

CONTRIBUTION OF ESTONIAN ARCHITECT KARL TARVAS (1885–1975), A GRADUATE OF RIGA POLYTECHNIC INSTITUTE, TO ESTONIAN HOUSING DURING THE INTERWAR PERIOD

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Estonian Museum of Architecture

Summary. Riga Polytechnicum (RP) / Riga Polytechnic Institute (RPI) was the only higher education institution in the territory of the present Baltic States where it was possible to obtain higher technical education in the 19th century and early 20th century. Well-known Estonian architects, engineers and industrialists also studied there. *Karl Tarvas* (1885–1975), a famous Estonian architect, studied at RPI from 1906 to 1915. His creative heritage significantly influenced and shaped the architecture of Tallinn and its suburbs in the 1920s and 1940s. During the Interwar period in the Republic of Estonia, *K. Tarvas* deliberately chose to improve the living conditions of the less affluent population by designing standard wooden buildings, which we now know as the Tallinn House (Estonian: *Tallinna maja*). This research provides an insight into the study years of *K. Tarvas* and critically evaluates his professional activity. *K. Tarvas* was one of the founders of Riga Estonian Students' Society (Estonian: *Riia Eesti Üliõpilaste Selts; REÜS*) established in 1909, which united Estonian students at RPI. He also was among the creators of the Estonian Association of Architects (Estonian: *Eesti Arhitektide Ühing*) in 1921. His three sons *Paul*, *Peeter* and *Pärtel* also chose the profession of an architect, *Peeter Tarvas* (1916–1987) was the most prominent of the three.

Keywords: *Karl Tarvas*, graduates of RPI, Estonian architects, Tallinn House, Riga Estonian Students' Society, Estonia housing in 1920–1940.

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Introduction

An architect *Karl Tarvas* is one of the many well-known architects who studied in Riga in the late 19th and early 20th century and who greatly influenced the Estonian architectural environment.

In the early years of the Estonian independence, he and 14 other architects founded the Estonian Association of Architects. It was established by Karl Burman (1882–1965), Aleksander Poleshchuk (*Александр Артемьевич Полещук*; 1868–1944), Viktor Reinhardt (1890–?), Nikolai Ludwig Jacob Thamm, Jr. (1867–1948), Eugen Habermann (1884–1944; studied at the Department of Mechanics (DM) of RPI in 1902–1905 and at the Department of Architecture (DA) in 1905–1906), *Ernst Gustav Kühnert* (1885–1961; studied at the Department of Engineering (DE) of RPI in 1902–1905 and at the DA in 1903–1906), Christfried Lehbert (1888–1970; studied at the DM of RPI in 1906–1908), a graduate (1910) of the DA of RPI Herbert Johanson (1884–1964), graduates (1913) of the DA of RPI Erich Jacoby (1885–1941) and Anton Lembit Soans (1885–1966), a graduate (1914) of the DA of RPI Edgar Johan Kuusik (1888–1974), a graduate (1915) of DA of RPI Aleksander Oklon (1889–1961), a graduate (1916) of the DA of RPI Ernst Ederberg (1891–1973) and a graduate (1917) of the DA of RPI Franz de Vries (1890–1938) in 1921.

The article provides a brief overview of the early creative heritage of *K. Tarvas* attributable to the period of his studies and specifically considers one type of building designed by *K. Tarvas* in Estonia – the Tallinn city tenement house. In the Republic of Estonia, *K. Tarvas* focused primarily on the poorer social class [1] while building a new environment and designing small but modern living quarters.

In the course of his private architectural practice in 1926–1940, *K. Tarvas* designed hundreds, if not more, wooden two and three storey tenement houses with a stone staircase, the type of residential building, which later became known as the Tallinn House. The architectonic solutions with regard to the outer appearance and size of this iconic type of local house changed under the impact of the changing building regulations over the years. These were mostly rental houses commissioned by small entrepreneurs, who could afford financing construction using the credit facilities provided by the state. The state loan policy for construction of residential houses called for strict supervision of the construction process, which was ensured by the architect *K. Tarvas* for each house that was built according to his project.

Karl Tarvas' Path to the Profession of an Architect



Figure 1. Karl Tarvas (c. 1924).

Karl Tarvas, or *Karl Leonhard Johannes Treumann* according to his birth certificate (after the Estonization of the name in 1940 – *Tarvas*), was born in Tallinn to a carpenter's family on 19 April 1885. His father *Paulus Treumann* (1842–1927) worked in construction [2], just as his father *Kaarel Treuer* (1806–1847), who worked as a carpenter in *Russalu* Manor. *Paulus* was born in *Märjamaa*, *Rapla* County. In 1874, he and his wife *Anna Treumann* (1844–1921) acquired a plot of land in Tallinn in *Endla* Street, which at that time was still surrounded by pastures (former *Wittenhof* Street). The area began to develop faster in the 1890s after the construction of the *Richard Mayer* (?-?) Chemical Factory. In terms of population, the district was mainly inhabited by the working families. Not much is known about *Paulus Treumann's* work. It is known, however, that he made a Neo-Gothic wooden altar table in *Kaarli* Church in Tallinn and a gate with two towers at the Old *Kaarli* Cemetery (1893; today part of *Siselinna* Cemetery). The *Treumanns* were a Lutheran family deeply involved in the life of the church. Among the future clientele of *K. Tarvas* there were several members of the *Kaarli* Congregation.

