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## THE INDUSTRIALIZATION OF CONSTRUCTION IN THE SECOND HALF OF THE XX CENTURY

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Via Edoardo Orabona, 4

70125 Bari - Italy

Phone: +39 080 5963564

E-mail: [info@artecweb.org](mailto:info@artecweb.org) - [tema@artecweb.org](mailto:tema@artecweb.org)

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# THE BUREAUCRATIC MECHANISMS OF THE TEMPORARY HOME. EXAMINING THE DEVELOPMENT OF PREFABRICATED HOUSE-TYPES THROUGH TRADE CONTRACTS BETWEEN FINLAND AND ISRAEL, 1948-1958

Tzafrir Fainholtz, Mia Åkerfelt

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## Abstract

In the 1940s and 1950s, Finland became a major exporter of wooden prefabricated detached houses. The growth of this industry coincided with a great global demand for housing which followed the Second World War. Different companies and sawmills were active on the Finnish market, among them, the sales organizations *Puutalo Oy* and *Puurakenteiden myyntiyhdistys*. One of the biggest importers of the Finnish houses in the early post-war years was Israel. Gaining independence in 1948, the country had to resettle thousands of displaced refugees, arriving from Europe and the Mediterranean in need of a home. Israel's trade agreements with Finland laid the foundation for a long-distance planning process when the state and other agents negotiated the designs of the houses with the Finnish manufacturers. The aim was to develop types suited especially for the Israeli needs. Based on ongoing research, this paper presents the complex diplomatic, economic, and political story of the import of the houses and the development of the models. The case is a challenging opportunity to learn from this period in mass housing history, building a methodology based on the paper trail left in official documents, correspondences, and architectural drawings, as well as in contemporary media, to discover the bureaucratic, political and economic mechanisms that shaped it.

## Keywords

Prefabrication, Housing, Crisis architecture, Wooden architecture, Finland.

## Tzafrir Fainholtz\*

*Faculty of Architecture and Town Planning, Technion, Israel Institute of Technology (Israel); Faculty of Arts, Psychology and Theology, Åbo Akademi University (Finland)*

## Mia Åkerfelt

*Department of Art History, Faculty of Arts, Psychology and Theology, Åbo Akademi University (Finland)*

\* Corresponding author:  
e-mail: [ftzafrir@gmail.com](mailto:ftzafrir@gmail.com)

## 1. INTRODUCTION

After the Second World War the Finnish industry for prefabricated wooden houses gained momentum and quickly surpassed the production rates from the pre-war decades. Fueled by the rapid payment of war reparations to the Soviet Union in goods – as prefabricated wooden housing – the industry also became an important part of Finland's international diplomacy.

The export on a global scale demanded that prefabricated types were developed for different climates and different users. However, due to the scarce archival sources,

the details of the planning process can only be obtained in a few cases from the main archives in Finland. One of the main customers around 1950 was Israel. Here, thousands of houses and several prefabricated hospitals were sent between 1948 and 1952. Archival material on the specific development of shelters and building types to Israel is limited. However, valuable data on the planning process and type development can be obtained by close reading of sales contracts and correspondence between the Finnish and Israeli counterparts. The case of the planning of types

for Israel provides an opportunity to try out methodologies for dealing with disappeared architecture and the planning of buildings, puzzling together a multitude of data from various archival sources to gain understanding of the planning process and its results. Therefore, the aim of the article is to examine how bureaucratic documents, as well as letters, architectural drawings, and photographs can contribute to piecing together the story of how prefabricated shelters were developed in collaboration between Finland and Israel. The central questions the article seeks to answer are: What was the political background and scope of the import of Finnish houses to Israel and how can the available data be assessed to gain information on the planning process? The material consists of a wide array of archival documents. The main archival sources are the Finnish manufacturers' archives in Suomen Elinkeinoelämän keskusarkisto (ELKA), as well as the Israel State Archive, and the Central Zionist Archive. These archives contain drawings, photographs, minutes from business meetings, correspondence, international agreements, and contract drafts. Furthermore, the Finnish National Library's digital archives provide extensive access to digitized journals, newspapers, commercial booklets, and product catalogs. The digitalization of the Israel Film Archive and Israel National Library also allows searches in data in different languages as their depositories scope go beyond the Israeli material.

Architectural archives come in a wide variety of forms and content types. The technical development during the last decades has highly transformed the work both within the archives themselves as well as how research in their contents can be conducted [1]. Today, architectural archives are understood as more than an entity devoted to preserving the work of well-known architects, focusing more and more on acknowledging the often fragmentary nature of the trails of papers left behind within the practice of construction. Even the term "architectural archives" is questioned due to the often highly diverse type of materials preserved, opting, for instance, for broader terms as "project archives", as suggested by Riccardo Domenichini [2].

