Estates of the highest nobility of the St. Petersburg province as a special spatial structure of the historical St. Petersburg agglomeration

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Abstract. The article is devoted to the investigation of the placement of the largest, representative and prestigious country estates—"estates of the highest nobility"—on the territory of the historical St. Petersburg province and adjacent provinces before 1917. It consistently formed a single spatial network around St. Petersburg—the capital of the Russian state, the special system, which consisted of at least 271 estates. All these representative estates received the special functional and spatial landscape characteristics that significantly distinguish them from the "ordinary" estates of the nobility.

1. Introduction
During 200 years of development of St. Petersburg and its agglomeration (1703-1917) around the Russian capital gradually, in several stages, the ring of suburban estates of the highest nobility was formed. These estates differed from hundreds of ordinary urban, suburban and rural estates by essential functional, spatial, compositional features, specially created by the orders of their owners by the most famous St. Petersburg architects.

2. Materials and methods
This article is focused on identifying patterns of placement and searching features of estates of the highest nobility around St. Petersburg. It is based on the study of numerous complex historical materials, including extensive collections of cartographic and descriptive data stored in various archives and libraries of St. Petersburg.

3. Results
3.1. The Territorial features of placement of the estates of the highest nobility.
At the beginning of the XX century in the St. Petersburg province there were about two thousand estates. Among them were both unique Imperial palace and park residences, and modest dwellings of rural landowners [1]. To date, on the territory of the modern center of St. Petersburg, in the zones of its near and far suburbs, in the far regions of the modern Leningrad region (until 1917—the counties of St. Petersburg province) hundreds of noble estates still remained, although in different condition, which have been studied in detail by I. V. Barsova, S. E. Guseva, T. E. Isachenko, O. V. Litvintsev [2; 3; 4; 5].
In I. V. Barsova’s dissertation work 516 estates are reviewed, and in S. E. Guseva’s work more than 250 estates, including 104 garden and park complexes are surveyed. At the same time, the typological and planning-landscape diversity of estates was noted: along with the overwhelming number of mass, ordinary noble and merchant estates (up to 5.0 hectares in size, including only a few objects), unique, large and the largest estates were identified, with huge manor landscapes and various individual sets of objects. In the dissertation of Tsachenko were identified 476 estates (high nobility and ordinary noble estates), surveyed 154 complexes. O. V. Litvintseva’s researches are devoted to noble estates of the Novgorod province, part of which counties bordered on counties of the St. Petersburg province, thus some of noble estates were included in the area of the zone of influence of St. Petersburg (in its agglomeration). In all scientific works were revealed the estates whose owners were the most influential persons and families of Russia, which had especially large sizes, the special larger and more various "set" of buildings, constructions, natural and man-made landscapes. In the study of E. A. Kozyreva such unique estates are defined as "estates of the highest nobility" ("near estates of the highest nobility") [6].

Previous studies of the suburban estates made by N. Y. Tikhomirov allowed identifying in the vicinity of Moscow the similar estates, special in size and structural diversity. They showed the dependence on the social status and noble socio-political duties of the owner of the estate and the area of the estates, the number of buildings, internal planning characteristics of the main manor houses (with large halls designed for various kinds of meetings and receptions, with paintings and sculptures in the halls and rooms), with greenhouses, pavilions, sculptures, bosquets, etc. in park compositions[7].

"Estates of the highest nobility ("Near estates of the highest nobility") – estates that arose and developed around St. Petersburg – this is a special type of estates formed around St. Petersburg of the representatives of the upper layers of the Russian nobility, created and operated until the 1917-1920s. Socially, the highest nobility included representatives of the highest 4 ranks (according to the "Table of ranks". It began in 1719, approved by the Highest act of January 24, 1722) [8] and according to the Manifesto on inheritance (introduced by Paul I as "Institution of the Imperial family" of April 5, 1797)[9] – members of the Imperial family, military – from generals and admirals to field marshals, civil - the highest ranks of Colleges and, then, Ministries, as well as the Imperial court. Such estates differed in planning and typology from hundreds and thousands of ordinary noble estates in that they were much larger. As studies show, there are more than 5.0 hectares (but more often - in the tens, even hundreds of hectares). They also included in their ensembles not only more diverse service and auxiliary buildings (vegetable and fruit greenhouses, blacksmith and carpentry workshops, creameries, dairies and distilleries, etc.). There were numerous special (clearly not functional, but necessarily prestigious) elements – various "temples of Friendship", "love Islands", "Parnassus hills", greenhouses for growing exotic plants, stables for particularly thoroughbred horses and cattle, gardens and parks in a special artistic performance, ponds and lakes with special landscape outlines, complex systems of paths and viewpoints, etc.