Karl Tarvas, the son of *P. Treumann*, was also interested in construction and engineering. After graduating from Tallinn Peter's School of Science (Tallinn Secondary School of Science), he entered RPI. Such a move to a neighbouring country (and the only technical university in the Baltic governorates) was quite common among young architecture enthusiasts. Before the establishment of Tallinn Technical College (Estonian: *Tallinna Tehnikum*) in 1918, the profession of an architect could not be acquired in Estonia. Most students of RPI were rather wealthy offspring of Baltic-German families who could afford paying tuition fees. Future engineers-architects *Anton Lembit Soans*, *Aleksander Bürger* (*Pürge*; 1887–1940; studied at the DM of RPI in 1907–1912) and *Christfried Leibert* were *K. Tarvas's* classmates. He began studying at the Department of Mechanics of RPI in 1906, after that he studied at the

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Department of Architecture in 1910–1915. *K. Tarvas* graduated in the spring of 1915 with a degree in engineering and architecture just before RPI was evacuated to Moscow due to World War I [3].

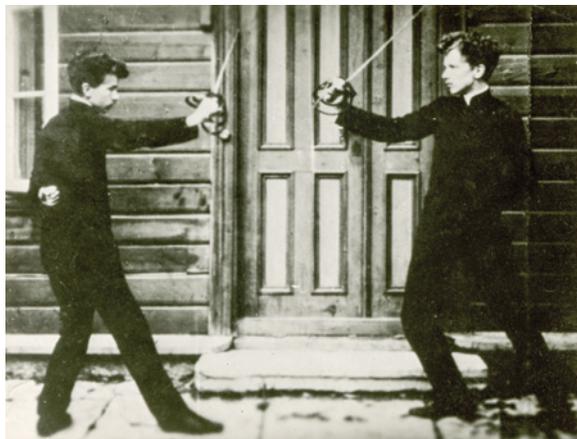


Figure 2. Photography was *Karl Tarvas*' hobby. Photomontage of two *Karls* in front of the door of his home in *Endla Street* in Tallinn (c. 1905).



Figure 3. Professor *Jan Benedikt Wodzinski* (1859–1926) with the students of the DE of RPI at a lesson on bridge construction. On the far left: two Estonians, a future ship construction engineer, a graduate (1904) of the DM of RPI *Nikolai Link* (1880–1943) and a future engineer, a graduate (1906) of the DE of RPI *Fromhold Kangro* (1881–1932) (1903).

Estonian architects and engineers, who graduated from RPI, created a sound basis for independent Estonian architectural life. There were ample job opportunities for architects, since it was necessary to find a solution to the housing problem in the cities, as well as to build new public buildings (government buildings, schools, theatres, etc.). Construction was also promoted by business activity – new bank buildings, commercial and industrial constructions were actively commissioned. Alumni of RPI Artur Perna (1881–1940), Karl Ipsberg (1870–1943) and *Aleksander Bürger*, to name just a few, were more than just architects and technical scientists – they were the co-founders of Tallinn Technical School. Tallinn Technical School founded in 1918 was the first establishment that provided technical education in Estonia. It gave birth to a new generation of architects in addition to those who studied in Riga, as well as in Russia, Poland and Germany.

K. Tarvas' interest in rental housing and public construction in general can be seen in connection with the internships he underwent at RPI under supervision of an engineer Voldemar Lender (1876–1939; Mayor of Tallinn in 1906–1913), who designed many wooden dwellings for the workers in Tallinn at the turn of the 20th century. These houses later became known as Lender Houses.

By the beginning of the 20th century, there were so many Estonian students at RPI – 95 Estonian students studied there in 1915 – that they started to join into corporations and unions [4]. *K. Tarvas* participated in the activities of the Estonian student society «*Laene*». He was introduced to the Society by his schoolmate and future banker, a student of the Department of Commerce (the DC; graduated in 1909) of RPI *Heinrich Väljamäe* (1883–1934). It was officially registered in the study year of 1906/1907. To finance the purchase of books and to provide loans to its members, the society organised soirees and staged plays. Sobriety was one of the principles society members practiced. In 1909, the members of «*Laene*» founded Riga Estonian Students' Society (registered on 21 April; later known as the Students Society «*Liivika*») with a group of students who left another Estonian Students' Corporation «*Vironia*» (founded in 1900) [5] in an act of protest. When four members of «*Vironia*» were accused of an assassination attempt on a Russian general, who was a senior member of Riga Military District Court [6], they were expelled from the Corporation without a court decision. After that some members decided to leave «*Vironia*» [7]. *K. Tarvas* was the Secretary of Riga Estonian Students' Society. A historical photo has been preserved in the Estonian Museum of Architecture, which shows the possible founders of the Riga Estonian Students' Society (Figure 4, p. 70): sitting, from left to right – future architect Anton Soans, Eduard Kimberg (1885–1943; graduate (1912) of the DM of RPI), Anton Uesson (1879–1942;

graduate (1910) of the DE of RPI – later the Mayor of Tallinn), Peeter Sisask (1885–1969; graduate (1911) of the DE of RPI), (?), *Karl Tarvas*; standing, from left to right – Karl Feldmann (also Weltmann; 1878–1961; graduate (1910) of the DC of RPI), future engineer *Aleksander Bürger*, future banker *Heinrich Väljamäe*, future engineer and construction entrepreneur Konstantin Zeren (1883–1944; graduate (1911) of the DE of RPI), future engineer Kristjan Kask (1874–1972; graduate (1916) of the DE of RPI), Viktor Pihlak (?) (1886–1967; graduate (1912) of the DE of RPI). The students of the Society also pursued ideological goals. For example, a student of the DC of RPI Jaan Naaris (1893–1919) stated at a general meeting of Society in October 1914 that the society united members not only for its own sake, but also to complete the work that should have been done in Estonia [8]. From 1911 to 1913, the construction of the Estonian National Theatre in Tallinn took place, the building was designed by the Finnish architects Armas Lindgren (1874–1929) and *Wivi Lönn* (1872–1966). The construction was supervised by an engineer K. Ipsberg (he worked in the first Estonian Students' Corporation «*Vironia*» in Riga), a study mate of *K. Tarvas*, who later became the Minister of Roads and Infrastructure (1921–1924) of the Republic of Estonia. Prospective architects – RPI students – also participated in the construction of the theatre.



