

The categorization of a country house

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ABSTRACT

There are currently no methods of justification categories of suburban housing from an investment attractiveness of land in the Leningrad region. In addition, there is no classification of cottage settlements in Russia. This article provides an explanation of the link between the category of suburban housing and investment attractiveness of the land. The objectives of the study are the analysis of factors influencing investment attractiveness of land plots in Leningrad region; analysis of the factors influencing the category of suburban housing; justification competent relationships between these data. The article suggests recommendations for choosing the category of suburban housing, depending on the investment attractiveness of the land. People choose their house in a cottage settlement in accordance with their status and needs. The status of the cottage settlement directly depends on the investment attractiveness of the land on which it is built. The original characteristics of the land cannot radically change in the process of operation, and the house in this area can be significantly upgraded and modernized, the plot is largely a determining factor in the classification of suburban housing.

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1. Introduction

The development of the largest cities in the world today cannot be imagined without the development of the country territories. For St. Petersburg, with its impossibility development of the historic districts, as well as the large influx of residents, the use of areas outside the city limits is especially relevant, because it allows to create high-quality, comfortable accommodations without distorting classic town image [1, 2].

The suburban housing market is one of the most rapidly developing areas business [3, 4]. This is due to several reasons:

- the growing popularity of country houses among modern citizens;
- active suburban development in accordance with approved master plans;
- the desire of urban dwellers to the improvement of habitat.

The land market of the Leningrad region is heterogeneous. Stands out as depressive areas where almost non-existent investment and construction activity and areas the high potential that *Literary review* determines the relative level of prices of plots of land of these areas. For comfortable and modern cottage settlement needs a good area to create high-quality of the General plan. For this reason, the correct choice of the land plot, which will correspond to categories of cottage settlement, is an important and urgent task.

2. Literary review

The question of determining the price of land is among the most controversial in modern Russian economic science. This is because the price of land is not only economic, but also largely a political factor. In Russia there is no sufficient the number of studies of factors influencing investment attractiveness of the land areas of the Leningrad region. In other countries this question is not studied.

The researchers did not consider in detail the classification of cottage settlements and their types. There is very little literature, which might be used to developers and buyers when determining the exact class of the cottage settlement. Developers of business plans construction cottage villages choose their own lands, each time analyze indicators of land for construction the cottage settlements of different types [5, 6].

3. Goals and objectives of research

The purpose of this study is to validate the category of suburban housing from investment attractiveness of the land.

Objectives of the study:

- analysis the factors influencing investment attractiveness of the land
- areas of the Leningrad region;
- analysis the factors influencing the category of suburban housing;
- justification proper relationships between these data.

4. Factors that determine the investment attractiveness of the land

The question of determining the price of land is among the most controversial in modern Russian economic science [7 – 10]. However, there are principles and factors determining the formation and development of the land market in modern Russia.

The principle of external influence is the market value of the land defined by the influence of external factors. For example, assessment of the location of the land depends on the conformity of the plot parameters adopted in this place the land-use type and its proximity to centers of economic activity [11, 12].

The following indicators should be included in the basis for the selection of land.

5. Transport equipment

The higher the quality of highways, and access roads to the village, the easier it will get from school or work.

The popularity of land will grow considerably, if in addition to cars you can get by railway communications, train and bus. Moreover, if you find that the train station is located near the cottage of the village, this will further raise the price rating [13].

For example, in the Leningrad region the following classification of the remoteness of the land is adopted from the ringway:

- up to 10 km;
- 10...20 km;
- 20...30 km;
- 30...40 km;
- 40...60 km;
- 60...80 km;
- more than 80 km.

For land plots in the Leningrad region there are three main criteria contributing to the prestige of their location is the direction (in this case taken be attached to the highway), the distance from the ring road and surrounded by land. According to these characteristics, determining the demand for land, land themselves do not differ from the cottage villages and other rural real estate that due to the different needs a potential buyer. The dependence of the value of the land and remoteness from the city shown in table 1.

If the land is acquired for cottage construction or a country the residence, then it is desirable that the distance to the city could be accomplished in approximately 40 - 50 minutes. This is the time that on average is spent on the road with a trip to the big city with regard to existing traffic problems. Waste more time on a daily trip to work when you live outside the city is undesirable. Therefore, the most prestigious distance is the distance is 20 km away.

