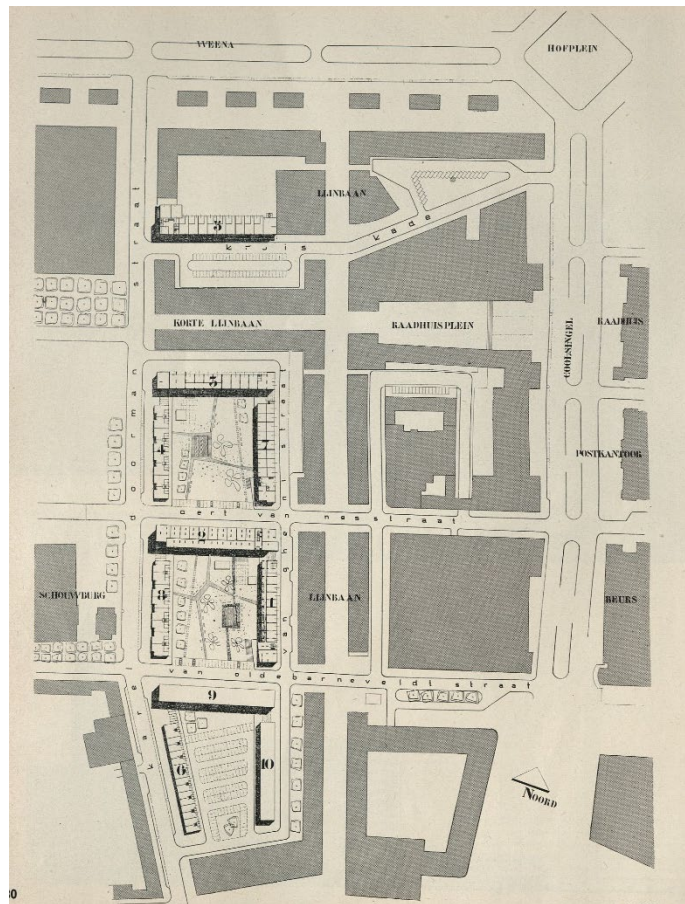


Figure 10: Lijnbaan's layout (Het Nieuwe Instituut, 1954)

¹⁷ Van Traa, C. (1953). *Rotterdams nieuwe winkelpromenade*. BOUW : Centraal Weekblad Voor Het Bouwwezen, 8(41), B-110414

¹⁸ Sandberg, W. (1957). *Centre commercial pour piétons à Rotterdam*. Zodiac : Revue Internationale D'architecture Contemporaine, 1(1), B-159407

¹⁹ Wahl, A. (2002). *Die Lijnbaan in Rotterdam*. Wahl, B-35534.

²⁰ Van Der Zee, R. (2022, October 19). *Walk the Lijnbaan: decline and rebirth on Europe's first pedestrianised street*. The Guardian. <https://www.theguardian.com/cities/2018/sep/19/walk-lijnbaan-europe-first-pedestrian-street-rotterdam>. Accessed on 11-03-2025

rather on the urban planning and organization of spaces that were aimed at, for that time, being innovative: “*The Lijnbaan is the result of an architectural concept in which innovation does not take place in the design of the buildings themselves, but in the creation of logistical, technical, organizational conditions that precede the actual design*” (Vanstiphout, 2005).²¹

III. High-rise building blocks

The idea was that of a car-free space having regular-shaped stores on both sides of a long promenade and high-rise buildings set back. In this way the traditional organization of residences above commercial practices was abandoned for this project (Ten Cate, 1988)²². By having a looser construction in which residential and commercial were separated, this made it possible to have a greater height for condominiums independent of the width of the street, thus creating a denser environment and offering a higher number of accommodations. A total of four high-rise residential and commercial buildings created the high-rise ensemble. Eight hundred-fifty apartment units were available and had between one to three rooms (Wahl, 2002)²³. They were between 85m² and 100m² and the intended users were shop owners or leasers and working professionals within the Lijnbaan area (Komossa & Aarts, 2019)²⁴.

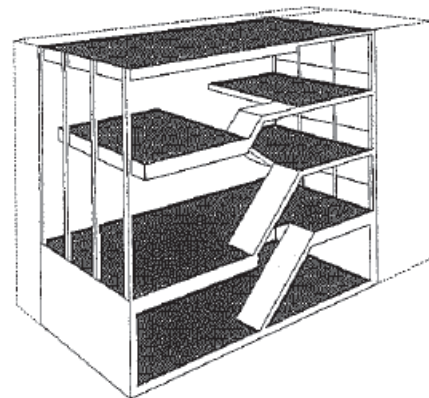


Figure 11: Store unit without overhang (Van Rijsbergen, 2010)

IV. Retail

The ensemble was home to approximately sixty-five retail stores.

The units were designed following a grid: they all had identical depths, yet the width varied. All units were composed of three floors. The shop windows were made of large glass surfaces ensuring seamless connections between indoor and outdoor and reducing the thresholds as much as possible. This connection was also enhanced by having a portion of the first-floor floor protruding outwards, creating an overhang-like element which

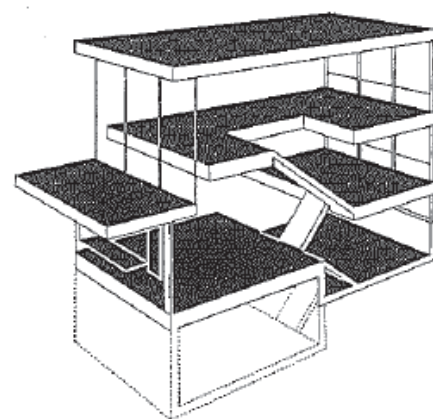


Figure 12: Store unit with protruding overhang. (Van Rijsbergen, 2010)

²¹ Vanstiphout, W. (2005). *Rotterdam verdwijnt en verschijnt 1940-1948*.