Figure 4. Probable founders of the Riga Estonian Students' Society (1909).



Figure 5. Estonian students in Riga around 1913. In the first line from the left: Karl Feldmann, Peeter Sisask, *Karl Tarvas*, Anton Uuesson, and *Heinrich Väljamäe*. In the second line from the left: Anton Soans, Konstantin Zeren, Eduard Kimberg, *Ferdinand Sägi* (1885–1924; graduate (1914) of the DE of RPI).

Figure 6. *Karl Tarvas* (on the right) in an apartment in Riga during his studies. Before the establishment of Riga Estonian Students' Society, students often met in the society apartments to discuss urgent issues and read papers (1906–1909).



K. Tarvas gained his first experience as a construction technician during the summer internship of 1909 at the office of Voldemar Lender. During the internship, the *Bekker* and *Russo-Baltic* shipyards were built in the military port of Tallinn. In 1905, when Russia lost the war with Japan due to military backwardness, extensive construction of warships began in the Russian Empire, including Tallinn. Several Estonian students of RPI participated in the design of large-scale structures at the *Bekker* and *Russo-Baltic* shipyards, which included factory complexes for many industries. Students were also involved in constructing residential buildings (wooden barracks) for 6000 factory workers.

K. Tarvas was under the influence of construction traditions typical of Riga, for example, in 1913 he built private houses in *Mežaparks* [9]. He probably cooperated with other students in the construction of houses

in the area of *Elizabetes* Street in Riga. A private house later designed by *K. Tarvas* at 30 *Nõmme-Kase* Street in *Nõmme*, Estonia, is stylistically similar to private houses in *Mežaparks* District (Riga), for example, the house designed by the architect, graduate (1901) of RPI Eduard Kupfer (1873–1919) at 21 *Visibijas* Street in 1913, which has details typical of *Mežaparks* as a garden city, such as symmetry, shutters, a high roof and a porticus [10].



Figure 7. Ants Reiman's (1891–1970) house at 30 *Nõmme-Kase* Street, Tallinn (architect *K. Tarvas*, 1930) (2010).

In the 1920s, *K. Tarvas* was probably in search of his own style, and the private house in *Nõmme* built in *Heimatstil* is different from his other works. Professor, Estonian art historian *Leo Gens* (1922–2001) noted that until World War I, RPI could have been considered a cultivator of the heavy German classicism in the Baltics [11]. Indeed, certain effects of this impact appeared in *K. Tarvas*' work in the early 1920s. From then on, *modernism* or rather the principles similar to *new objectivity* would prevail in his work. The latter style emerged as an attempt of the German progressive architects to build as cost-effective housing as possible to resolve the housing crisis, to provide the tenants with the healthy minimally-acceptable floor-space, as well as ensure access to green spaces and other residential requirements of a similar kind.

Professional Career of *Karl Tarvas* after Studies at RPI

Similar to many architects-engineers at that time, *K. Tarvas* was mobilized into the tsarist army during World War I (1915–1918) and worked at Peter the Great's Naval Fortress. The extensive construction works had begun on the islands and the coast to establish the naval fort of the Russian Empire and strengthen its position in the Baltic Sea [12]. Participation in the construction of the sea fortress also saved the young men from direct deployment to the war front. However, it cannot be ignored that many young RPI architects and engineers took part in the

Estonian War of Independence (for example Edgar Johan Kuusik, Anton Soans, Johann Ostrat (1894–1979), etc.).

K. Tarvas worked as a junior foreman during construction of the fortifications of *Viirelaiu*, *Saaremaa* and *Muhu* islands [13]. He invited his friend, a fellow student Hugo Laur (1893–1977) who had also studied in Riga, to join the construction project as a technician-architect [14]. H. Laur later became a well-known theatre actor, who, in addition to his acting career, also designed several houses, mainly in the rural areas in Estonia. In the initial period of the Republic of Estonia, *K. Tarvas* continued working on construction of the naval fortress as the Head of the Construction Office (1919–1923). He designed the *Aegna* Island Commando Barracks in the Gulf of Finland and probably several more buildings and facilities, but unfortunately the architect's personal archive was destroyed during the bombing of Tallinn in 1944.



Figure 8. Commando Barracks on *Aegna* Island (1927).

While working for the military, he got the position of the County Architect for *Harju* County (1920–1926) [15]. One of the country's priorities was to provide comprehensive education in order to establish a strong foundation to the young nation. In pursuit of this idea, the Estonian Constituent Assembly ruled on the six-grade compulsory schooling and published the School House Construction Fund Act [16] which allowed distributing beneficial loans to municipalities for the construction and reconstruction of new school buildings. As a result, more than 300 new rural school buildings were built in Estonia during the Interwar Era [17] and about as many buildings, including a number of manor houses, were rebuilt into schools. *K. Tarvas* designed several modern rural school buildings in *Harju* County. Schools often played the role of a community centre, like *Saku* Primary School (*Kajamaa* School). Vertical windows are the characteristic feature of the façade of the building hall. At the beginning of the century, this element also appeared in other works of architects and teachers of Riga Polytechnic Institute. As the County Architect, *K. Tarvas* was obliged to carry out

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technical supervision of the school buildings being built using the state loan financing. The state also provided loans for housing to resolve the apartment crisis.



Figure 9. *Saku* Primary School – Community-Parish House (c. 1927).



Figure 10. Veterinarian's house in *Raasiku* Parish built by the master builder Wassili Pander (?-?). The exterior cladding boards had not yet been installed (architect *K. Tarvas*; 1920s).