Table 1. The dependence of the value of the land and its distance from the town

	The name of the highway	The distance from the town, km	Plot size, Ha	The total cost, thousand rubles*
	Ryabovskiy highway	29	0,1	1 000
	Murmansk highway	80	0,1	250
	Vyborg highway	100	0,1	340
	Moscow highway	60	0,1	199
	Priozersk highway	24	0,1	1 150
	Priozersk highway	21	0,1	1 150
	Scandinavian highway	50	0,1	722

Note

* Prices are as of July 2015

6. The remoteness of the site from places of employment

For the reason that economic centers are the concentration of financial, material and human resources, investment attractiveness of land, and hence their market the cost greatly depend on the proximity or remoteness of their location from the economic centers [14].

The dependence of the value of the land area of 0.1 hectares and remoteness from the city on Moscow highway are shown in the table 2.

Table 2. The dependence of the value of the land area of 0.1 hectares and remoteness from the city, on the Moscow highway

№	The distance from the town, km	The total cost, thousand rubles*
1	22	640
2	28	575
3	41	555
4	50	400
5	65	210
6	74	194
7	75	196
8	85	170
9	100	160
10	160	199

This distribution of market value of land is due to the fact that the Centralis attractive part of the city for administrative and business activities, so the market value of the land in the city center will be maximum [15, 16].

The territory of the city, close to commuter line has a better environment, so it is more attractive to the placement of residential development. In this regard, the market value of land decreases depending on the increase of the distance from the city center.

Figure 1 shows the dependence of the value of the land of 0.1 hectares and its location (distance from the center of the city) and 15 directions of the Leningrad region.

In the majority of directions, it is possible to notice smooth reduction of cost in proportion to increase of distance from the city. However, schedules has a leap, which can be explained with existence near a site of historical sight, a reservoir, the picturesque wood, large shopping center.

In addition, you can identify the most popular directions of the Leningrad region. The most popular destinations are Beloostrovsky region, Zelenogorsk area, Resort area, Primorsky district, Petrozavodsk district.