²² Ten Cate G. (1988). *New Lovely Lijnbaan*, 43(25), B-99742

²³ Wahl, A. (2002). *Die Lijnbaan in Rotterdam*. B-35534

²⁴ Komossa, S., & Aarts, M. (2019). *The Legacy of CIAM in the Netherlands: Continuity and Innovation in Dutch Housing design*. *Urban Planning*, 4(3), 90–101. <https://doi.org/10.17645/up.v4i3.2123>

also served as a sheltering device for shoppers and strollers.

The urban expression of the center is described by Vanstiphout (2005)²⁵ in which he states that *“each shop was a different composition of the transition from the public shopping street to the interior space of the shop. Behind the shopping pedestrian street run the dispatch streets, whose facades consisted of different configurations of the same facade elements.”* Despite the exclusion of cars from the premises, logistical vehicles could still transit and reach the retail units through a separate and hidden galley.

V. The urban environment

The Lijnbaan’s focus was not necessarily on its architectural expression, rather on its inner block and user experience: paved surfaces, shopping promenades, and retail locations. In fact, Van den Broek abandoned the traditional view of the street with a traditional layout – retail in the plinth and residential above – in favor of a structured spatial sequence that focused on user experience and utility.

During the design a special focus was given to the creation of continuous spaces. For Van den Broek en Bakema architecture also meant spatial qualities, *spatial art*. The designers *“attach great importance to creating spaces through clear lines, surfaces and bodies, forming sequences of simple spaces and relating them to the surroundings.”* This quote from Wahl (2002)²⁶ outlines one of the main ideas behind the concept.

The promenade’s width was of eighteen meters and hosted diverse activities. Enriching elements were placed all along like flower beds, benches, statues and glass vitrines which helped create an intricate sequence of spaces communicating a luxurious feeling for that time.

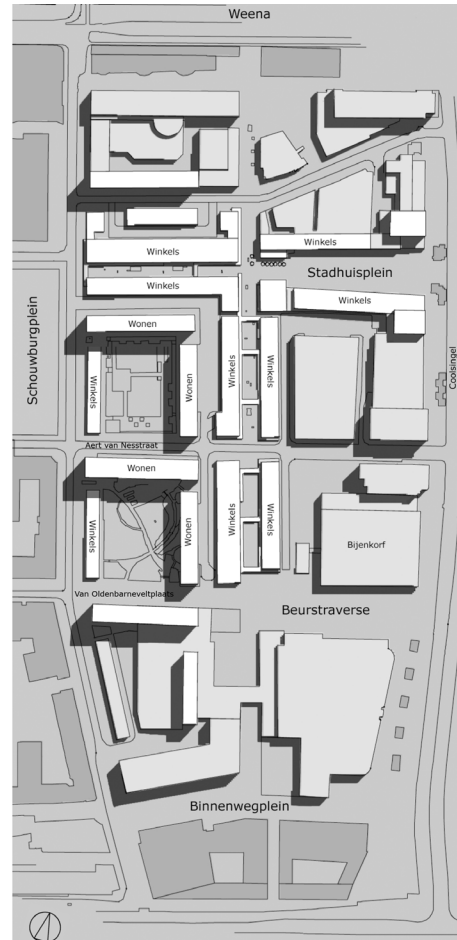


Figure 13: Lijnbaan’s function division (Van Rijsbergen, 2010)



Figure 14: The shopping promenade in the 1950’s (Wederopbouw Rotterdam, n.d.)

²⁵ Vanstiphout, W. (2005). *Rotterdam verdwijnt en verschijnt 1940-1948*.

²⁶ Wahl, A. (2002). *Die Lijnbaan in Rotterdam*. B-35534

These spaces were connected one another via canopies running the entire length of the streets and were placed at a four-meter height. In addition, Wahl (2002)²⁷ states that *“the roofs running across the promenade as a space-defining element have the task of visually dividing the elongated shopping street and thus creating a sequence of spaces that merge into each other.”* They provided immediate shelter for visitors and contributed to spatial divisions of the long promenade without adding physical barriers to the human height.

The Lijnbaan’s 300-meter promenade was divided into two shorter streets to interrupt its length, but was also related to the phasing of the project. The Korte Lijnbaan came first, and the Lange Lijnbaan followed right after (Van Rijsbergen, 2010)²⁸.

The sheltering elements were in both the Korte and Lange Lijnbaan, with these two intersecting at approximately one-third of the length of the 300-meter street. This not only allowed to offer more shopping surface, but also enabled connections with other streets improving accessibility and creating squares for multiple activities and interactions (Van Traa, 1953)²⁹. The human scale was an important focus, also for its architects. Populating the area with low-rise would have *“changed the atmosphere of this urban space and thus also the behavior of the users by creating a wide, bright pedestrian zone equipped with flower beds and benches instead of a narrow shopping street surrounded by tall buildings”*, as Wahl (2002)³⁰ mentions.

As previously mentioned, this was one of the first European examples in the post-war reconstruction period and it rapidly became popular throughout the Netherlands to the extent that people from across the nation would visit. This innovative ideology later spread to Eastern Europe in cities like Stevenage (UK) where the core values of the *winkelcentrum* were embraced and replicated. The Stevenage shopping center even became one of the first examples in the United Kingdom (Van Der Zee, 2022)³¹.