By 1917 Saint Petersburg province had 8 districts, 4 suburban (near to the city, adjacent to city’s boundaries and the surrounding in the directions to the North, East, South, South-West, and the West boundaries of the city was the Gulf of Finland): Peterhof, Saint-Petersburg, TsarskoyeSelo, Shlisselburg, as well as 4 farer (closer to the borders of the province): on the Western border province of Gdov, Luga, Yamburg, on the Eastern border of the province – Novoladozhsky County.

The survey of the territorial location of the studied estates allowed showing the following features.

Initially the core of the estates formed in the 1710-s in the non-urban areas (but on the modern map of St. Petersburg – within the boundaries of the modern center). They subsequently, when the expansion of the boundaries of the downtown and the entire city were "absorbed" and became either "inner city estates", or were converted into other purposes, even with an entiredemolition of the estates (Figure 1). Their features were often small sizes, very high saturation of landscape and park objects of the highest prestige. Within the city boundaries which stabilized in 1857-1858 it was possible to identify 13 estates [10].
In parallel, systems of estates of the highest nobility formed in suburban and distant counties.

The second belt was a very dense ring of estates, located next to the famous imperial country palace and park estates of Gatchina, Pavlovsk, Peterhof, Tsarskoye Selo, functionally (as estates of the highest level of courtiers, dignitaries, military ranks, whose way of life fully corresponded with the Imperial court), as well as in landscape qualities, canons and composition "linked" with them (Figure 2). For each estate a picturesque area was chosen, not far from the Imperial summer residence. The structure of each estate, regardless of its size, specially manifested representativeness and special nature of the economy (not only functionality, but also theatrical demonstration), usually included a complex of residential buildings with a large manor house with a front yard, numerous and various manor buildings, a park (parks) with a river, lake, pond. Often there was a church in the estate, and sometimes a theater, ceremonial greenhouses, specialized pavilions (for example - "ruins"), etc.

The third, also continuous belt of estates reached practically external borders of four suburban counties, up to their external borders. In total, the second and third belts united at least 140 estates.

Thus, in four internal, suburban counties by 1917, 120 estates were preserved, including in Peterhof County-27 estates, in St. Petersburg-32 estates, in Tsarskoye Selo-33 estates (of which 10 were located within the boundaries of County towns), in Shlisselburg – 28 estates.

In the four outer counties, the placement of estates of the highest nobility had other features. Such estates were also located in improved natural and landscape zones, on the main navigable rivers and ancient major highways, but not in a continuous ring, but forming large "nests", “bushes” around the main estates, often at distances of 3-5 km from them. They included separate small estates with manor houses and parks around. Andwere already smaller in size and had lesser variety of objects in each estate. It can be assumed that such "nests" and "bushes" aroised in the process of crushing the larger and the largest original estates. In gdovsky district were revealed-20 estates located along the Eastern tributaries of the riverthe Great. In Luzhskydistrict there are 29 estates located on the rivers in the upper reaches of the Luga river, on Oredezhi, etc., along the ancient roads from St. Petersburg to Pskov. In Yamburg district - according to the ancient, known from the XVII century. Narva tract-17 estates. And on the Eastern border of the province, in Novoladozhsky district - along the ancient route.
that ran along the southern shore of lake Ladoga and known since the XIII century - 18 such estates. The same zone extended to the territory of Vyborg province (along the routes of the ancient tracts St. Petersburg-Vyborg and St. Petersburg-Priozersk), and in the South-East - in the territory of Novgorod province along the tract, then the railway St. Petersburg-Moscow including at least 47 of the estates (Figure 3).

Figure 2. 1917. Placement of estates of the aristocratic society in the territories of the neighbor districts of St. Petersburg province

Figure 3. 1917. Placement of estates of the aristocratic society in the territories of distant districts of the St. Petersburg province.
3.2. Some examples of estates of the highest nobility.

Features and typological differences can be seen in the examples of the two estates.