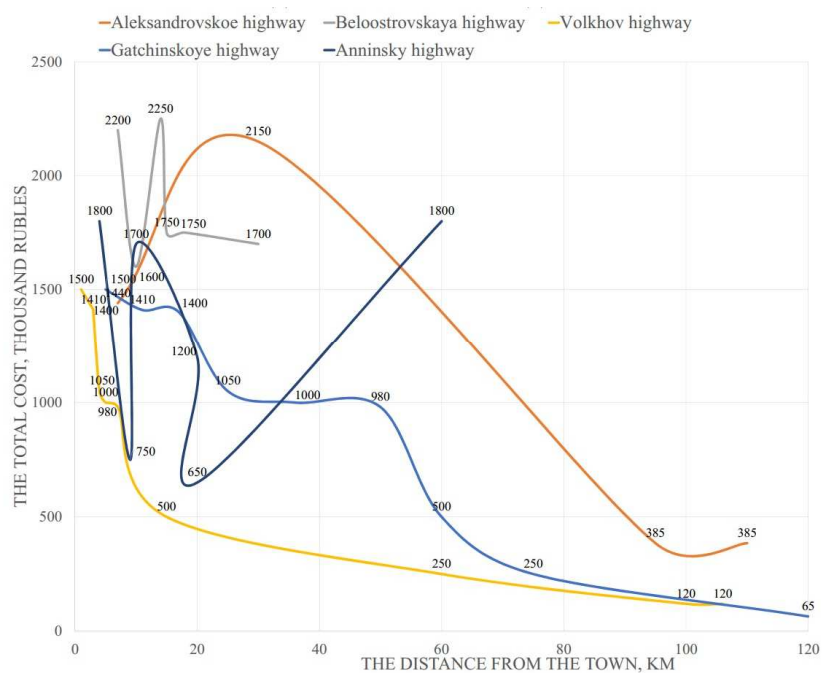


Figure 1A. The dependence of the value of the land and remoteness from the city

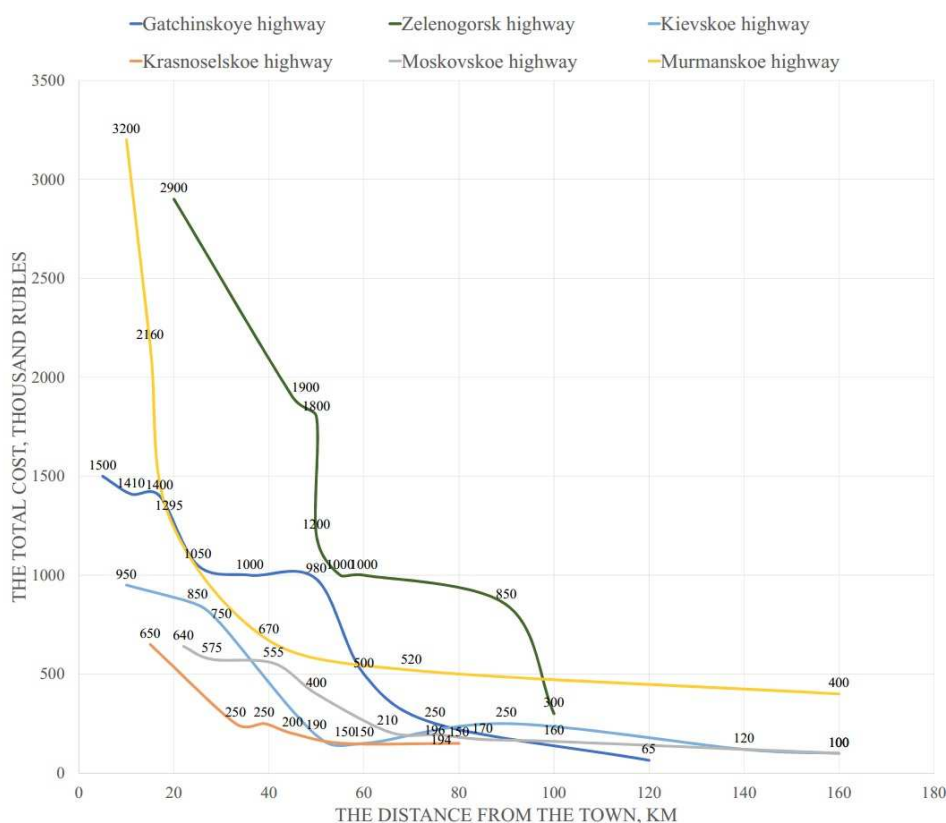


Figure 1B. The dependence of the value of the land and remoteness from the city

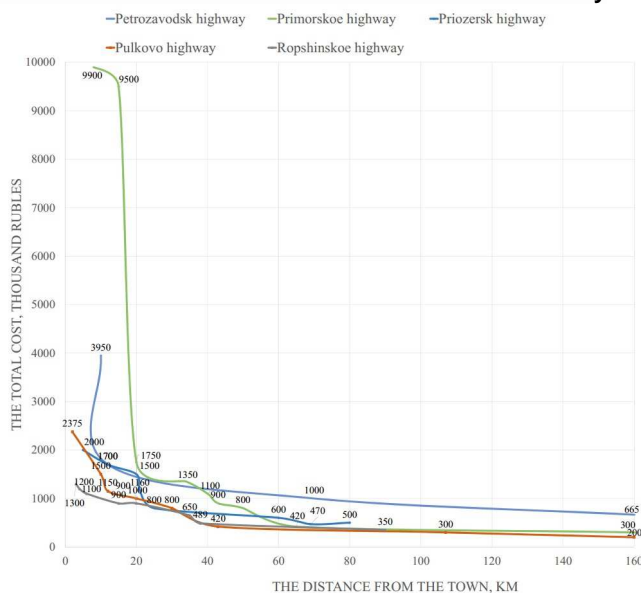


Figure 1C. The dependence of the value of the land and remoteness from the city

7. The appeal to a potential buyer

The village should be located not only in beautiful but also environmentally friendly places.

The ecology of the district consists of the following main indicators:

- condition of the soil, air, and water;
- validation of radiation environment;
- the level of physical influences (electromagnetic field, vibration, noise);

– assessment of results of medico-biological and sanitary-epidemiological research.

Important recreation zones: recreation and walks, the presence of a natural reservoir. Also always in the price of the cottages on the first line because you can see the river or lake from your window. The presence of historical monuments, buildings can also increase the cost of the land.