One challenge of the architectural archives is the wealth of data often available, which within more traditional architectural research might lead to a focus on

the usage of the pictorial material, bypassing the other primary sources and the data they contain [2]. In the case of administrative architects and development companies, the data is ever more diverse, especially in colonial settings or in international trade, often spread over several countries [3-5]. Another challenge is posed by situations where data is missing or was never produced or sorted in the first place, as for instance regarding camps or temporary settlements [6].

Common research perspectives today consist of documentation of company histories, how partnerships or networks contributed to facilitating orders and projects, conflicts expressed in the correspondence between agents and the mother company, or post-colonial perspectives on the existing data. In the case of Finnish houses in Israel, the research deals with company archives, local government archives and the type of collected data typical for administrative architects. To extract relevant information, it is beneficial to adopt a methodology which connects a multitude of source types, as economical documents, correspondence, minutes from meetings, registers of conflicts and newspaper articles, as well as memory records and oral stories, not just focusing on the drawings [3-7].

In the project, the first step was to create a chronological understanding of the design process and the import/export to bring information on the temporal aspects of the work. Here, we will highlight some of the examples of the design process as case studies. The next stage adds data from all the different types of sources that are available, as well as contextualizing the finds with historical data. This will contribute to creating a comprehensive description of the planning process. The sources are analyzed through close reading of the archival documents to understand the historical context surrounding the official discourse on the import and export. The drawings, photographs and visual material are subjected to architectural – or visual analysis, which specifically searches for signs of the design process decisions in the material product.

## 2. PREFABRICATION IN FINLAND AND THE EXPORT INDUSTRY

In Finland, industrial prefabrication of wooden houses began in the late 19th century. During the first decades

of Finnish independence, the 1920s and 1930s saw a new development of prefabrication methods as well as companies within the trade [8, 9]. From the beginning, the main market for Finnish prefabricated houses was global, and the trade routes established in the 1890s continued to be important throughout the main parts of the 20th century. The trade with the Levant developed during the inter-war decades and Finnish manufacturers were continuously reported to exhibit and sell their houses in 1930s British mandate Palestine, mainly trading with the country's Jewish community [10-12]. Trade contacts were mainly based on interpersonal relations, and these were the foundation for the intensified trade between the governments and Jewish organizations after the Second World War and the founding of the state of Israel in 1948 [13].

The main difference in the trade during the post-war decades compared to previous trade was the centralized coordination of manufacturing. In 1940, twenty-one companies joined together and founded the Puutalo Oy sales organization to streamline the production and sales of Finnish prefabricated houses. Due to the wars between Finland and the Soviet Union between 1939 and 1944, and the following war reparations Finland had to pay, the Puutalo organization became the coordinator of the wooden housing industry's part of the reparations and developed formalized collaboration with the Finnish government [9]. This gave the organization easy access to participation in large-scale international trade deals. Until the end of the 1950s, most of the company's production went on export due to the struggling domestic economy. However, thanks to its connections to the government, the company participated in the national reconstruction after the war, mainly regarding planning and development of suitable building types. Another leading organization involved in the trade with Israel was Suomen Puurakenteiden Myyntiyhdistys, founded in 1944 by six companies which left Puutalo and started their own organization [14]. The organization simplified its name in 1950 to Myyntiyhdistys Puurakenne. In early 1956, Puutalo Oy and Myyntiyhdistys Puurakenne merged due to the dramatically deteriorating market for prefabricated wooden houses due to a halt in exports to the Soviet Union [9]. A third company involved in the Is-

raeli trade was the Pelkkatalojen Myyntiyhdistys, which was formed in 1949 and had four members in 1951 [14]. Since the company was described by the Finnish press in 1954 as a small company with mainly domestic clients in contrast to Puutalo Oy or Myyntiyhdistys Puurakenne, it is possible that the negotiations with Israel failed [15].

### 3. OPPORTUNITY AND DIPLOMACY IN FINLAND'S HOUSING EXPORT TO ISRAEL

Following the mass immigration, the Israeli landscape was dotted with various kinds of temporary dwellings, like the *Ma'abarot*, New Towns, *Kibbutzim* and, *Moshavim*. While tents were common in the beginning in many places, they were later replaced by *Zrifim* (Shacks) or *Zrifonim* (Small Shacks), *Badonim* (structures made of cloth), and *Pachonim* (metal Shacks). These buildings were distributed by the government and the Jewish Agency, as well as by public housing companies like Amidar. The need for housing on this massive scale posed a great challenge to the new Israeli government, and to the Jewish Agency, organization that was pivotal in the founding of Israel (and was still powerful in the first decade of the state).

As a new state facing mass immigration and a housing crisis, Israel was struggling to build mechanisms for the provision of houses to fulfill what was described by Allweil as a «state citizen contract during the first years of Israeli sovereignty» [16]. This kind of contract, which tied state policy and housing, was not unique to Israel [16], though in Israel, the creating of new a government and the political and diplomatic of housing import, created, as we will show, mechanisms of multiple participants.