In the case of Stevenage, the center was built in the period between 1956 and 1959 with Chief Architect Leonard Vincent being the lead designer. A grid system was adopted for most commercial practices and just like in the case of the Lijnbaan the center developed linearly and with canopies protruding from the retail units to provide shading and shelter. Human



Figure 15: Stevenage (UK) shopping center. (Twentieth Century Society, 2020)

²⁷ Wahl, A. (2002). *Die Lijnbaan in Rotterdam*. B-35534

²⁸ Van Rijsbergen, J. (2010). *Vreugde in naoorlogse winkelstraten. Een vergelijking van de Lijnbaan met de Prager Stra e. I.* <http://repository.tudelft.nl/assets/uuid:9983b9fa-1e2e-4e58-80bf-d802e4474800/ScriptieLijnbaanPrager.pdf>. Accessed on 11-03-2025

²⁹ Van Traa, C. (1953). *Rotterdams nieuwe winkelpromenade*. BOUW : Centraal Weekblad Voor Het Bouwwezen, 8(41), B-110414

³⁰ Wahl, A. (2002). *Die Lijnbaan in Rotterdam*. B-35534

³¹ Van Der Zee, R. (2022, October 19). *Walk the Lijnbaan: decline and rebirth on Europe’s first pedestrianised street*. The Guardian. s. Accessed on 11-03-2025

scale was also considered, having low-rise buildings within the shopping area. (Stevenage Town Centre Tour, 1956)³²

VI. *The Lijnbaan from the 1980's to today*

The center faced a period of decline during the 1980's. The original shopkeepers had, by that time, retired and closed their practices only to “*be replaced by large chains solely intent on turnover*” (Van Der Zee, 2022)³³. The individuality and unique image of Lijnbaan's first generation shops were slowly fading. Consequently, the ensemble started catering to a different target group than the previous one and slowly the image of the center started drifting into that of an unsafe place to be in the evening. Despite several proposed solutions by the municipality, not much was implemented; the original canopies were changed into Plexiglas ones with the attempt to restore part of the complex's image. Nowadays these are steel and wooden (Van Rijsbergen, 2010)³⁴. Since 2010 the center has held national heritage status and efforts are made by the shopkeeper association to restore the current modern-day facades into the original ones of the 1950's (Van Der Zee, 2022)³⁵.



Figure 16: The shopping promenade (Pengo, 2025)

³² N.A. *Stevenage Town Centre Tour*. (1956). Stevenage Borough Council.

³³ Van Der Zee, R. (2022, October 19). *Walk the Lijnbaan: decline and rebirth on Europe's first pedestrianised street*. The Guardian. s. Accessed on 11-03-2025

³⁴ Van Rijsbergen, J. (2010). *Vreugde in naoorlogse winkelstraten. Een vergelijking van de Lijnbaan met de Prager Stra e. I.* <http://repository.tudelft.nl/assets/uuid:9983b9fa-1e2e-4e58-80bf-d802e4474800/ScriptieLijnbaanPrager.pdf>. Accessed on 11-03-2025

³⁵ Van Der Zee, R. (2022, October 19). *Walk the Lijnbaan: decline and rebirth on Europe's first pedestrianised street*. The Guardian. <https://www.theguardian.com/cities/2018/sep/19/walk-lijnbaan-europe-first-pedestrian-street-rotterdam>. Accessed on 11-03-2025

4. The Lijnbaan across Europe

This fourth chapter presents Coventry as another example of post-war reconstruction at a city scale and its urban reorganization is discussed. This is followed by the discussion of the shopping precinct as a car-free environment and human-centered.

1. German bombings on Coventry and reconstruction plans

Coventry was also involved in a series of German bombings that began in 1940, just like Rotterdam. The inner city suffered damage and this created housing shortage. Even though this created casualties and was dramatic, the destruction of part of the city was also considered a “*blessing in disguise*” as

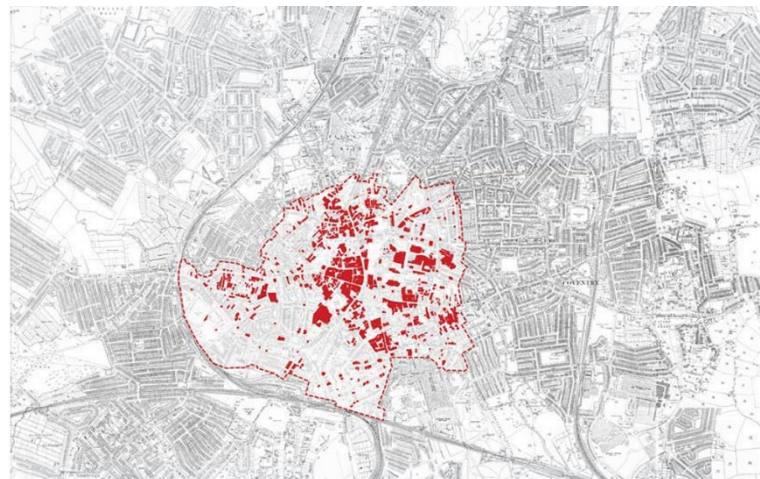


Figure 17: World War II building damage in Coventry's center (Coventry Government, 2009)

Couperus (2015)³⁷ mentions.

This meant that, just like the

center of Rotterdam, a *tabula rasa* approach could be adopted here too.