1. Ropsha. The estate with an area of 80.6 hectares is located at the ropshinsky highway, on an ancient ledge 49 km South-West of St. Petersburg and 18 km from Strelna. The huge estate was known not only for its unique architectural and landscape ensemble, but also became the place where Emperor Peter III was assassinated in 1762. The estate belonged to members of the Imperial family for many decades. There are 4 major stages in the development of the Ropsha.

The 1-st stage. 1712-1741, in possession of chancellor G. I. Golovin. Since 1712 chancellor G. I. Golovin received from Peter I this area to create a country estate. According to the project of arch. P. M. Eropkin was arranged manor yard with a regular park, then created the Upper and Lower parks.

2-nd stage. 1741-1785, in possession of the Imperial family. Since 1741 the estate was in the possession of Empress Elizabeth, at that time in 1750, the architect F. B. Rastrelli rebuilt the manor house (creating his famous three-part enfilade composition), changed the layout of the Upper and Lower parks. Elizabeth Petrovna gave the estate to the heir-Grand Duke Peter Fedorovich. Since 1761 the estate was presented to Ekaterina Alekseevna. Then it passed to the favorite of Catherine-Grigory Orlov.

Stage 3. 1785-1798, in the possession of the family of the court jeweler Lazarev the estate was subjected to a radical reconstruction, with the reconstruction of the main manor house in the spirit of "palladianism" by the projects of the arch. A. Porta, with highly artistic interior decoration and with the creation of a magnificent landscape park by the efforts of park builder Engelman.

Stage 4. 1798-1917, in possession of the Imperial family. After Emperor Paul I bought the estate into the ownership of the Imperial court until 1917 Ropsha was one of the residences of the families of the Imperial family. Works were carried out in the interiors of the palace, throughout the parks.

By the beginning of 1917 in the structure of the estate there were 36 objects: the Palace (the main manor house), 14 auxiliary buildings (wings), 9 greenhouses, greenhouses and greenhouses (winter flower, cherry, novovinograd, peach, strawberry, etc. greenhouses), stables, forges, bee, etc. as well as extensive ponds, lakes, channels with landscape scenes and panoramas, with numerous bridges, Islands, gazebos, etc. slaughterhouse, paper mill (Figure 4) [11, 12, 13].

2. Terpilitsi. Estate (manor) an area at different stages of 14.0-19.5 hectares. For the First time the village Terpilitsywas marked on the map of Ingermanland (1727), and the manor Terpilitisywas known by the materials of the general survey (1790) of Yamburg County. We noted even then that the planning structure of the estate and surrounding villages remained almost stable until the 1950s. In its history several stages can be noted:

Stage 1. The end of the 1780-s the foundation of the estate by its owner, the court stalmeister and Yamburg County leader of the nobility V. M. Re binder [1].

2nd stage. 1830-1845, in possession of Vamanos. Since 1830 the owner of the estate was A. F. Weimarn. At this time the wooden manor house, stone wings, services are constructed; the landscape park was founded [14]. From the late 1830-s the owners were A. F. Peiker (born Weimarn) and privy councilor (civil rank 3 rank) I. W. Peiker. At them in front of the manor house the front yard flanked by manor wings was arranged, and to the North-West—some more wings are erected. On the North, East and South sides of the manor house was laid out a new landscape Park, and in the Western part of the estate formed an household zone with a brick forge and barnyard [15].

Stage 3. 1846-1908, in possession of Wrangel. Since 1846, the owner was a real state Councilor (civil rank 4 rank), Baron E. E. Wrangel [16].After his death, the estate was inherited by his son-G. G. Wrangel, from 1881 - A. E. Wrangel, by the early 1900s-Baron N. A. Wrangel. According to the inventory of property of 1873 it is known that as a part of the estate there were: the manor one-storied wooden house on the stone foundation, two wooden wings, a carriage house, a greenhouse; as well as outbuildings (wooden house, two wooden houses for workers and employees, barn, barn, wooden sheds, stone barnyard for horses, windmill stone octagonal [17]. And already in 1881 in the estate there
were 2 houses for the owner and administration, 4 houses for workers, 1 house, 3 buildings for cattle, 2 barns, 8 sheds, 9 other buildings, a soil shed for cherries, 1 water mill. Under N. A. Wrangel, the complexes of buildings in the Northern corner of the estate were significantly rebuilt (Figure 5) [18].