The archive material shows there was not one governmental or non-governmental body responsible for the import of the houses to Israel and their distribution, there was also not one guiding hand and decisions were made through negotiations and sometimes in response to immediate needs. The new Israeli government had a Planning Department in the Prime Minister's Office, but the issues of imported housing were navigated by different ministries, from the Foreign Ministry which was dealing with the diplomatic side of the import of prefab housing, to the Ministry of Labor with its Housing Department

and others. The government also used other organizations such as Amidar, a governmental housing company which helped in the management of the housing. Since Israel was a new state, there was still the involvement of pre-independence Zionist bodies dealing with the issues of housing in the new country. An important pre-state organization dealing with housing was the Jewish Agency, which had a great impact on the issue also in the first decade after the founding of Israel. Another organization which preceded statehood was the Jewish National Fund, which was active in building settlements. The correspondence in the archives reveals many different participants in the import of the houses from Finland to Israel, including also private companies and agents who worked with the different authorities in the dealings [17]. The files in the ISA (Israel State Archive) show the involvement of different governmental bodies to name a few: the Planning Department at the Prime Minister office (for example file ISA 2762/λ-21); the Foreign Ministry and Israeli delegations abroad (for example file ISA 2369/λ-13); the Ministry of Labor, Housing department (for example file ISA 2369/λ-13) and others. The involvement of the Jewish agency can be traced among other places in the files of the CZA (central Zionist archive) where correspondence also about the JNF and other organizations is kept (for example, file S14-168). Examples of the involvement of private agents include the Jakob A. Lewison and company firm (correspondences appear, for example, in file ISA, 432/λ-31).

Anticipating the need for housing a growing number of Jewish immigrants, the Jewish Agency was negotiating with Finland's prefabrication industry and authorities already in 1946, two years before Israel's independence. The agency was in contact with the Finnish delegation in Istanbul concerning the purchase of houses which they called "Finn-Houses" [17]. The producing company was most likely Myyntiyhdistys Puurakenne since their telegram address at the time was "Finn-Houses" [18]. The Jewish Agency continued to be active in settling the newcomers to Israel after the establishment of the state in 1948. However, after the founding of the state of Israel, the interests of the Jewish Agency sometimes clashed with the interests of the government as the latter was looking to establish a trade based on the exchange

of commodities with Finland, with which the new country signed its first international economic agreement in 1949.

The Finnish and Israeli governments were building an economic diplomacy to which the Jewish Agency dealings seemed to be a threat [19]. The Jewish Agency policies caused friction with the Israeli government as an act of a «state within a state» [16] and this was seen related to the agency's housing import dealings, which caused significant uproar at the Israeli Foreign Ministry as it was thought to risk Israel's relations with Finland. In 1951, this led Moshe Sharet, the Foreign Minister, to write to Levi Eshkol, Treasurer of the Jewish Agency (later Israel's prime minister), about the damage done to the country's diplomatic relations due to the Agency trade of the prefabricated houses with Sweden. Sharet wrote «In the development of the export to Sweden and the rest of the Scandinavian countries (including Finland) and in the founding of all our trade relations... on barter trade we invested immense efforts», and «the separate dealing of an official institute such as the Jewish Agency [...] ruins our all endeavors and make a mockery of us». «It's about time that the Jewish Agency will move from a de jure to de facto recognition of the state» [20].

The first trade agreement between Israel and Finland was reached in August 1949, based on parallel trade. The largest part of the Finnish export deal consisted of prefabricated houses, with an Israeli commitment to purchase 680,000 dollars worth of houses (which later grew to 720,00 dollars when the agreement was prolonged) and the Israeli largest export were citrus fruits and industrial components [21, 22]. The trade with Finland was based on separate dealings with Finnish companies and was not entirely directed by the Finnish government. It is a possible result of the lack of guidelines that Israel first did not trade with one of the major companies but rather with a wholesale company called Hero-Tukku Oy. It is unclear how the connection started, but in the preserved correspondence, Hero-Tukku offered to provide "semi-prefabricated houses", which must have been cheaper than the prefabricated houses required by the Finnish-Israeli agreement [23-25].

While Israel was dealing with Hero-Tukku, the larger timber sales organizations also showed interest in export-



ing to Israel. Puutalo Oy entered the Israeli market with the help of Jakob Lewison, a businessman from Tel Aviv who had experience in dealings with the Finnish timber industry. In 1949, Lewison wrote to the Israeli Ministry of Economy and Industry about the intention of Puutalo Oy to send a task mission to Israel to form a business “collaboration”. The letter specified that the mission would explore which prefabricated houses would be suitable for Israel and announced the Puutalo Oy’s intention to build a factory in Israel for the production of prefabricated houses, hospitals, schools, etc., with the possible help of the Israeli government [26]. There is no evidence that Puutalo Oy ever built such a factory or really intended to do so, but by 1951, Israel had become a major customer of the company. Pelkkatalojen Myyntiyhdistys also approached the Israeli authorities in November 1950. Pelkkatalojen Myyntiyhdistys negotiated with the Israeli authorities, but its offer seemed too expensive and “uninteresting” [27]. It is unclear whether the company gained any Israeli commissions, but since it was described in the Finnish press in 1954 as a small company with clients mainly in Finland, it is possible that the negotiation failed [28]. In 1951, Myyntiyhdistys Puurakenne also approached Israel through an Israeli-Finnish representative who was urging them to order houses from the company [29]. This bid was successful, and the company exported houses to Israel in the following years.