Donald Gibson, an architect with modernist ideologies working for the city of Coventry since 1938, became a key figure in the recovery process of the city. He drew up a reconstruction plan focusing on restoring the image of Coventry by embracing a modernist approach. Family health and housing became important themes in this phase and the local community also experienced involvement. The planning of a new inner city was centered around self-sufficiency: all sorts of services would be made available for smaller groups (Couperus, 2015)³⁶.

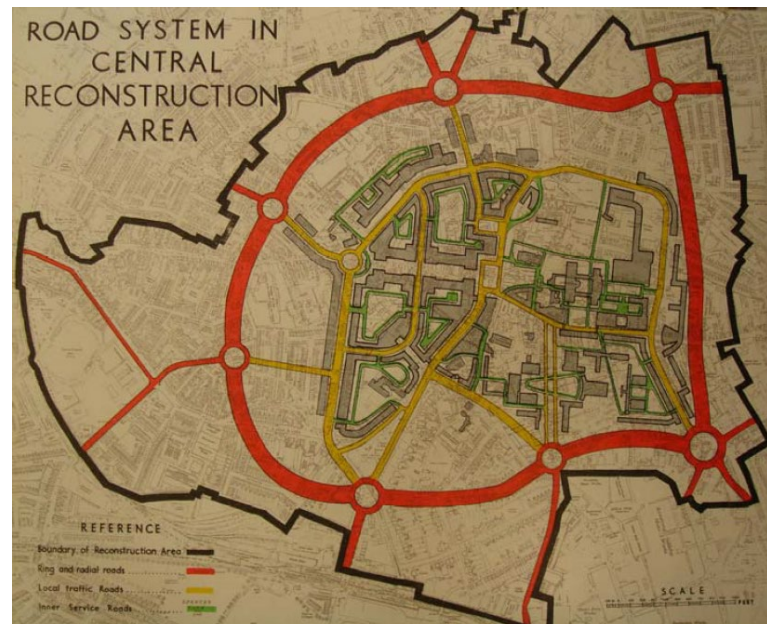
Prior to working on the reconstruction plans, however, in 1938 Gibson began with the development of a plan to improve the city as it lacked housing and recreational facilities. This scheme was designed to create a new living area for its locals and improve the city on a social, cultural and economic level. His initial idea included a design of long and low-rise buildings in the center and removal of some existing buildings around the main cathedral to accentuate its appearance.

This plan, drawn up in the pre-war era, was later adapted and executed considering the 1940 German attacks. As mentioned above, only residential and recreational facilities were originally included, however the commercial center and shopping streets were later included in the new design brief. The idea of an extensive pedestrianized shopping

³⁶ Couperus, S. (2015). *Experimental Planning after the Blitz. Non-governmental Planning Initiatives and Post-war Reconstruction in Coventry and Rotterdam, 1940–1955*. *Journal of Modern European History*, 13(4), 516–533. <https://doi.org/10.17104/1611-8944-2015-4-516>

area emerged and “vehicular traffic was to be re-routed away from the city center by means of an inner ring road to create what Gibson was later to describe as ‘quiet precincts where the movement of people is slow, and close and intimate’”, as Campbell (2007)³⁷ discusses. This prioritized slower traffic and safer environments. Other fundamental design points included the dismantling of some buildings to improve the skyline, and several sightlines were created to have a constant view on historic buildings like St. Michael’s Cathedral.

The adopted approach also involved land nationalization and governmental funding. This allowed local councils to purchase land from its previous owners and intervene. This provided financial security for those affected by the war. Gibson’s ideology can be compared to the *Corbusian functionalism* as the needs and requirements of Coventry’s residents were a priority



(Campbell, 2007)³⁸.

Figure 18: Infrastructure system of Coventry according to Gibson’s view (Gould, J. 2009)

During his time as City

Architect for Coventry, Gibson set many other precedents. One example is the first rooftop parking, the first post-war civic theater and several experimental building methods (Council, n.d.)³⁹.

Gibson’s reconstruction plan was thought as two-phased. The first phase consisted of preserving the standing buildings and street layout around the center of the city. In addition, this phase had three aims: improving traffic circulation, improving traffic capacity, and grouping of buildings by similar activity type. The second phase, instead, focused on the layout of infrastructure and building blocks for the new.

³⁷ Campbell, L. (2007). *Paper dream city/modern monument : Donald Gibson and Coventry*. In: Boyd Whyte, Iain, (ed.) *Man-made future : planning, education and design in mid-twentieth-century Britain*. London ; New York: Routledge, pp. 121-144.

³⁸ Campbell, L. (2007). *Paper dream city/modern monument : Donald Gibson and Coventry*. In: Boyd Whyte, Iain, (ed.) *Man-made future : planning, education and design in mid-twentieth-century Britain*. London ; New York: Routledge, pp. 121-144.

