A Study of Late 19th Century Military Bases and Barracks of the Former Army of Japan

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Abstract

Now that the buildings of the former Army of Japan are facing the prospect of demolition, there is increasing demand that their historical importance be assessed and that ways be found to reuse or preserve them. Today, as the example of early Meiji barracks built in the middle of 1870's, only three still exist in Sendai, Shibata and Nagoya. The Army's architectural system has not yet been sufficiently studied. So far, the architectural prototype for Army buildings has not been found, but we can describe the architectural planning process and the prototypes both for garrisons, which were built on the site of ancient castles, and for barracks, which mixed the traditional Japanese carpentry and the positive introduction of new techniques from Europe. This paper intends to clarify the planning method for military garrisons and the early stages of the barracks construction process by way of field surveys and archival documents.

Keywords: army; military base; barracks; prototype; Shibata

1. Introduction

Buildings of the former Japanese Army still exist in many places in Japan, but their value has not yet been sufficiently considered. Now that they are facing the prospect of being demolished, there are demands that their architecture be historically evaluated and that ways be found to preserve them.

The Japanese Cultural Agency has been interested in these heritage buildings related to the Army and warfare and has undertaken a comprehensive survey. In 2002, the Agency identified around 50 properties, such as the first daiba, a fortified island constructed for the purpose of defending Tokyo-Edo (Minato-ku, Tokyo), or the Asahikawa Kaikosha Veterans Club, run by the 7th Army Division (Asahikawa, Hokkaido) (Fig.1.). However, this was far fewer than the actual number of remaining Army heritage buildings, because the Agency only looked at the buildings sold to local governments or to the private sector after the Second World War. As a result, most of the historical buildings belonging to the Self Defense Forces were not counted.

Both the Army engineers' architectural system and the Western-style buildings built at the beginning of the Meiji era have been widely studied by many researchers like Nakamori,T (Ref.1) or Fujimori,T (Ref.2). This is also the case for the Army's military buildings and headquarters as well as the Navy's brick structures by Yatani, A (Ref.3) and Nakajima, H (Ref.4) etc. But the barracks and architecture built on local Army bases have not been sufficiently studied.

The author has investigated the remaining facilities and buildings of the Ground and Air Self-Defense Forces since 2004 and found approximately five hundred properties built before 1925. More than hundred of them correspond to the criteria of Army heritage buildings. In this paper, the author will focus on the early stage of the Army, extracting the early examples of military architecture in Japan.

The Seinan Civil War of 1877 was the turning point in the Japanese military system, because afterwards, the introduction of Western military strategy and weapons marked the beginning of a radical modernization process. Military facilities from that time, for example, suggest both a continuation from the Edo era and the introduction of European planning policy.

More than twenty buildings still exist from the first decade of the formation of the Army (1868-1877). Among them three are barracks while one is a regimental headquarters. Two of the barracks belong to the Ground Self-Defense Force and the other two buildings belong to public institutions.

This paper intends to clarify the military base planning method and the construction process for Japanese Army barracks at the very early stage by way of field surveys (Ref.5) and through archival documents (Ref.6). In this context, barracks means the standardized building to house draftees, forming the core of the military base.
2. The Construction of Military Bases and Barracks at the Beginning of Meiji Era

2.1 The placement of Chindai

The modern military system in Japan started at the point when the shogunate government and each han (clan) adopted European and American military practices and promoted the purchase of modern arms during the disturbances at the end of shogunate period in the second half the nineteenth century. Whereas previously, the military system had been decentralized under the feudal daimyo (lord)-samurai relationship, by the opening of Meiji era in 1868, it had shifted to a centralized national army, organized by military district. This process began with the creation of the Ministry of War (Hyobu-sho) in 1869 (Meiji 2), which was then divided into the Department of the Army and the Department of the Navy in 1872 (Meiji 5). The basis of organization in the Army was the Chindai, or garrison, which consisted of two regiments (Chindai was replaced by the Division in 1888). By 1873 (Meiji 6), there were six Chindai, headquartered in Tokyo, Sendai, Nagoya, Osaka, Hiroshima and Kumamoto, and fourteen regiments based all over Japan (Fig.2). The systematic construction of military facilities also started at this time.