In some cases, the companies’ dealings with Israel were supported by people in the Finnish government. In 1951, Åke Gartz, the Finnish Minister of Foreign Affairs, who also was the Deputy Director of the Ahlström Oy company, which in its turn was a part of Myyntiyhdistys Puurakenne, offered Israel to increase the amount of “pre-fabricated houses in pre-cut components”, in a new trade agreement, to the sum of 1,000,000 dollars in exchange for a Finnish import of woolen tissues, raincoats, automobiles and trucks [30, 31]. Later, when the agreement for 1951-1952 was finalized, this sum grew to 4,000,000 dollars for “Prefabricated houses in components, prefabricated hospitals and schools”, as it was mentioned in a secret protocol attached to the agreement. Israel’s main export exchange was citrus and Kaiser Frazer cars, which were assembled in Israel and shipped to Finland.

While Israel was a major importer from Finland, the Israeli need for houses declined as the country’s situation improved and permanent dwellings were built. In the trade agreement for 1953-1954, the quota for importing Finnish prefabricated houses was left open and now also building parts were included in this term [32]. The import of Finnish houses continued after this date, but according to the records, the trade was much smaller. The efforts of the Finnish manufacturers to maintain the export to Israel continued in 1953 when Puutalo Oy participated in the Conquering of the Desert International Exhibition in Jerusalem, where the Finnish timber industry was represented, and Puutalo Oy presented a 62 m<sup>2</sup> house with four rooms, fully furnished with Finnish furniture [33]. The Finnish housing export to Israel was continuously supported by Finnish diplomacy. In the 1956-1957 economic agreement with Israel, a secret clause was agreed that if Israel were to import prefabricated houses for foreign currency, it should offer to import first from Finland and guarantee Finland the “first refusal” [34].

The diplomatic and economic aspects of the trade in prefabricated houses between Israel and Finland had a crucial impact on the number of houses imported to Israel and their production in Finland. This also affected the design process of the early houses, and they were more or less developed through correspondence.

#### 4. THE NEGOTIATION OF PREFABRICATED DESIGNS AND THE AFTERMATH OF TEMPORALITY

While thousands of houses were imported to Israel from Finland, tracking them in Israel is challenging. The houses were distributed by different government offices, the Jewish Agency, the Jewish National Fund, and organizations such as *Amidar*, which made it difficult to locate their locations. Furthermore, the houses were considered temporary, most of them were demolished after a few years, and the few that survived were scattered all over the country. The temporary nature of the houses also encouraged the Israeli importers to demand that the houses be bought without roofs or floors, which compromised their structural integrity and must have affected their durability and survival [35].