³⁹ Council, C. C. (n.d.). *Upper precinct – Coventry City Council*. Coventry City Council. <https://www.coventry.gov.uk/local-history-heritage/upper-precinct-history/print>. Accessed on 15-03-2025

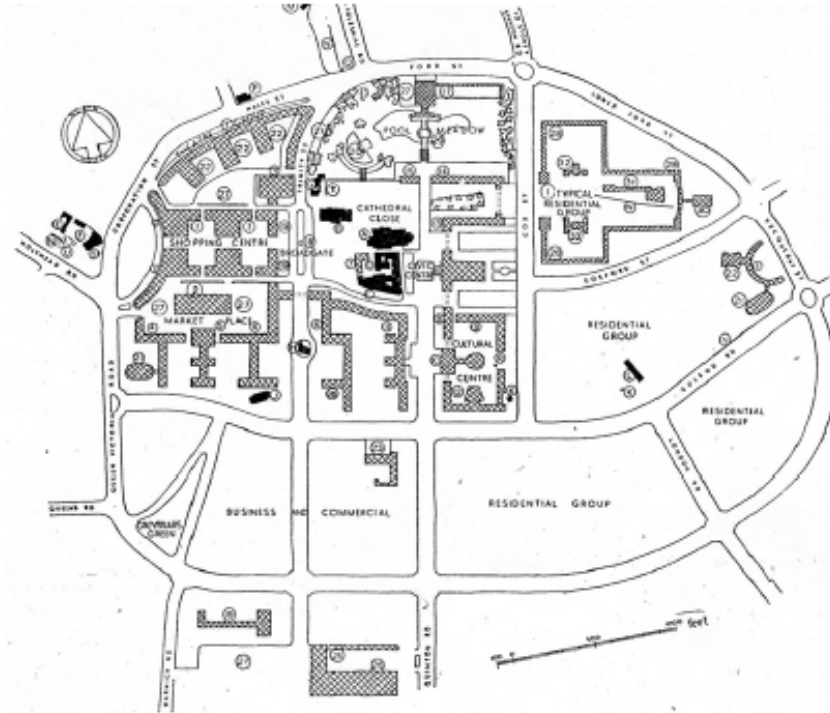


Figure 19: Final masterplan for Coventry (new buildings hatched) (Gould, J., 2009)

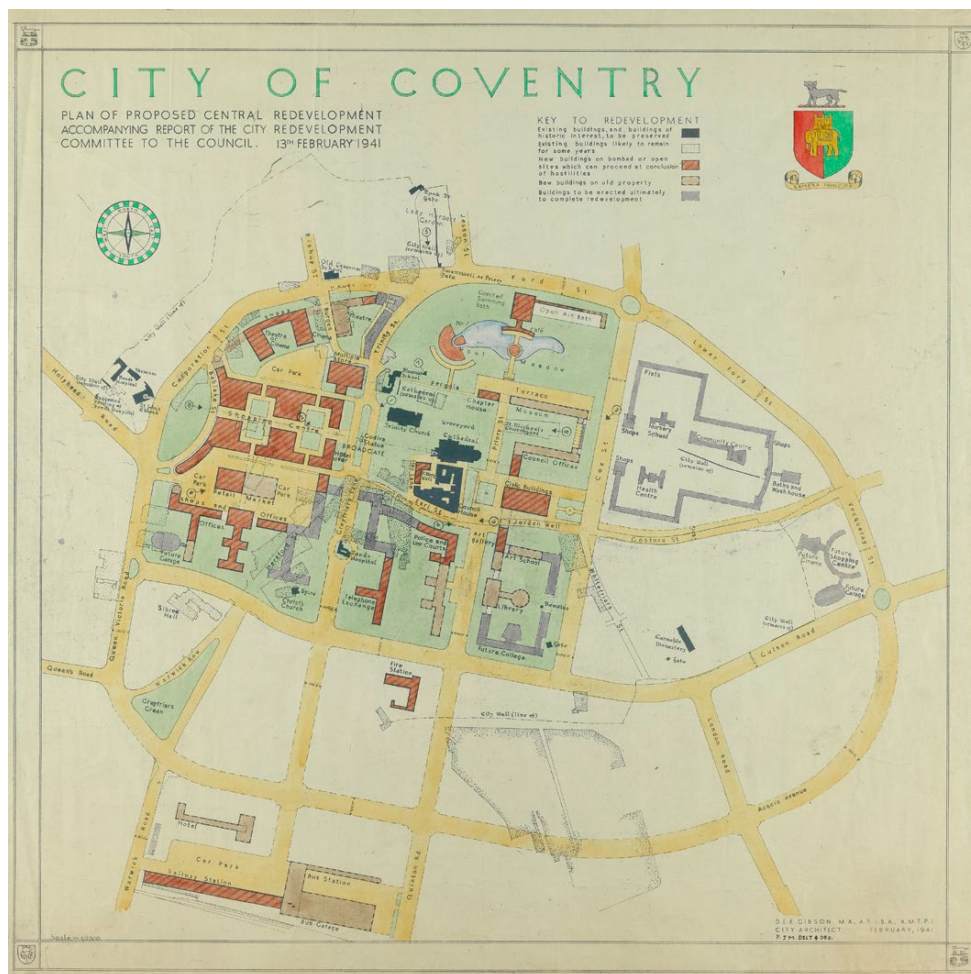


Figure 20: Plan of proposed central redevelopment, Coventry (Historic England, 2016)

II. The design

The precinct was designed in the period between 1941 and 1948 with Donald Gibson being the lead designer. This was one of the first pedestrianized shopping centers in the United Kingdom and some of its stores opened on May 22nd, 1950. The official opening, however, was in 1954 and until the late 1970's the center still underwent expansion and redevelopment.

The main design concept was that of a car-free promenade whilst having motor access for logistics exclusively at the rear of the practices. This indicated a shift from the idea that motorized traffic, and pedestrians should mix in favor of the separation of the two. The design and orientation of the large promenade, furthermore,

was aligned with St. Michael's Cathedral as seen in *Figure 22*. This was done to maintain a connection with the historic whilst still building for the future. At the center of the precinct was a fountain serving as a focal point for the whole area (Council, n.d.)⁴⁰.