2.2 The Castle Abolition Act

At the beginning, a major consideration in the construction of military bases was how to make use of the castles that had expressed military power under the shogunate government. Initially, their ownership had been transferred from each lord to the new government. Then, after the feudal han (clan) system was abolished and prefectures were created, they came under the jurisdiction of the Ministry of War. The new government identified the number of castles with strategic value and high maintenance costs, and in 1873 (Meiji 6), the government issued the Castle Abolition Act (Jokaku-haiki-rei) to demolish the others. As a result, 144 castles were demolished and only 58 survived. Most of the garrisons for the initial fourteen regiments were built on castle sites. The only exceptions were Tokyo, the capital, and Aomori, which was not a castle city. It is noteworthy that even afterwards, when the new regiments were set up, many of their garrisons came to be built in castle compounds.

A regiment's move into the castle compound was a rather joyous occasion for the local community. The enormous cost of maintaining clan facilities could not be covered by the local governments, which suffered from the harsh financial conditions immediately after the Meiji Restoration. The private sector was also unable to manage, although in certain cases the castles were sold to private organizations. As soon as the castles were ordered to be demolished, several outstanding figures of the foreign services and the military appealed for their preservation. Such actions had a big influence on the Army's decision-making process. In Nagoya and Himeji, as a matter of fact, preservationist pressure successfully ensured that these castles' original beauty was conserved under the military land-use system.

2.3 Military Land Use of Castles

Nagoya Castle

In the case of Nagoya for example, the governor of the Nagoya han immediately decided after the Restoration to demolish the buildings because they cost so much to administer and maintain, but Max von Brandt, a minister from the German Embassy, insisted upon their preservation, because he so admired the castle's beauty.

In addition, Col. Nakamura Shigetou, of the Corps of Engineers, made a strong case for preservation, based on the castle's architectural aesthetics. As a result, it was decided to use Nagoya Castle as a military facility and the third garrison of the Tokyo Chindai was assigned here in 1871 (Meiji 4). Nagoya Chindai was
established two years later as home to the 6th Infantry Regiment and the necessary army facilities were built successively in the castle and surroundings. Avoiding the Honmaru, the main part of a Japanese castle that contains the dungeon, the barracks were built in the Ninomaru (second compound) and the Sannomaru (third or residence compound). The Chindai headquarters was located in the Sannomaru and the 6th Infantry Regiment barracks were set in the Ninomaru. The barracks that was dismantled and reconstructed in the Meiji-mura open-air museum used to be here (Fig.3.).

**Himeji Castle**

Himeji Castle was to be auctioned off immediately after the Meiji Restoration, but no private organization was able to raise the extremely high cost for dismantlement and the auction ended in failure. Meanwhile, Col. Nakamura's opinion letter moved up the Army chain of command, which decided to retain Himeji Castle as a military facility. In 1874 (Meiji 7), the Osaka Chindai moved in, replacing the 10th Infantry Regiment (formerly the 1st Infantry Battalion). (Fig.4.).

**Shibata Castle**

The case of Shibata Castle was rather different from the above-mentioned examples of Nagoya and Himeji. It was much smaller and its main buildings should have been demolished by the Castle Abolition Act. In 1874 (Meiji 7), however, the third battalion of the Tokyo Chindai was formed here and soon after the castle was assigned to the 16th Infantry Regiment. One of this regiment's barracks still exists on the original site, where it is known as the "White Wall Barracks (Shirakabe-heisha)." The dating of this building will be discussed later, but it is clearly one of the oldest Army facilities in Japan, together with the 4th Infantry Regiment's barracks in Sendai and the 10th Infantry Regiment's barracks in Nagoya, mentioned above. (Fig.5. and 6.)