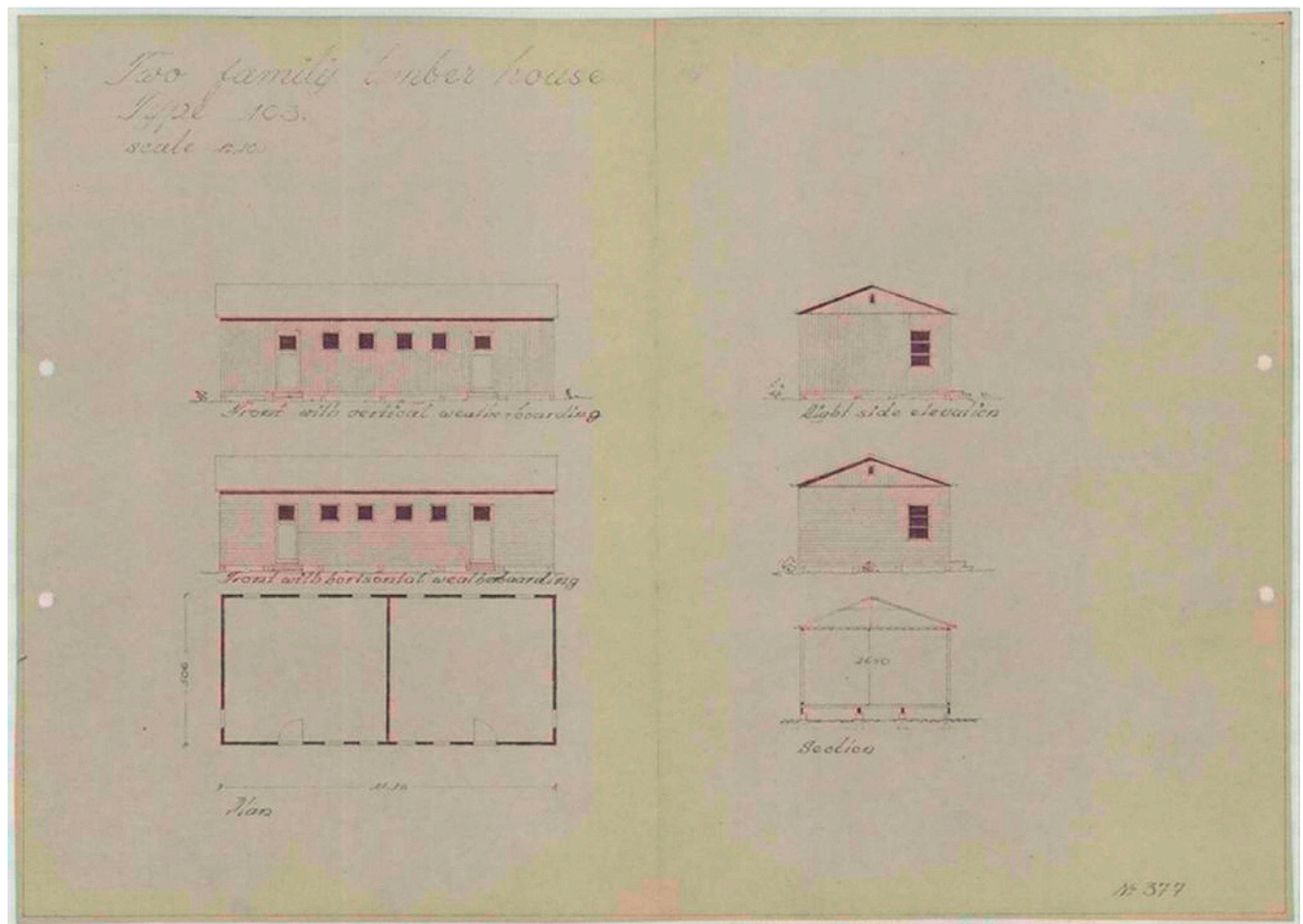


Fig. 1. Pelkkatalojen Myyntiydistys, "Type 103", 1951. Source: Israel State Archive.

While most of the houses did not survive, they did leave a paper trail in governmental and municipal archives, in memories of people, in old newsreels, pictures and different sites. One Finnish prefabricated building type that left its mark both on-site and in the archives was the two-family *Zrif* (hut), developed in collaboration between the Israeli authorities and the Finnish exporters. The initial design specification for a basic two-family *Zrif* was made by the Israeli Housing Department and sent from Israel to Finland, where both Pelkkatalojen Myyntiydistys and Puutalo Oy received it. The "type 103" was a simple wooden, unadorned shack divided into two one-room units with one entrance. Each unit was meant to house one family. To reduce costs, it was requested that there be no division inside the units (Fig. 1). The suggestion and drawings sent from Pelkkatalojen Myyntiydistys in January 1951 show a simple two-room house with no bathrooms or kitchen areas. The building had

two doors with small windows, and four windows on the front elevation. The company also offered two options for positioning the boards of the outer walls, one vertical, the other horizontal. Two larger elongated windows were fixed, each on the side elevation. The house was to stand detached from the ground on stilts with a wooden floor. The Pelkkatalojen Myyntiydistys wooden house, which was meant to be constructed of timber, must have been considered too expensive, since the company sent another offer in which the houses would be built with a method called "Pe-Te" consisting of plates of pressed wood wool [36, 37].

Puutalo Oy also received the "type 103" specifications and sent their offer, and by February 1951, houses were ordered from the company for the sum of 460,000 dollars [38]. Puutalo Oy designed two options, renamed "type 840p" and "type 840s", both remarkably similar to the previous Pelkkatalo timber design. The "840p" (Fig.