The precinct became part of the 1945 reconstruction plan and was based on two key concepts: safety and comfort and creating a multi-level shopping area. This envisioned multiple car-free squares with pedestrian access both on the ground and first floors and retail units on both levels. A gallery-like environment is provided on the ground level via overhangs which simultaneously provide access to the upper-level shopping area. Car accessibility, as abovementioned, was located at the rear of the blocks, mostly hidden from public view. The plan entailed several building blocks of mixed-use: the plinth and first floor were for retail and catering facilities, and the remainder for office spaces.

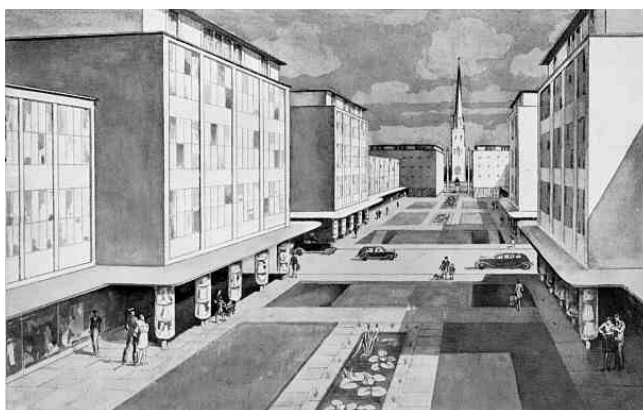


Figure 21: Orientation of the precinct towards St. Michael's Cathedral (Historic Coventry, n.d.)

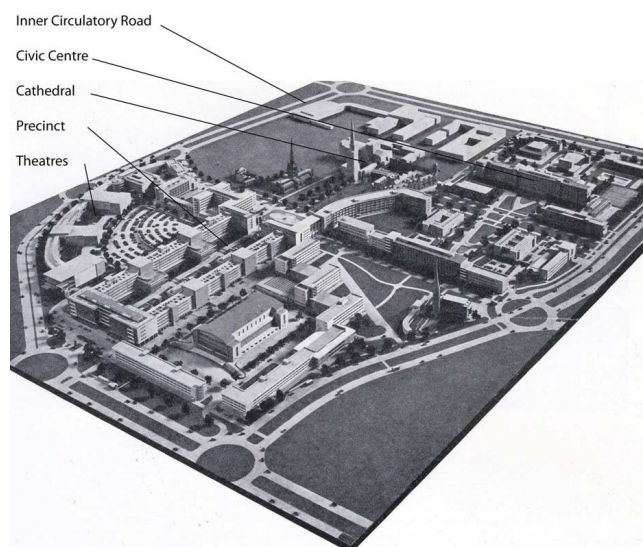


Figure 22: The Precinct and its surroundings (Gould, J., 2009)

⁴⁰ Council, C. C. (n.d.). *Upper precinct – Coventry City Council*. Coventry City Council. <https://www.coventry.gov.uk/local-history-heritage/upper-precinct-history/print>. Accessed on 15-03-2025

Broadgate is one of the entrances to the precinct. Being one of the first areas to be designed, this set the foundation for the principles of the whole development. According to city legislations the buildings could not exceed the six-story height so “as not to compete with the Cathedral Spire” (Gould, 2009)⁴¹.



Figure 23: Broadgate Garden (Historic England, 2016)

The shopping center was initially one whole promenade. However, with the addition of Market Street, now Smithford Way and Market Way, the precinct was later divided into the *Upper Precinct* and the *Lower Precinct* as Figure 25 shows.



Figure 24: Coventry's shopping precinct (n/a, n.d.)

The *Upper Precinct* can be accessed from *Broadgate* where visitors enter a square surrounded by six-story buildings with concrete canopies for shelter. The upper level designated for shopping and catering facilities was accessible through a set of two symmetrical staircases.

The *Lower Precinct* is accessible via the former Woolworths building and Locarno Ballroom. Here the ground and first level were occupied by two-story retail units. The access to the Ballroom was also located on the first level and was highlighted with glass and a tower. This portion of the shopping center, however, was not completed until only after Gibson's replacement in 1959 by Arthur Ling.

Smithford Way, mentioned above as one of the two streets separating the precinct, was pedestrianized in 1958, only four years after the center's official opening. The street width is the equivalent of a two-way traffic road, considering that traffic still flowed before it's closure. To its sides two-story blocks were built for retail. Here, the ground floor is recessed, and a canopy is added. At the eastern side of Smithford way a multi-story car park was built, but since 1991 this was converted into the *West Orchards Shopping Center*.

⁴¹ Gould, J. (2009). *Coventry Planned: The architecture of the Plan for Coventry 1940-1978*.

Market Way is the second artery that partitions the center and at its intersection with the shopping promenade, the street is separated into two sections. At each end a high-rise tower can be found where office spaces are located. *Market Way* leads into a square at its west, *Market Square*. Now known as *Shelton Square*, the piazza has a similar identity to the other: low-rise buildings with commercial functions on the ground and first level, canopies to shade shoppers, and office spaces on the remainder of the levels. On top of one of the buildings was once a car park. This was innovative for the time. *Bull Yard*, accessible southwest from Shelton Square, has an identical building block structure. (Gould, 2009)⁴².