**3. Planning of Army Bases**

**3.1 Garrison Components**

The infantry was the kernel of the Army. Chindai were initially organized with infantry, artillery, cavalry,
engineer, transport and other units. In 1876 (Meiji 9),
the entire Army comprised 16 infantry regiments, 7
artillery battalions, 2 cavalry battalions, 2 engineer
battalions, 2 platoons and one quartermaster company.
Military base planning was organized around the
regiment, which in the case of the infantry comprised
about 3000 drafted soldiers.

Toward the middle of Meiji era, a regimental
garrison consisted of a regimental headquarters,
barracks, an officers' mess, an enlisted ranks' mess,
ammunition depots as well as other additional
buildings such as stables and warehouses. The
officers' mess and enlisted ranks' mess did not exist in the first
stage of the military base planning.

3.2 "Plan of the Aomori Base"

There are few remaining architectural plans
indicating barracks layout and planning, since most of
them were destroyed at the end of World War II. The "Plan of the Aomori Base of the Second Military
District", which is conserved in the Defense Center
of the Self-Defense Forces in Aomori, is therefore a
rare document. It shows the layout of the 5th Infantry Regiment's garrison in Aomori, colored by ink and
with the scale of 1/600. The title of "the Second Military District" indicates that this plan dates back to the Chindai period before the establishment of the Divisions of 1888 (Meiji 21).

The site is a rectangle covering approximately
7.8 ha. The front gate is situated on the southwest
side, while the large-scale buildings (the regimental
headquarters, the barracks, etc.) are placed in such a
way to surround the rectangular yard. Buildings were
numbered from 1 to 10, with numbers 1 to 8 formed
by four semidetached long barracks housing two
companies each. The regimental headquarters (No. 9)
and the uniform warehouse (No. 10) line up alongside
the southwest road. A long covered corridor attached
to the front of each building forms a continuous
breezeway in the snowy winter season. A military
hospital was located in the southeast (lower right)
corner.

The headquarters building has been relocated to the
new site by the Self-Defense Forces after the Second
World War and is no longer in its original position.
Another preserved document called the "View of the
Barracks of the 5th Infantry Regiment in Aomori" (Fig.8.) with the date of 1900 (Meiji 33) explains the
way in which the base was used. An adjacent site with
the officers' mess was added behind the original site,
apparently after 1888.

3.3 Views of Regiment Bases

There are a number of surviving drawings and
illustrations of Army barracks. Although they do not
accurately indicate site plans, it is still possible to see
the form of the barracks from a bird's-eye view.

Many of these views were drawn after the middle
of the Meiji era for travel guides. The Army bases
were considered to be landmarks because of their new
and enlightened ideas. In the early stages, most of the
regimental bases were built within castle compounds
so that the view, combined with watchtowers, stone
walls and moats, expressed the notion of a new urban
landscape in the heart of a city.

Also, comparison of these drawings helps to reveal
the barracks planning method in the Chindai period.
Of the sixteen regiments set up at the beginning of
the Meiji era, three are depicted in surviving bird's-eye drawings: the "View of the Barracks of the 5th Infantry Regiment in Aomori" as mentioned above; the "Complete View of the 4th Infantry Regiment" (Sendai) and the "Detailed View of the Shibata Base". What is common to all three is the fact that the major buildings form a rectangular enclosure on a rectangular site. In Sendai's case, the rectangle is formed of 13 large-scale buildings. Although they are not named, they doubtlessly followed the same site plan as Aomori. What is different is that the base entrance is off from the central axis, losing the symmetry (Fig.9.).

On the other hand, the "Detailed View of the Shibata Base" shows 10 large-scale buildings forming the rectangle around the inner yard. The presence of a continuous breezeway connecting each building as in Aomori suggests that the region is snowy. The preserved White Wall Barracks is located in the back of the inner yard (Fig.6.).