Figure 11. Members of *Harju* County Government in *Laitse* Manor. From left to right: County Engineer and the Head of the Road Department *K. Tarvas* (1924).

The urban situation in Tallinn and the effective building regulations had a direct impact on the architecture of the rental houses *K. Tarvas* designed. Just as elsewhere in Europe after World War I, the apartment crisis was one of the biggest problems in Tallinn – there was a shortage of cheap apartments for Tallinn residents. In contrast to many other cities, the housing crisis in Tallinn was alleviated by the construction of economical Lender's Houses before World War I. Thus, in the 1920s, small apartments were needed mainly to house city workers [18] and rural migrants. Upon an initiative of a civil engineer Voldemar Lender, cheap wooden two-storey rental houses were built in workers' settlements, primarily to improve the living conditions of the working population. Later the first rental workers' dwellings with a stone staircase were built in the territory of the *Russo-Baltic* Shipyard on the *Kopli* Peninsula [19].

Figure 12. Semi-detached houses (1939–1941) in *Kopli*. A spatial planner Aleksander Loman (?–?), the architects of the complex *Karl Tarvas* and *Roman Koolmar* (1904–1971) (c. 1941).



By 1922, housing construction was at standstill due to the small number of private entrepreneurs. The situation changed when the state started to offer housing loans at 4 % with repayment term of 50 years. In the following years, many new apartment buildings were built. Construction Loan Committee closely monitored the granting of loans for the construction of smaller houses and apartments [20]. These loans were used by cities, municipalities, privately owned construction companies and, increasingly, by private house builders and small entrepreneurs [21]. In the first years, the loans could not be used for the construction of multi-storey and multi-apartment buildings. Therefore, one-storey houses with an attic were built. Homeowner's apartment was situated on the ground floor and the rented apartment on the rooftop floor.

In the 1920s, housing was actively developed in Tallinn with a focus on social construction to accommodate teachers, doctors and other city servants. In 1924, the City Design Bureau was

established to promote construction of residential and other purpose buildings. The Office was headed by an RPI graduate Herbert Johanson who was, in fact, the only Estonian to belong to Riga Association of Architects. At that time, population of Tallinn was three times smaller than in 2021, the city's territory did not expand, and new residential buildings were built only in industrial areas, such as the *Kopli* Peninsula or *Lilleküla* District [19]. The situation changed in the 1930s, when the construction of new buildings, such as in *Kalamaja* District, began in the outskirts of Tallinn. The Tenants' Association «*Üürnik*» approached *K. Tarvas* with a request to design and build a building complex in the *Pelgulinn* District similar to the workers' residential area in *Puu-Käpyla* District in Helsinki (1920–1925; architect *Martti Välikangas* (1893–1973)). *K. Tarvas* implemented this project from 1924 to 1926. The building complex consisted of three semi-detached houses and one house for four families, all buildings were constructed using local building materials. Each part of the semi-detached house consisted of the following premises: on the ground floor, there was a toilet with a small window, a living room with a kitchen and a dining zone in a niche – a common modern layout that was based on the principle of a flowing room; there were two bedrooms on the first floor. There was no bathroom inside the house, the laundry room was located in the basement. The kitchen of each section had a separate pantry. According to the concept of a garden city that was implemented across Europe, the plot was not fully built up, there was space envisioned for a private garden. The ideas for setting up residential cooperatives were borrowed from Germany and Finland. After successful implementation of the project of the residential complex in 1926, *K. Tarvas* established his own private practice as an architect, and it was a good time for construction industry.



Figure 13. A two-family house at *Õle* Street in *Pelgulinn* District, Tallinn (2010).

Tallinn Houses Designed by *K. Tarvas*

A standardized two- and three-storey building with a typical stone staircase was the most frequently built rental house in Tallinn in 1920–1930s. Now, the characteristic wooden apartment buildings form an integral part of the Estonian urban environment. Amendments to the fire safety regulations and the Construction Law of Tsarist Russia with regard to the Estonian and Livland Governorates determined that from 1903 the design of apartment buildings should include one stone staircase instead of two wooden staircases used in the previous design. Construction of such buildings in Tallinn began in the interwar period. These building projects were based on the layout of Lender's House with two or three-room apartments and a stone staircase. The Tallinn House usually housed eight two-room apartments. The spatial planning was well thought out and standardized.



Figure 14. Johannes Trump's (1893–1943) building at 20 *Vilmsi* Street in Tallinn with two wooden staircases (1930) is one of the late versions of Lender's House, a popular Tallinn house (2011).

In two decades, almost a thousand Tallinn Houses with a typical stone staircase were built in Tallinn, about 2/3 of these houses were designed by the architectural bureau of *K. Tarvas* [22]. According to Grigori Jomm (1912–1992), the architect at *K. Tarvas'* bureau, in 1935–1940, a few dozen projects were completed within a month [1], and this was possible thanks to the standard solutions of the developed spatial plan. The Tallinn Houses designed by *K. Tarvas* were characterised by a high construction quality, their erection was usually inspected by *K. Tarvas* himself.

The size of the houses changed along with the changes in the legislation in 1920–1930 – in the beginning, only two-storey houses were built, later also three-storey buildings. The architectural style of the buildings reflected the features of several styles – from late Art Nouveau to Functionalism, manifested in the buildings with characteristic

plastered façades (houses in *A. Kapi* Street). In the early years of Estonian independence, a lot of buildings with mansard roofs were built. Initially, mansard spaces were non-residential and were used as the laundry-drying space. The Construction Law allowed construction of only two three-room apartments in the attic (Figure 15).