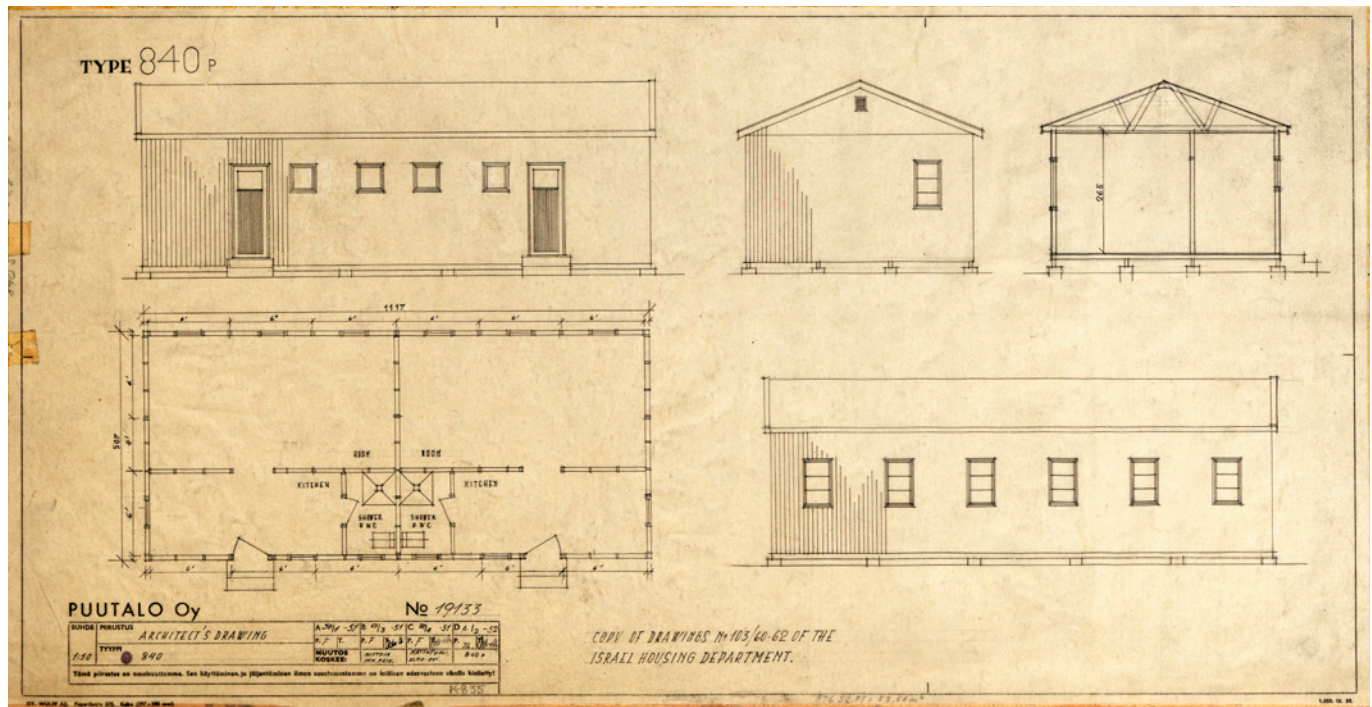


Fig. 2. Puutalo Oy, "Type 840d", 1952. Source: ELKA Archives.

2) was designed to stand on stilts with wooden floors, while the "840s" was designed to be placed on a concrete platform, eliminating the need for a wooden floor and allowing the Israelis to save on the import of wooden floor materials. After the commission was secured, the "type 103" was further developed. The letters do not include information on this, but the drawings can be analyzed to describe the fine-tuning of the design process. In the 1952 version of the "type 103" by Puutalo Oy, each of the rooms had gained a small entrance area, a division of the living space, a small bathroom with a shower and toilet, and a small area at the entrance was designated as a kitchen but with no fittings. The design changes to the "type 103" were most likely related to the function of the house, since it was meant to provide temporary housing for longer periods, and this required utility rooms [39].

A *Ma'abara* to which the "type 103" was sent was Amishav, erected near the city of Petah Tikva and later incorporated into the city itself. This was part of a rebuilding of the *Ma'abara* in 1952. This rebuilding was celebrated in an Israeli newsreel, which announced that these *Zrifim* replaced the tents where the inhabitants had lived before [40]. In the same newsreel, one can see several types of houses, among them the "type 840p". The arrival of the Finnish houses in Amishav must have

been seen as a more enduring solution for housing. The area where the houses were built became known as the "*Zrifim Finnim*" (Finnish huts) neighborhood and it is still remembered on a plaque at the local Tiferet Israel synagogue. The move into the *Zrifim* was considered a move into a more permanent public housing policy and came with a price, as the inhabitants had to pay a deposit and a monthly rent, and if they could not do it, they had to take a loan. In Amishav, the *Zrifim* housed 1300 families in 1953, mainly from Iraq but also from Romania, Iran, and Yemen, amongst other countries [41]. The cramped existence in which whole families lived in one room in a *Zrif* and ongoing neglect by the state turned the Amishav into a slum in the following years. In 1963, 11 years after its construction, the "*Zrifim Finnim*" neighborhood was up to demolition as a newspaper wrote that «Amishave is still neglected», commenting that at times, up to fourteen family members were cramped in one *Zrif* and that there were houses which still were not connected to the sewage system there were no paved roads, and even the clinic was not connected to electricity [42]. The simplicity of the types used to build "*Zrifim Finnim*" and neglect were the reasons why most of the *Zrifim* in Amishav were demolished, leaving only a few heavily altered ones that still exist.