The close location to the land plot of power lines, pits of granite, sepulchral burials, chemical plants, hazardous production facilities, a big congestion of garbage, towers of cellular communication is undesirable [17].

8. Area

Pricing factors after the location of the land is its area.

9. Engineering infrastructure

Comfortable accommodation in a country house based on high-tech and reliable of engineering systems. Modern engineering systems are a complex system communications, which include those necessary for life infrastructure as a system heating and water supply, sewerage and electric power supply of a country house [18, 19]. However, these systems are only required technical minimum, which is included in the concept of engineering systems. Besides necessary for civilized life of light, hot and cold water, modern engineering system also allows owners of country houses to equip their homes for more infrastructures.

10. The system of cultural and community service

Institutions of cultural and community purpose are designed to satisfy all the needs of the population in the area of welfare and recreation. These institutions are centers of gravity, so their presence is very important for the normal functioning of a modern cottage settlement [20].

In case of absence of one of these elements, the business plan of construction cottage settlement will help to estimate the costs of their creation.

11. Category of country houses

Classification of cottage settlements in Russia, in general, so far are not present.

For this reason, the most developers while deciding about the status of a suburban real estate follow own opinion about certain attributes of the village. But there are quite clearly determined the criteria and rules on which the cottage settlement can be attributed to elite country real estate, premium, luxury or economy class, business class [21].

The status of cottage settlement depends on architectural decisions themselves cottages, sizes country house, future maintenance of the house in operation, closeness and privacy of the village [22].

On the value of houses is influenced by other housing factors: remoteness from highways, availability of natural reservoirs and forests, the number of country houses in the village, the level of infrastructure and transport accessibility. It turns out that the status of a cottage settlement in heavily depends on the characteristics of the land on which it is built. Also the cost the land is 10...50% of the total value of a country cottage. The ratio the land value and the total value of land are shown in table 3.

Table 3. The ratio of land value to a total cost

Features			The total cost, thousand rubles	The cost of land, thousand rubles	Percentage, %
District, distance from the city	Plot size, ha	The area of the house, m ²			
Vsevolozhsky district, 25 km	0,1	166	4 500	1 500	34
Gatchina district, 50 km	0,1	132	5 500	600	11
Vsevolozhsky district, 12 km	0,1	185	8 999	1 880	21
Priozersky district, 65 km	0,15	158	5 300	2 600	49
Lomonosovsky district, 15 km	0,20	175	6 200	2 500	40

12. Planning decisions

Areas in the cottages economy class not greatly exceed the minimum requirements. In while the floor space in the cottage premium could be substantially higher than normalized values (figure 2). Plan of cottages economy class more often than usual rectangular the form and layout of the cottages premium can be very intricate, nonlinear, and not standard [23, 24]. The ratio of areas of the cottages of different classes to the norms is shown in table 4.

Table 4. The ratio of areas of the cottages of different classes to the norms

The name of the room	Area rate, m ²	Cottage economy		Cottage premium	
		Area, m ²	The coefficient exceeds	Area, m ²	The coefficient exceeds
Common room	12	14,36	1,20	34,78	2,90
Bedroom	8	13,04	1,63	30,80	3,85
Kitchen	6	10,97	1,83	30,50	5,10
Bathroom	1,8	4,04	2,25	12,60	7
Toilet	0,96	1,2	1,25	5,00	5,21