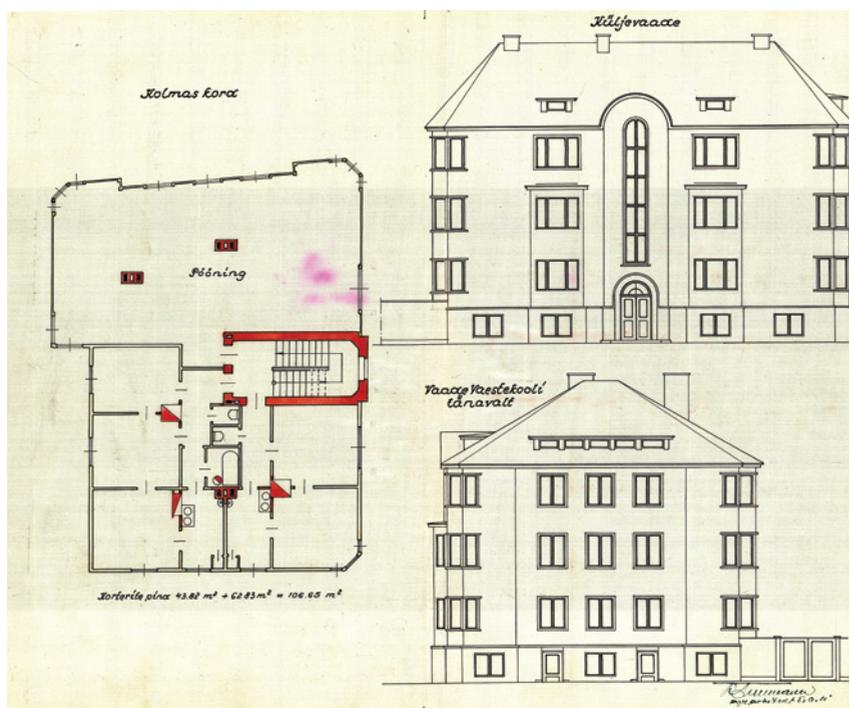


Figure 15.
The project of
an apartment
building at
2 *A. Kapi* Street,
Tallinn, with two
attic apartments
(1934).

In the 1930s, 90 % of new housing was built by private investors [23]. They invested funds in construction using the opportunities offered by the housing loan programme that allowed for extensive construction of the rental houses like the Tallinn House. According to a historian *Kārlis Sils*, in the Interwar Period, the underprivileged members of society of Tallinn had better access to cheap rental apartments than the residents of Riga [24].

Even in the early 1930s, wood was the main building material used in construction of residential buildings in the capital. In 1929, only 18 % of the whole residential stock were masonry buildings [25]. The construction of rental houses was also affected by the fall in timber prices in 1932. The trend to build rental houses was accelerated by the fact that at the beginning of Estonia's independence, silicate bricks were used instead of natural stone in construction of staircases, trusses and vertical walls, which made building process faster and more economical.

One masonry staircase instead of two wooden ones allowed expanding the area of other rooms. Extensive use of the new material was promoted by the silicate brick manufacturer, a graduate of the DM (1904) of RPI Oskar Amberg (1878–1963), the owner of the «*Amberg & Ko*» plant [26] in Tallinn. In some cases, plaster was laid on the outer wall of the staircase in the Tallinn rental houses, but as an architect, *K. Tarvas* chose to open the natural texture of the brick, which corresponded to the principles of functionalism, creating various brick patterns in the pediment and portal part of the building. The curved portal as the one in the building designed at 15 *Salme* Street in 1932 (Figure 16) is typical of the historic buildings of Tallinn's Old Town, which probably inspired *K. Tarvas*. The favourable economic situation in the 1930s allowed the architect to express his creative thought. An oval ground plan of the staircase was one of the innovations that appeared in his projects, where the exterior doors of four apartments on one floor were located in an arched corridor. The building project at 24 *Kunderi* Street is similar, where the exterior doors of two apartments on one floor are located in an arched corridor (Figure 18, p. 80).

Figure 16. Jaan Linnas (?–?)
Tallinn House at 15 *Salme*
Street in *Kalamaja* District,
Tallinn (2010).



Figure 17. Tallinn House with a typical staircase
exterior wall made of silicate bricks at 5 *Valgevase*
Street, Tallinn, built in 1931 (2021).

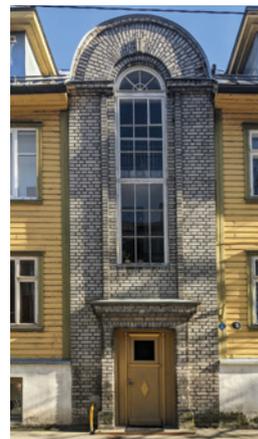




Figure 18. The project of Johannes Ots' (?-?) rental house at 24 Kunderi Street (1936) in Tallinn is a typical stone townhouse from the mid-1930s, with the oval staircase solution characteristic of K. Tarvas (1936).