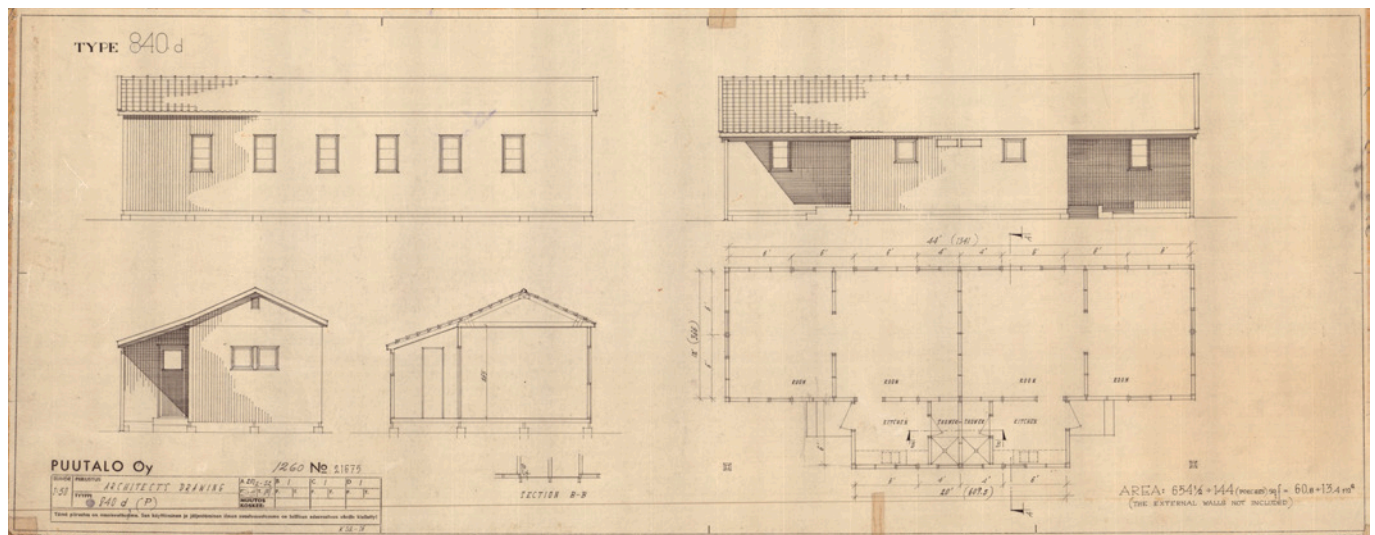


Fig. 3. Puutalo Oy, "Type 840d", 1952. Source: ELKA Archives.

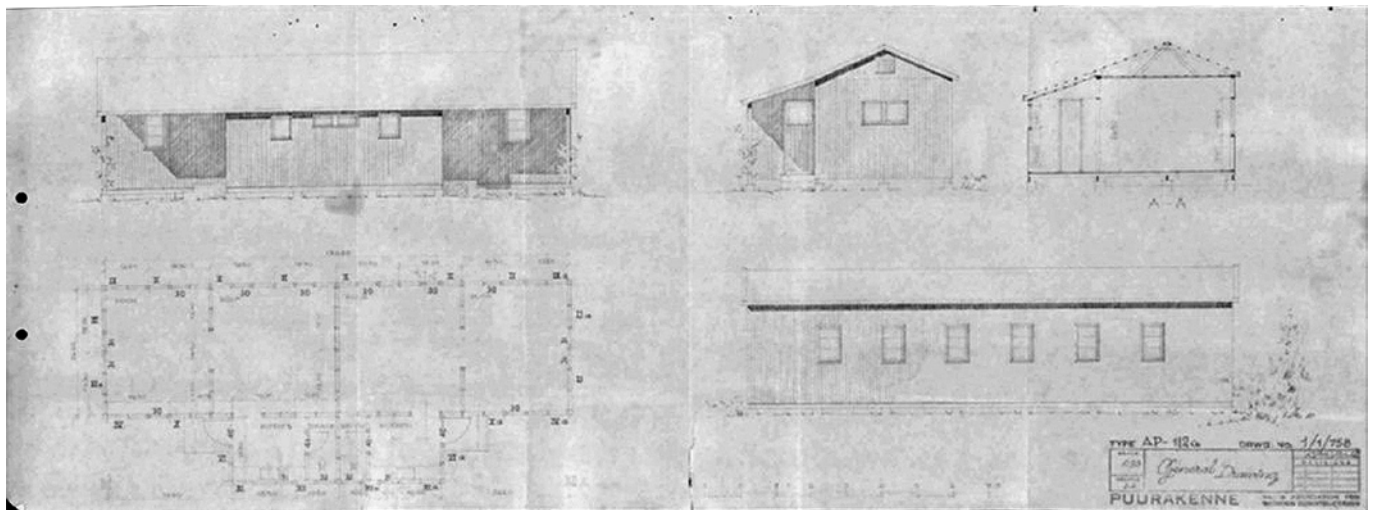


Fig. 4. Puurakenteiden myyntiyhdistys, "Type AP-112a", 1952. Source: Israel State Archive.