Figure 25: Market Way in the 1960's (Historic England, 2016)

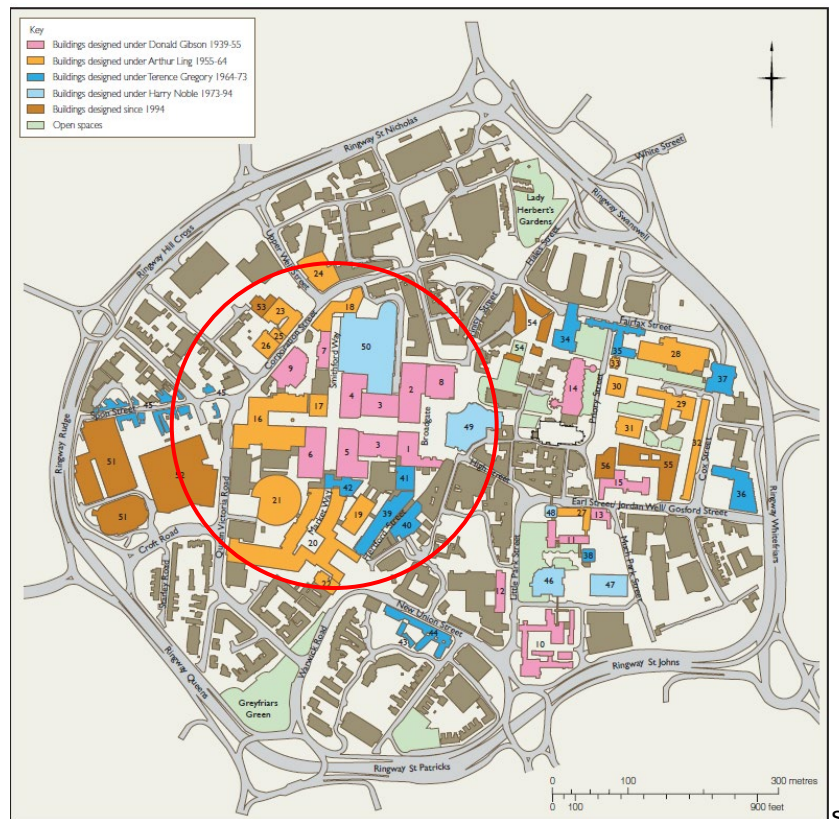


Figure 26: Building development over time (Historic England, 2016)

⁴² Gould, J. (2009). *Coventry Planned: The architecture of the Plan for Coventry 1940-1978*.

5. The precincts compared

This chapter compares the two shopping centers. Similarities and differences are presented and discussed in terms of historical context, design, environmental characteristics and identity.

I. Historical context

The Netherlands and the United Kingdom are countries that were both severely affected by the German bombings of 1940. In both cases their centers were almost entirely wiped out and this allowed a higher degree of freedom in reconstructing the city and re-establishing its new identity. As mentioned above, in both scenarios the *tabula rasa* approach can be identified, but under different executions.

The city of Rotterdam under Cornelis Van Traa experienced a proper partitioning of the city into zones with different functions and with shopping and retail located at its core. In Coventry's case, instead, the reconstruction plan was an addition of what was already designed years preceding the Second World War and featured a less densified area with low-rise buildings. Both Dutch and British city planners, however, envisioned a shopping and leisure area in which fast and slow traffic would be separated. This indicated a starting point for modernist ideas in favor of innovation and progress.

II. Feasibility and community involvement

Two different approaches were adopted to guarantee the feasibility of each shopping center. In the case of Rotterdam, Lijnbaan's construction was made through a joint effort by shop owners and the municipality who were both financially responsible. In Coventry's precinct case, instead, this was financially feasible through the land nationalization scheme in which the government purchased land from those whose buildings were damaged for a planned reconstruction approach. In addition, in Great Britain there was a high degree of community involvement in which locals gained an indispensable role in defining needs and wants. Cornelis van Traa, instead, defined general guidelines through his zoning plans for Rotterdam to which developers and persons had to attain to.

III. The designs

Some overlap between the design period of the two centers can be identified. As previously mentioned, the British was designed between 1941 and 1949 and the Dutch between 1949 and 1951. There is no scientific evidence discussing whether one was inspired by the other, but it is noticeable how both projects have several common design points.

To begin with, the most dominant theme is infrastructure. Van Traa and Gibson, as mentioned in the previous chapters, envisioned a car-free environment for this part of

the city. This meant that slow traffic and pedestrians were in a more dominant role and that vehicles were rerouted elsewhere. There is still a smaller traffic transit within both precincts, but this is limited to expedition streets that serve the shop units for logistics. On this matter, in Coventry the topic of car transit translated into the concept of the ring road for the main routing whereas in Rotterdam cars could still transit through larger arteries.

Lijnbaan and the precinct of Coventry partially feature low-rise constructions in combination with high-rise buildings. In the Dutch scenario this makes it a more dominant theme as high-rise is set back from the lower buildings whilst in Coventry the varying building heights appear as integrated one another to form squares and areas with different functions. The function per layer remains identical: two layers of retail followed by commercial and residential above.

A design feature in which they differ is the difference in levels. Lijnbaan is a three-hundred-meter length single-leveled pedestrian accessible promenade with a sequence of spaces defined by wooden canopies extending throughout the Lange Lijnbaan. Coventry, instead, extends through two completely accessible levels. This is done via symmetrical staircases in

correspondence of some squares in the precinct and this offered a diverse shopping experience to its visitors. Shading elements are present in the British center, but under a different form. These are achieved through a ground-floor setback of the retail units that creates an overhang-like protective element for shoppers. This simultaneously creates a walkway for the upper shopping level.