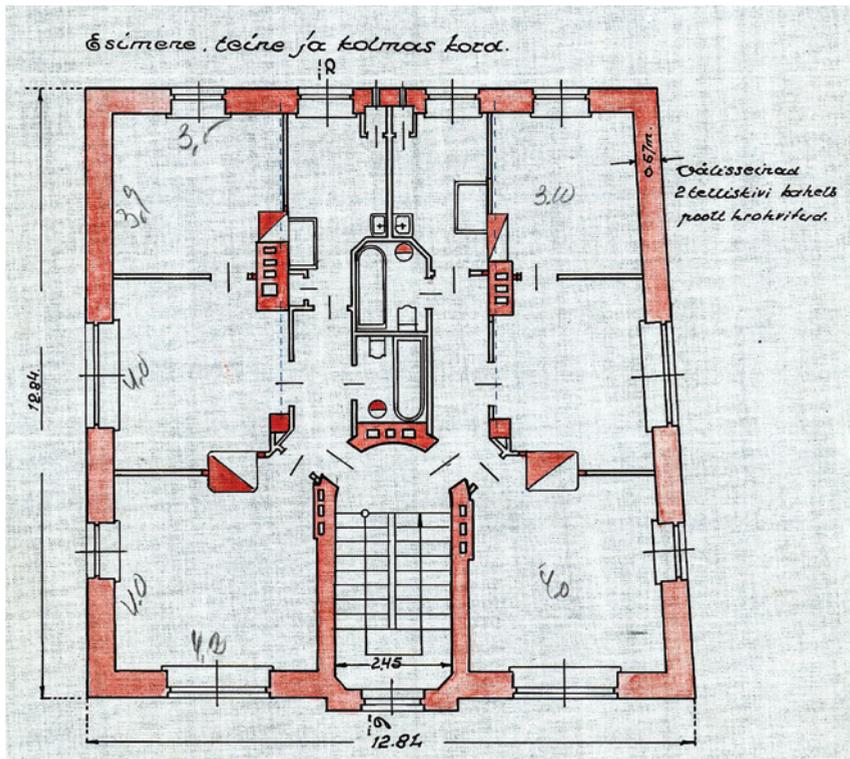


Figure 19. Rental house at 24 Kunderi Street, Tallinn (2011).

In the late 1930s, new wooden tenement houses in the city centre were plastered to look like stone buildings. For example, such a house was built by the owner of the hairdresser's salon Helene Horn (?–?) at 24 *Taime* Street (completed in 1937) in *Pelgulinn* District, Tallinn. This house with a stone staircase and a gable roof is lined with vertical wooden boards, but finished with plaster following the smooth façade canon typical of functionalism. *K. Tarvas'* clients were small businessmen, city commissioners and manufacturers, such as a construction contractor Johannes Trump (1893–1943), who commissioned a house at 30 *Vilmsi* Street, and a carpenter Jakob Aben (?–?), who ordered a house at 68b *Koidu* Street. These buildings are the most common representatives of the Tallinn House. Traditionally, the buildings had a high basement to house additional premises, such as shops and laundry rooms (the apartments were quite rarely equipped with a bathroom). Initially, apartments for maids or drivers were located in the basement of the building.



Figure 20. The house of the carpenter Jakob Aren at 68b *Koidu* Street, Tallinn (c. 1931).

The layout of the plot of the Tallinn House is designed following the concept of the garden city – there is no firewall between the houses, but rather several meters long pathways (4.25 m). Therefore, even the smaller apartments had views of two cardinal points, which is characteristic of the modernist ideal of a healthy living environment. Traditionally, the house had a courtyard with a garden, which was particularly appreciated by the residents who came to the city from the countryside.

By 1930, 1300 new houses with 8000 apartments had been built in Tallinn, half of which were small rental apartments [27]. However, the housing crisis had not yet been resolved. The tenancy law was harsh against the landlords, requiring them to renovate the buildings and set a fixed rent, which, according to the experts, was also the main obstacle to the resolution of the housing crisis. Although this law was repealed in

Estonia in 1927, the only exception was rental apartments of less than 54 m² (Estonian unit: 12 *ruutsülda*; one *ruutsülda* is ~ 4.5 m²) [28] in Tallinn.

The layout of a Tallinn House usually included four apartments on one floor: three two-room and one three-room apartment. An architect *Konstantin Bõlau* (1899–1959) discovered that such a floor plan was very common (up to 90 %) in apartment buildings in the early 1930s [29]. The floor space of two-room apartments with a kitchen and facilities was usually 36–45 m², the floor space of a three-room apartment was 52–60 m². In the two-room apartments designed by *K. Tarvas*, the facilities and living rooms were usually located on both sides of the corridor, while the kitchen with a window was located at the end of the corridor (Figure 21). This layout of the apartments allowed classifying apartments into apartments with either a courtyard view or a street view. *K. Tarvas* continued to use this plan also later, during the Soviet occupation, in the design of a standardized eight-apartment two-storey building. This project of *K. Tarvas* received the Award of the Estonian Soviet Socialist Republic in 1948 and was recommended for cities and towns. In the 1950s, such buildings were built in *Uue-Maailm* and *Pelgulinn* Districts of Tallinn and in *Paide* City.

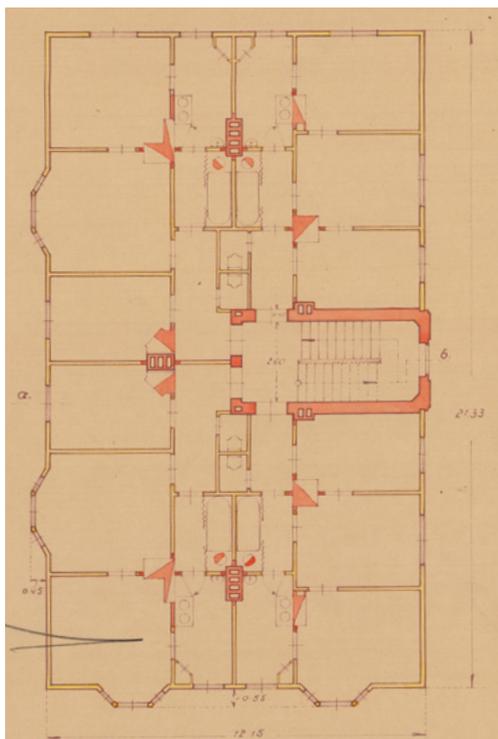


Figure 21. Project of the three-storey apartment building at 7 *Laulupeo* Street, Tallinn. Owner Heinrich Riis (1894–?) (1932).



Figure 22. Apartment building at
7 Laulupeo Street, Tallinn (2021).