Figure 4. Layout of the buildings of the Ropsha Manor. Drawing by I. Chernyshov. 1869. RGIA. F. 596 Op. 4 D. 1019. (Expiation: 1 – the palace, 2 – Small sitting wing, 3 – Kitchen Cabinet, 4 – Large living wing, 5 – Cellar wing, 6 – Caretaker’s house, 7 – Colonel’s wing, 8 – Canopy, 9 – Stable wing, 10 – Pantry, 11 – Servant’s barracks, 12 – Shed, 13 – Barns, 14 – Two-storey cavalier house, 15 – Service to it, 16 – Winter flower greenhouse, 17 – Ground cherry barn, 18 – Shed for storage of shields, 19 – Fire shed, 20 – Stables, 21 – Pantry, 22 – Garden master’s house, 23 – Glacier and bath, 24 – Barn, 25 – Hotbeds, 26 – Guardhouse at the entrance from Kipen, 27 – Bathroom, 28 – Apiary, 29 – Forge, 30 – Cherry greenhouse, there are: a – pineapple and new grape, 31 – Big peach alley, 32 – Peach greenhouse, it consists of: a – strawberry, b – drain, c – new apricot, d – old apricot, e – early peach, 33 – Grape-greenhouse in it are: a – greenhouse, b – peach, c – old grape, 34 – Guardhouse at the entrance from Krasnoe Selo, 35 – Garden guardhouse, 36 – Canopy).
Stage 4. 1908-1917, the Estate was sold in parts. From 1918, the land and buildings were nationalized.

3.3. Uniform spatial structure of estates of the highest nobility on the territory around St. Petersburg.

The study of regularities of spatial localization of estates of the highest nobility around the capital St. Petersburg showed the unevenness of their placement. On the territory of the most historic city (within the boundaries established in 1858-1860) there are 20 estates, within the boundaries of the neighboring counties – 120 estates, and within the boundaries of the distant counties-84, in total – 214 estates. In the territories adjacent to the capital St. Petersburg provinces: Novgorod (in European Russia) - 20 estates; Vyborg (Grand Duchy of Finland) - 27 estates. Thus, all around the historic St. Petersburg to 1917 there were 271 "near estates of the highest nobility" (Figure 6).

Moreover, up to the outer borders of the neighboring counties, such estates were placed almost as a single dense ring, concentrating as much as possible around the city Imperial Palace ensembles and suburban Imperial Palace and Park residences. The estates themselves were characterized by larger spatial and landscape dimensions, as well as greater complexity of functional and compositional structure (compared to conventional noble estates). In the territories of the outer counties, smaller estates were placed in large "nests", "bushes" along the main highways departing from St. Petersburg, around the main estates, having smaller sizes compared to the estates of the neighboring counties. As well as along major land and water highways. Such a dense and interconnected spatial localization of estates of the highest nobility in the vast spaces around St. Petersburg allows us to assert that during the XVIII-early XX centuries a well-ordered network of estates was formed, which actually became a special representative layer (layer of representative estates) of the historical St. Petersburg agglomeration [19].

These materials for the first time in the historical and urban sphere reveal a special "layer" of the most prestigious estates located around the capital city of Russia-St. Petersburg and formed by 1917 a single spatial system focused on territorial and social interaction with the Imperial court (Imperial
residences), as well as – on the periphery – on a particularly dense interaction with each other (Figure 7). The processes, features, regularities of identifying such territorial mutual placement of the largest estates in the spaces, the size of hundreds of square kilometers require additional research.

**Figure 6.** 1917. Placement of estates of the aristocratic society throughout the territory of St. Petersburg province and in the surrounding provinces.

**Figure 7.** 1917. Placement of estates of the aristocratic society within the borders of the belt of the St. Petersburg agglomeration.
4. Conclusion
Thus, the analysis of the processes of further development of the St. Petersburg agglomeration during the XIX-early XX centuries showed a fairly rapid expansion of the territory of the agglomeration following the reformation of the out of Petersburg transport system, which included the traditional land and water routes from the XVIII century. These transformations led to the birth of new functional and landscape elements in the significantly expanding territories of the near belt of agglomeration – holiday villages, holiday zones and country belts, created on the principles of regularity "garden cities and garden suburbs". All this led to the continuation of the processes of transformation of the emerging agglomeration in the "ideal agglomeration" on the principles of "regularity".

Recommendations
The article can be recommended to historians of architecture and urban planning, as well as modern urban planners, architects, urbanists, designers dealing with the problems of urban development and agglomerations.

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