Another example of a two-family house that was distributed in Israel through two companies was a design that was manufactured in Puutalo Oy as part of the 840 series and was marked as 840c. This type had two units, each with one room, and the "sub-type 840d" had two rooms. From the outside, these two types were identical, built on stilts. They each had a kitchen area and a shower area which projected out of the middle of the entrance façade with small, shaded areas on each side. The houses were planned with no toilets. The back façade was similar to the "840s" and "840p" types, but the side façade had a horizontal window instead of an elongated one. This type was also designed according to Israeli specifications and a similar version of it was designed by

Myyntiyhdistys Puurakenne with one type almost identical to the Puutalo "840c", called "AP 111a", and another similar to "840d" called "AP 112a" [43]. The differences between these types and the Puutalo ones were that the "AP 111a" had only four windows in the back façade and that the *Puutalo* types had an elongated attic ventilation shaft while the *Myyntiyhdistys Puurakenne* ones were squarer shaped (Figs. 3 and 4).

In *Kibbutz Sde Boker*, which was built in the Negev desert, a "*Zrif Fini*" was erected in 1952, not far from the famous *Zrif* that was built as a home for Israel's First Prime Minister, David Ben Gurion. According to archival sources, this *Zrif* was a double-family house with "one and a half" room in each unit, and from a contemporary





Fig. 5. Werner Braun, *Sde-Boker*, 1953. Source: KKL-JNF photo Archive.

photo, we can learn that this was a Puutalo Oy “840d” or Puurakenne “112a” [44] (Fig. 5). This instance shows the difficulty in tracing the distribution of the different houses since, without a photo of the side façade, we can’t trace the manufacturer of the building. It also shows that the distribution of the houses was sometimes random, and houses were sometimes sent individually and were temporary in most cases (Ben Gurion’s *Zrif* is an exemption). They were part of a temporary planning of the site where they were built. At the time, the housing in the *Kibbutz* was usually without kitchens and private showers; the arrival of this house to Sde Boker was a unique circumstance that made its tracking through the photos fortuitous.

The story of both the *Zrifim* of Amishav and Sde Boker, which are only two of many cases, reflect how designed building types that were made as mass housing

solutions could be manufactured on demand by different companies, and how the architecture of temporary housing demands research in different forms of documentation especially in cases when the buildings themselves are not preserved anymore.

## 5. CONCLUSIONS

Built as temporary solutions, prefabricated houses in crisis areas are usually of ephemeral existence. In the case of the architecture of the Finnish houses exported to Israel, this is evident in the transitional nature of their existence as transit houses in transit camps for people in motion. The heritage of these houses is, therefore, elusive, and their premeditated disappearance challenges the evaluation of their story through the research of existing

architectural objects. The nature of this architecture thus demanded the research to turn to available documentation, building a research methodology following examples by Crinson, Mansion-Prud'homme, and Carboni based on combining snippets of information in various types of sources. The wealth of archival material, only a fraction of which we could include in-depth here, of correspondences, drawings, official papers, newspapers, and movies, allows a new reading of the story of the Finnish housing export to Israel and the impact of dealings and bureaucracy on designs and their effects. If we would have stayed within the traditional sources in architectural history, such as main company archives or just drawings, a perspective challenged by, for instance, Domenichini, the complex dialogue involved in planning and executing the projects in Israel would not have been possible to unveil. The “design by correspondence” process provides valuable lessons on planning housing in crisis areas and what the main objectives of governments, agencies, manufacturers, or inhabitants in these situations might be. The research in the political background and scope of the import of Finnish houses to Israel highlights how the need for bilateral deals between countries to upkeep diplomacy, while keeping the budget low at all costs, stresses the limitations in the design process of the shelters. In all documents, the materiality of the houses, the money, the practical issues, and trade are underlined. However, the ones who rarely are discussed in the available sources are the inhabitants. In general, the times when the house types were changed to better accommodate daily tasks and hygiene, there are no traces in the archives of the reasons or discussions preceding the design changes in the material. The end user got a place to live but could most likely rarely influence the design or level of comfort initially provided. These processes offer a glimpse into the mechanism of mass housing and shelter design in a period of crisis, which it is possible to learn from when planning shelters for future crisis housing.

When dealing with this case study, it becomes evident that the architecture must be understood through the complex diplomatic history between the two countries during the years immediately following the end of the Second World War. The growth of the Finnish industry and the formation of companies brought forth and trans-

formed the local timber industry into a global exporter, with different companies as players in its market. The housing crisis in Israel in the first years of state turned Israel into a major importer of Finnish houses, and the effect of local politics, bi-lateral diplomacy, and economy defined which houses arrived, their quantity and the period in which they arrived, while political power struggles in Israel effected their arrival. The negotiation of trade and diplomacy affected the architectural production and its implementation in different places such as Amishav and Sde-Boker, which in turn affected the inhabitants' lives before bringing about the disappearance of most of these houses. The learning of the bureaucratic and political mechanisms of industry and international trade in the Finnish-Israeli case reveals the importance of learning this history to understand the management of design and application of housing in times of crisis.

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