In 1935, *K. Tarvas* admitted that the building boom in the rental market was over because the number of apartments was exceeding demand [30]. As early as in 1902, Tallinn was divided into three building areas: the Old Town, the stone construction area and the zone where new wooden houses could also be built. The economic growth allowed for construction of larger buildings and more expensive rental apartments. These ideas were first expressed by the city architect (1928–1934) *Elmar Lohk* (1901–1963), who intended to make the city centre and its immediate surroundings more representative, which implied expanding the area of stone buildings.

In the independent Estonia, construction law allowed building wooden buildings only in the suburbs. The new building regulations of Tallinn, which came into force in 1932, extended the area of masonry buildings outside the city centre. Amendments to this law in 1935 further expanded the area of masonry development outside the city centre into the areas which also included wooden buildings. The transition to fire-resistant materials was in some cases harsh, in some cases it was more natural when the area of masonry construction was expanded to primarily wooden districts. Masonry buildings were built on vacant building plots, in the sites of old wooden houses or behind wooden buildings, where gardens were located. For example, studying the history of the buildings at 12 and 14 *Hermann Street* it may be observed that *Kustav Norvik* (1874–?) first built a Tallinn House in the land plot and in the late 1930s, a stone house of the same size further away from the street line in the same plot. Similar development was carried out on 26 *Köleri Street* in *Kadriorg* District, where in 1938 a stone building was built in the courtyard of the Tallinn House (Figure 23, p. 84).



Figure 23. Tallin House at 26 Kõleri Street in Kadriorg District (2010).

The amendments to the 1935 Building Act envisioned implementing spatial impact assessment projects that were drawn up for all major streets of Tallinn. During assessment, the material and height of the building as well as the distance from the buildings to the street line were determined and recorded. The street line was marked red on the plan (Figure 24), for example, like in the situation plan of the plot at 7 Jõe Street showing the demarcation of the demolished building and the new street marked with red lines. The owners of the wooden houses to be demolished were offered various benefits (land tax exemption, soft loans for construction of the masonry buildings), but they did not consider these measures a sufficient consolation, which caused disagreement between the city government and the senior homeowners. Tallinn had been growing rapidly already before World War I. When its population reached 100 000, the Great Tallinn Competition was organized in 1913. It was won by a Finnish architect Eliel Saarinen (1873–1950), who saw Tallinn as a city with masonry apartment buildings. World War I did not allow this idea to come true.



Figure 24. Situation plan of the plot at 7 Jõe Street, Tallinn.

The cityscape had changed considerably by the mid-1930s and in the competition with the new housing stock, old apartments fell out of favour. In 1935, *K. Tarvas* together with *Konstantin Bölau*, Aleksander Klein (?-?), and Andres Grauen (1886–1942) published a book «*Maja korrashoid ja remont*» (House Maintenance and Repair) that provided guidelines for preserving and restoring old buildings. In the book, *K. Tarvas* described modernization and reconstruction of the largest apartments in the city centre (comprising five and six rooms during the tsarist period) into smaller apartments, as well as the construction of low-budget apartments in the attic. One of the co-authors of the book, a publicist *K. Bölau*, popularised the modern way of living and functionalist architecture. He promoted in press the ideas and philosophy expressed in the book. *K. Bölau's* contribution to architecture has been studied by an art historian Karin Hallas-Murula [31]. She specifically addressed the period since 1934, when the country was run by President *Konstantin Päts* (1874–1956). Until then, city governments had relative freedom in the matters related to urban planning, but in a more authoritarian environment, the state imposed stricter regulation with regard to the appearance of the cities. The President spoke about representativeness and traditional appearance of the new buildings. This initiative was called the State Revival Action.

In 1934, an engineer *Leo Jürgenson* (1901–1986) noted that new apartments built in Tallinn were of two main types – small two- to three-room apartments with a kitchen and bathroom in the basement in the suburbs of the city and larger luxury apartments in the stone houses of the city centre [32]. However, he believed that there were too few one-room apartments with a practical adjustable room plan. The ideas of easily maintained well-planned apartments were topical at the time. The Isokon Building in London pioneered the idea of minimalist urban living and made the headlines all over Europe in 1934. *L. Jürgenson* considered it important that the new apartments meet the requirements of the modern life and, if possible, were furnished with the built-in closets, whereas rooms should have clear zoning: kitchen, sleeping area and living area. This was taken into account by *K. Tarvas's* clients – furniture manufacturers Gustav (1889–1961) and Marta (1894–1992) Kaunismaa – when designing their new apartment houses at 4 *Aedvilja* Street (Figure 25, p. 86). On the first floor of the building, in addition to the one-room apartments, there were also industrial premises and a showroom. The house had central heating and an elevator, most apartments had in-house bathrooms. The Kaunismaa family also owned the stately building at 5 *Pronksi* Street (1936) designed by *K. Tarvas*, which had a lot of built-in furniture.

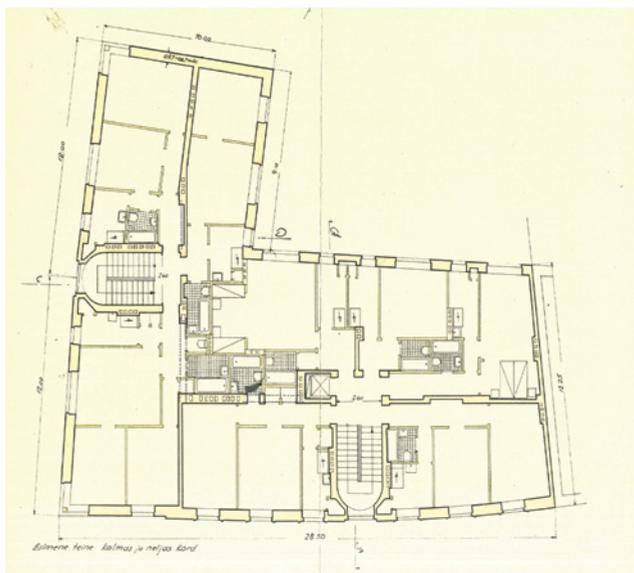


Figure 25. The plan of the third floor of the apartment building at 4 Aedvilja Street in Tallinn city centre (1937).