The comparative study of the above-mentioned three bases shows that the basic garrison plan was in the shape of a rectangle surrounding the inner yard. This is the prototype of the Army base at the beginning of the Meiji era. The inner yard spans about 1 ha. After the Army was reorganized into the Division system in 1888, the bases were expanded with the construction of other necessary facilities.

4. The Architectural Features of Barracks
4.1 The Shibata Barrack

Of the early stage military barracks, only three buildings still exist: Sendai, Shibata and Nagoya. Two of them have been relocated: the Nagoya barracks is now in the Meiji-Mura open-air museum, while the Sendai barracks has been relocated to the municipal park. On the other hand, the Shibata barracks, known as the White Wall Barracks, still exists on the original site within the compound of Shibata Castle. It is used by the Ground Self-Defense Force as an exhibition hall. (Fig.10.)

Barracks construction started as soon as the modernized military system was set up in Japan. This is evidenced by the archives of the former Ministry of War conserved in the Defense Center (Ref.11). It is assumed that the barracks of the 4th Infantry Regiment in Sendai and of the 6th Infantry Regiment in Nagoya were built in 1873 (Meiji 6), the same year the base was built. When these buildings were dismantled for relocation, the date was confirmed by the preserved carpenter's marks. On the other hand, the date of construction for the 16th Infantry Regiment's barracks in Shibata is uncertain, although the City History of Shibata suggested the possibility of both 1873 (Meiji 6) and 1874 (Meiji 7).

However, the newly found Ministry of War documents suggest a series of Army construction projects in the Niigata region. At first, the Chindai soldiers had used the old buildings of the Shibata Castle. But in 1871 (Meiji 4), a new base was constructed in Yorii village near Niigata, so that the soldiers were moved there as the First Section of the Tokyo Chindai (Niigata Base). Two years later, as soon as the military district (gunkanku/shikanku) system was introduced, the Niigata Base became the Third Shikan-ku but with the establishment of the regiment system a year later, it was transformed into the 3rd Regiment and then moved southward to Takasaki. To replace it, the newly established 16th Infantry Regiment was formed in Shibata in order to defend the Niigata region. As a result, the Niigata Base was abandoned. An old report said that the buildings there were badly damaged (Ref.12). The description of the construction of the Shibata Base appears in several documents from 1874 (Meiji 7). Accordingly, the Shibata Base is judged to have been built in 1874 (Meiji 7) (Ref.13).

The three existing barracks in Sendai, Nagoya and Shibata were therefore constructed in 1873-74, making them the oldest Army heritage buildings in Japan. Parallel to other building types such as schools and city halls, military facilities represent an important sector of Westernized architecture in the early Meiji era.
unique appearance of the White Wall Barracks with its plaster wall reminds us of the remains of the old castle. It is a two-story wooden construction with tile roofing and four entrances located on the front and back sides with gable roofed porches. On the front façade, the breezeway (gangi) protects from snow and rain. The building stands on a base of Ooya-stone with timber construction on top. The front façade is finished with plaster while the back façade and the northern and southern standings are weatherboard. The thick timbers from Shibata Castle were reused for the roof structure as mentioned before.

4.2 The Transformation of Barracks

The current appearance of the White Wall Barracks in Shibata is not the original. The "Detailed View of the Shibata Base" shows this building with fewer front windows, although the basic features, such as the two-story wooden construction, tile roofing and white plaster finishing, are the same. This "View" dates back to 1896 (Meiji 29), so the old building must have been altered to a great extent sometime after this year.

According to Army archives, the military buildings were subject to constant alteration or transformation. In fact, some newly revealed documents found in the Defense Center relate the process of building and altering barracks in various places in Japan. The record of 1873 (Meiji 6) describes the problem of using glass windows in a certain barracks. It says that the new glazed windows let in too much sunlight. As a solution, the Army issued a letter saying that white cotton cloth should be hung on the windows to avoid strong sunlight (Ref.14). Prior to this, military buildings did not have any glass windows or curtains.