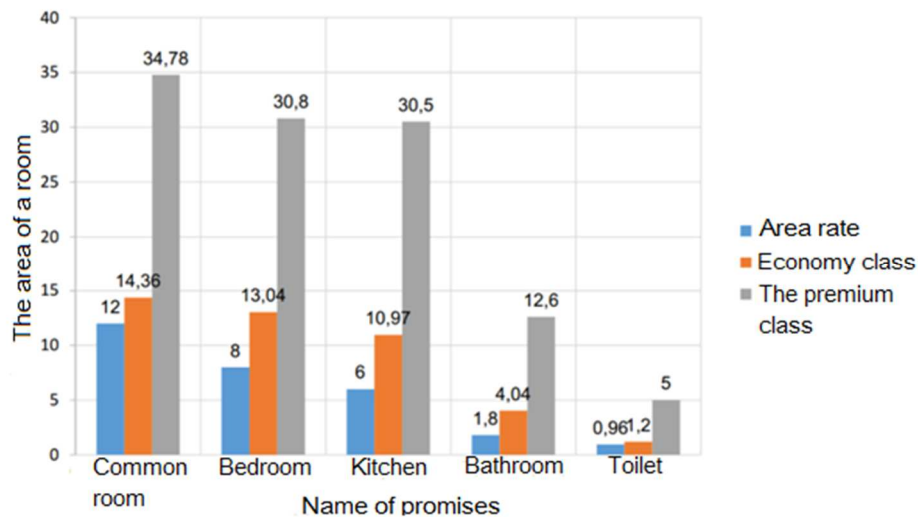


Figure 2. The ratio of areas of the cottages of different classes to the norms

The cottages economy class have only necessary spaces such as a bedroom, kitchen, living room, and bathroom. Cottages premium in addition to the necessary space includes premises that meet the individual requirements of the buyer. It can be fitness hall, billiard room, study room, swimming pool, walk-in closet. The total area of technical facilities and their number also prevail in the premium class.

13. Further service

According to experts, the cost value, preferable to buyer, for operation of a country house has to be equal cost value on operational expenses of the city apartment 3 - 4 rooms. In general, for the buyer – the less expense is better.

All monthly expenses of owners of cottages are divided into two parts:

- Operating costs (use of engineering systems, cleaning and maintenance territory, security, deductions for home improvements).
- Utility payments (heat, water, sewer, garbage collection). Electricity and telephone services in the total payment are not included into the general payment and paid separately. About 60...70% of the amount spent on cleaning and maintenance site. The developer may choose several schemes of receiving profit from the cottage village. For example, the initial cost of a land plot may not be great, but it will be great monthly fees for the further service and vice versa [25].

It was not successful to find out dependence of cost of service on the market value of square meter of housing. It is obvious that management companies set the price, in accordance with a total area of maintenance of the house. Than it is more, than higher the price and vice versa. In addition, this trend is traced in other classes of

houses. Another way of calculating operating costs by counting the total amount cost for a certain period of time, which is divided by the number of households.

In the villages of economy class, operational payments are not too onerous and usually include payment for the protection, cleaning and garbage removal. In the villages of business class and elite settlements services are much higher level and much more diverse. Here already pay cleaning of public zones (in the summer one price, in the winter – another), sanitary and hygienic processing of the general territory, maintenance of a road condition and protections, various repair work, illumination of arbors, walking paths, cleaning of reservoirs, forests.

14. *Energy efficiency of a cottage*

Energy efficiency of the house is a great feature for houses of various classes, from the cottages economy class to premium class. This tendency became actual not in vain at all. It is more favorable to invest a little more money in construction of the house and to save on further service, than every month to spend large sums for electricity, water, and so on.

Important role in a question of energy efficiency is relation of people. If there is no desire to save, pull out charging from the socket after use, to turn off the excess light – solar batteries simply will not be enough. In order to use power effective technologies, the person must have the corresponding mentality and desire, only then all costs of construction will pay off during the operation.

What makes a house a sustainable house?

1. Use of green materials
 - Wood is strong, flexible, renewable and CO2 positive material.
 - Timbercrete is combination of timber waste (sawdust) from various sources and concrete. This results in a material that is lighter than solid concrete, but of greater strength and with better insulating capabilities.
 - Straw bale building is made from natural materials they are a sustainable, recyclable, non-toxic and healthy form of building construction.
 - Eco brick is recycled conventional brick. It is strong, renewable material, which has long life.
2. Energy efficient insulation
 - Mineral wool
 - Fiberglass
 - Extruded polystyrene (XPS)
 - Rockwool
 - Polyurethane foam
 - Aerogel