The townhouses designed by *K. Tarvas*, although technically innovative, were modest, such as the five-storey building at 8b *Roosikrantsi* Street (1931–1932) built by the real estate businessman Albert Koba (1878–?). The building with the central heating system had two elevators: one for traffic between the floors, the other for the laundry and sauna room (at that time, the sauna room in the houses in the city centre was rare) in the basement. The one-bedroom apartments also had a bathroom. The design of the building also included strength calculations performed by *K. Tarvas*.



Figure 26. Calculations of the wall strength of the building at 8b *Roosikrantsi* Street, Tallinn (1932).

In the construction of buildings, *K. Tarvas* used modern building materials: in the interior – glass stone, in the construction of the walls – nopsa-wall, as well as reinforced concrete ceilings. The buildings had an elevator and central heating. The ceiling was often vaulted to promote heat circulation in the rooms. In addition, only good quality building materials were used; construction details were characterised by ascetic nature.



Figure 27. *Susanna Kermann's* (1891–1987) rental house at 3 Koidula Street (1935), Kadriorg District. It accommodates three- to five-room apartments and has two elevators (2010).

Conclusions

The wooden districts of Tallinn are highly valued in today's real estate market. The Tallinn Houses that were historically intended for the poorest strata of the society with a laconic and frugal design today are considered the pearls of wooden housing. In the 1920s and 1930s, Tallinn was a rapidly developing city with lively construction activity taking place in the suburbs. Along with the growing access to housing loans and investments in the real estate, the number of rental apartments

increased exponentially. Real estate construction in Estonia did not stop even during the economic downturn in 1932, since the funds were secured by investing in real estate. This can be compared to the current situation, when despite the adverse impact of *Covid-19* on the business activity, a record number of real estate transactions took place in 2020. Substantial modernisation of wooden dwellings is being carried out. Many houses in wooden districts (*Kadriorg, Pelgulinn, Kassisaba*, etc.) have already been rebuilt making apartment extensions, adding loft storeys and building up the attics, as well as renovating the facades.

According to a real estate broker from «*Oma Maa*» bureau *Risto Vähi*, two-room apartments with the original layout in a Tallinn House are the most popular property in the real estate market [33]. This is attested by his colleague who also acknowledges this trend, adding that it is often an emotional purchase [34]. Almost a century old, these buildings still create an impression of what an ideal living space could be. These relatively small apartments allow the users to adapt them to their changing needs. A Polish architect *Blazej Czuba*, who participated in the 16th Venice Architecture Biennale in 2018, noted that a person needs at least 37 m² of space for a long-lasting comfort in their own home, which may not be ensured by the under 20 m² mini apartments that are being increasingly marketed today [35], and this opinion stands to reason.

The creative heritage of the architect *Karl Tarvas*, who obtained his education at Riga Polytechnic Institute, especially in Tallinn in the 1920s and 1930s, has left a historic imprint on construction in Estonia. *Karl Tarvas* was breaking stereotypes building high-quality and modern low-budget family apartment houses – the Tallinn Houses. The questions whether this quality may be ensured today in the new houses, whether they will have all the good qualities of a city home, and whether these houses will still be sought after in the real estate markets 80 years after their construction remain open, just as the question whether they may be modular and prefabricated wooden urban houses inspired by the traditional wooden heritage of the city.

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Figure 1. Admission Committee at Kiisa Bridge in Saku. Eesti Ajaloomuuseum, AM 15974, F18392 (fragment).

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Rīgas Politehnikums (RP) / Rīgas Politehniskais institūts (RPI) 19. gadsimtā un 20. gadsimta sākumā bija vienīgā augstākās izglītības iestāde tagadējo Baltijas valstu teritorijā, kur bija iespējams iegūt augstāko tehnisko izglītību. Tajā studēja arī pazīstami igauņu arhitekti, inženieri un rūpnieki. Viņu vidū – pazīstamais igauņu arhitekts Karls Tarvass (*Karl Tarvas*; 1885–1975), kurš studēja RPI no 1906. līdz 1915. gadam. Viņa radošais mantojums būtiski ietekmēja un veidoja Tallinas un tās priekšpilsētu arhitektūru 1920.–1940. gadā. Starpkaru laikā Igaunijas Republikā K. Tarvass apzināti izvēlējās uzlabot mazāk turīgo iedzīvotāju dzīves apstākļus, projektējot tipveida koka ēkas, ko mūsdienās pazīstam ar nosaukumu Tallinas māja (igauņu val. – *Tallina maja*). Pētījumu rezultātā sniegts ieskats K. Tarvasa studiju gados un izvērtēta viņa profesionālā darbība. K. Tarvass bija viens no Rīgas Igaunņu studentu biedrības (igauņu val. – *Riia Eesti Üliõpilaste Selts (REÜS)*; dib. 1909) dibinātājiem, kas apvienoja RPI igauņu studentus, kuri 1921. gadā piedalījās Igaunijas Arhitektu asociācijas izveidē (igauņu val. – *Eesti Arhitektide Ühing*). Arī viņa trīs dēli Pauls, Pēteris un Pertels izvēlējās arhitekta profesiju, pazīstamākais no dēliem ir Pēteris Tarvass (*Peeter Tarvas*; 1916–1987).

Atslēgas vārdi: Karls Tarvass, RPI absolventi, igauņu arhitekti, Tallinas māja, Rīgas Igaunņu studentu biedrība, mājokļi Igaunijā 1920.–1940. gadā.