In another case in Kumamoto in 1871-72 (Meiji 4-5), a stove was installed in the barracks and the soldiers were taught how to use it (Ref.15). In 1875 (Meiji 8), they were further instructed to pay attention to cleaning the chimney (Ref.16). As a result, however, a strong draft blew down the chimney into the rooms so often that in 1892 (Meiji 25), the soldiers had to stop using stoves and started using hibachi, the traditional Japanese charcoal heating pod (Ref.17). These articles illustrate the trial and error process at the early stage of barracks construction.

The Army's architectural section has been studied by T. Nakamori (Ref.19), who notes that during the government organization reform of 1890 (Meiji 23), the section was unified as the "Temporary Architectural Department" in the Ministry of the Army. Between 1892 (Meiji 25) and 1914 (Taisho 3), the number of "engineers" (i.e. military architects) varied from two to eighteen but the average number was around six. In the preceding period, the military facility planning and designing process was not as systematic. Fewer engineers took charge of each architectural project.

One of the crucial concerns in barracks planning was hygiene. In 1894 (Meiji 27), for example, at the time of the First Sino-Japanese War, 12,000 of the total 17,000 deaths were caused by beriberi, while the plague outbreak in Taiwan prompted the Japanese government to promulgate the Sanitary Law. Under its terms, ¥208,611 was allocated in 1895 (Meiji 28) to the sterilization of barracks all over Japan. (Ref.20)

The radical transformation of the White Wall Barracks corresponds to this period. The multiplication of windows and the change in corridor layout were the result of the new law. An investigation of the barracks allows us to reconstitute the building's original state (Figs.11.-14.).

5. Conclusion

In the formation period of the Japanese Army, garrisons were primarily built inside existing castle compounds. The barracks, which each housed a company, were placed in the form of a rectangle surrounding the inner yard. This planning system was established in the mid-1870's, when the regiment system was introduced. Additional facilities were added later.

The barracks planning principle was based on standardization from the very beginning of the Army, with wooden, two-story rectangular buildings of 15m wide, tile roofing, front and back entrances, porches with a curved gable roof over the entrance and wooden sash windows. Based on this prototype, necessary works were added according to local requirements, such as breezeways in the snowy regions or plaster
wall finishings, as seen in Shibata.

In the first stage, the barracks plan was characterized by the presence of crossing passages on the ground floor and central corridors on both the ground and first floors. It should be noted that around 1890, hygiene concerns led to major sanitation-related structural upgrades, such as ventilation systems, openings and cleaning systems.

Like any type of building, military architecture also depends on the skillful techniques of local carpenters. Sometimes they recycled building materials from dismantled castles.

The prototype of the regimental bases and barracks emerged in the 1870's, then developed through trial and error into the much more functional and healthy facility toward the middle of the Meiji era.

References
6) The archives of the former Army, particularly the architectural plans, were destroyed as the Second World War ended. However, there remain a few surviving documents in the Defense Center at the Ministry of Defense, the memorial centers of local Self-Defense Force bases and local libraries.
8) 'Plan of the Aomori Base of the Second Military District‘「第二軍管青森営庁歩兵聯隊之図」(around 1887, Meiji 20), conserved at the Self-Defense Force base in Aomori.
9) 'View of the Barracks of the 5th Infantry Regiment in Aomori‘「青森歩兵第五聯隊兵営之真図」(1900, Meiji 33), conserved at the Self-Defense Force base in Aomori.
10) 'The Complete View of the 4th Infantry Regiment'「歩兵第四聯隊全図」(year unknown), conserved in the Historical Folklore Center in Sendai.

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11) JACAR (Japan Center for Asian Historical Records of National Archives) Ref. A03023113400 (1873), pp.1-2.
18) Figs.12. and 14 correspond the East part of the building which exists today.

Figs.3., 4 and 5 were made by Yoshiyuki Sato and Figs.11. and 13 by Naoto Takizawa. Figs.12. and 14 were made by author.