All of these materials have approximately the same coefficient of thermal conductivity - 0.04. Therefore, the choice of material probably will be more dependent on the quality, ease of work, durability, ecological compatibility and cost.
3. Reducing of energy consumption
 - Use of light sensors, dynamic lighting, resource-saving light sources with electronic control gear (ECG) will help to reduce energy consumption in your house.
 - Absorption chillers/heaters work on natural gas. Such systems can reduce the consumption of electrical energy by the use of relatively cheap natural gas. This equipment chills the water for conditioning system.
 - Smart grid – It is system, which collect information about energy production and consumption and automatically improves the efficiency, reliability, economic benefits, and the sustainability of production and distribution of electricity.
 - Double-glazing reduce structural heat gain and heat losses.
4. Water saving
 - Waste Water Treatment System can be used for flushing toilets or air-cooling.
 - Rainwater cistern (System of collecting and storage of rainwater) can be used for collecting rainwater and using after for irrigation of green area. It may be located in the basement level.
 - Water reuse for a garden
 - Usage dual flush button – 2 and 4 liters reduce water consumption.
 - Metered Valve Faucets- These faucets shut off after a designated amount of water is dispensed from the tap.
 - Dual use of water (monoblock consisting of a toilet and sink).
5. Ventilation energy saving system

- Ventilation with variable air flow (VAV) and CO₂ sensors. The concentration of carbon dioxide and moisture in the room is dependent on the number of people in it. The sensors respond to the concentration of CO₂ and moisture and supply the demanded amount of air to the room.
- Heat recovery systems the energy saving technology based on the principle of a reuse of heat of the deleted fulfilled room air for heating of fresh stitched air.

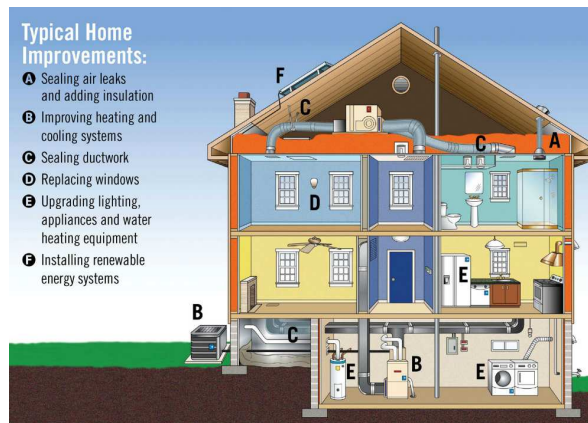


Figure 3. Typical home improvements for achievement of energy efficiency of the building

15. Conclusion

Uniformity of a social environment is of great importance for many people when they choose a home in the country. People feel more comfortable with people when they have approximately identical social status, similar interests. People choose the house in a certain cottage settlement according to the status and needs. The status of cottage settlement is directly depends on investment attractiveness of the land on which it is built.

Baseline characteristics of the land cannot be changed radically in the process operation, and the house on this site it is possible to significantly improve and modernize, the land is largely the determining factor in classifying country housing.

To develop the correct category justification suburban housing from investment attractiveness of land it is necessary to create a typology of cottage settlements, which would concentrate on something relatively stable; to create detailed typology the land areas of the Leningrad region. After that it will be possible to offer more detailed communication between land plots of different investment attractiveness and various categories of cottage settlements. That further will be able to simplify considerably work on the business plan of construction the cottage settlements.

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Категоризация загородного жилья

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ИНФОРМАЦИЯ О СТАТЬЕ	ИСТОРИЯ	КЛЮЧЕВЫЕ СЛОВА
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АННОТАЦИЯ

В настоящее время отсутствуют методики обоснования категории загородного жилья от инвестиционной привлекательности земельного участка в Ленинградской области. Так же пока нет классификации коттеджных поселков в России. В данной статье предлагается пояснение связи между категорией загородного жилья и инвестиционной привлекательности земельного участка. Задачами исследования являются проведение анализа факторов, влияющих на инвестиционную привлекательность земельных участков Ленинградской области; проведение анализа факторов, влияющих на категорию загородного жилья; обоснование грамотной связи между этими данными. В статье предложены рекомендации по выбору категории загородного жилья в зависимости от инвестиционной привлекательности земельного участка. Люди выбирают свой дом в определенном коттеджном поселке соответственно своему статусу и запросам. Статус коттеджного поселка напрямую зависит от инвестиционной привлекательности земельного участка, на котором он построен. Исходные характеристики земельного участка нельзя кардинально изменить в процессе эксплуатации, а дом на данном участке можно значительно усовершенствовать и модернизировать, земельный участок в большой степени является определяющим фактором в классификации загородного жилья.

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