IV. Urban environment and human scale

The atmosphere within the two shopping areas can be defined as different. In The Netherlands' scenario the promenade is an open-air environment that extends linearly, whilst in the British scenario the precinct is an ensemble of buildings that create a self-contained center. In the latter piazzas are also present, one element that the Lijnbaan lacks.



Figure 27: Lower Precinct. (Historic England, 2016)



Figure 28: Lijnbaan's low-rise building blocks and open-air environment (Van Traa, 1953)

Materiality defines the urban atmosphere and character of a space. Both settings have a few shared materials like glass and concrete, but in Lijnbaan steel was used for the structural grid, canopy structure and for the window shops. Coventry, instead, had a heavy presence of brick which resembled a more traditional approach towards architectural constructions.



Figure 29: Coventry Precinct's varying building heights (J. Busst, n.d.)

The human scale of both spaces is also different: Lijnbaan's dominance of two-story buildings versus Coventry's varying of heights. Urban furniture in Coventry reflected traditionality, with the example of a large fountain in one of the squares. Modernity could be found in Lijnbaan, where the canopies divided the promenade's space horizontally and in which terraces, green patches and glass vitrines belonging to shops created an intricate sequence of spaces through minimalism.

6. Conclusion

This chapter concludes this history thesis in which Lijnbaan winkelcentrum and Coventry's shopping precinct's similarities and differences are identified and discussed. Here, a conclusion on the comparison is found and a reflection on their impact as innovative designs is stated.

This thesis examined the emergence and development of Lijnbaan winkelcentrum in Rotterdam, The Netherlands, and its comparison with the shopping precinct of Coventry, United Kingdom. Both centers were contextualized within a framework which included the post-war reconstruction and urban planning following modernist idealism. Through a comparative analysis on a historical, urban planning and architectural standpoint, this study aimed at historical understanding of more contemporary approaches towards retail and to what extent the Lijnbaan was an inspiration across Europe.

The Lijnbaan, designed by architects Van den Broek en Bakema and later opened in 1953, represents one of the earliest creations of human-scale and fully pedestrianized retail environments in Europe's post-war period. Its design, featuring a linear and open-air shopping promenade, deeply focusing on human scale with low-rise retail spaces, embodied modernist planning ideals. The adoption of a *tabula rasa* approach allowed for many opportunities ensuring greater maneuverability and freedom in redeveloping the shopping area.

In terms of influence across Europe this thesis discussed how the Lijnbaan not only set a precedent for modernity, but also set a new typology for retail spaces. Even though similar design principles were adopted in the example of Coventry around the same period, Lijnbaan's pedestrianization, human-scaled spaces and spatial sequencing were used as a reference in later urban developments like in the case of Stevenage, also in the United Kingdom. Whilst a direct relation or causality between Stevenage's shopping center and Lijnbaan winkelcentrum are intricate to be established, the information presented indicates that the latter had a catalytic role in the establishment of the former.

Coventry's precinct with Donald Gibson as its designer shared several elements like traffic separation, pedestrianization and integration of mixed-use functions with the Lijnbaan center. On the other hand, the design journeys of the two establishments developed parallelly yet still allowing both centers to have an identity of their own. In this case a direct causality could also not be established. Nonetheless, the early completion of the Dutch shopping center and its advertisement across the country and the continent emphasized it as a reference point in post-war retail.

This study therefore discusses that even though the Lijnbaan did not serve as a universal template for post-war retail centers it set a precedent for modern urbanism principles. Its concept and design functioned both practically and ideologically with an influence on commercial redevelopments affected by world conflicts.

7. Reflection

This section includes a reflection on the whole process in which relevancy of the thesis on the topic, methodology used and how it unfolded, and learning points are discussed.

I. Relevancy

The development of the Lijnbaan winkelcentrum and Coventry's shopping precinct in the period following the Second World War outlined an alternative and effective way of restructuring the old city centers bombarded by the Germans into something, in some cases, completely different than what it used to be. What drew me personally into the topic of the two shopping centers was to investigate whether they had influence over one another considering their numerous similarities ranging from historical context, design principles, design outcomes, and most of all the need to restore the cities' images.

II. Methodology

The initial research question still involved the Lijnbaan, its key design principles and on how it could have potentially been a role model for other shopping centers designed in the period following it. However, this was formulated in a strong and decisive manner suggesting that the Lijnbaan was the *prime example* of center that was later replicated multiple times across Europe. A less strong statement was then formulated, and the formulated sub-questions allowed a transition from a statement to a feasible question to answer through research.

In terms of source finding, this process was extensive as some of the used sources were not available online and had to be physically retrieved in Het Nieuwe Instituut, the national archive of The Netherlands. This involved an in-person visit to the center and gathering information on the papers identified based on relevancy, followed by a scan of all documents for later consultation. This was a challenging process as the documents were mostly in Dutch, German and French, languages with which I am not familiar. Therefore, the translation of these documents was time-intensive and lengthy. The gathering of other source types, however, occurred smoothly as these were mostly available in English language. The methodology adopted remained feasible during the entire process and, even though many documents were retrieved, literature review was conducted for each one of them.

III. Learning points

A positive experience throughout the process of research proposal formulation, source-finding, and literature review. Challenges were faced in the writing portion of the thesis as several key pieces of information were gathered across multiple sources and the combining part of this data into coherent and structured sections was challenging. The planning that was made to have a clear overview of deadlines and work that must be

produced was useful, but some deviations were made from this, and a few delays occurred in the chapter writing process.

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