

## **3D PROPERTY OWNERSHIP 3D LAND USE IN FINLAND**

**KAUKO VIITANEN**

Helsinki University of Technology  
Finland

### **ABSTRACT**

Ownership of real property is not vertically restricted (clearly) in many countries, i.e. the right of use is based on the situation on the surface level. Underground and overground premises may be brought for the use of a third party by establishing a usufruct restricting the right to use the property. However, in many countries it is possible to establish three-dimensional real properties and get also a market for 3D properties.

In Finland the 3D land use in buildings is arranged rather far through a third way with the limited company system. There is specific legislation for housing stock companies, which is also applied to mutual real estate stock companies. In a housing stock company the ownership of a shareholder entitles to the possession of certain premises (apartments) stated in the articles of association. The share certificates may be pledged as security like the shares of an ordinary limited company. The share certificates, i.e. the apartments, have an active market and they are quite liquid.

It can be said that the 3D land use in built up properties is functioning very well in Finland. There are, however, some problems when there is a need to use the space under or over an existing real property and when there is also a need to mortgage that right.

## REAL PROPERTY IN FINLAND

The Finnish territory is divided into real properties and other register units. A real property is a unit of ownership, which shall be registered in the cadastre as a real property (*Real Property Formation Act 2 §*). There are nine different types of real property units (*Real Property Registration Act 2 §*). This article concerns two of the most common types unless otherwise stated. These real property types ("estate" and "site") are the normal types in the property market and the private ownership. The rest are mainly public land and water areas with special restrictions. Other register units consist of state roads and common areas owned by real properties (indirect ownership).

A real property unit is an item of ownership, use, conveyance and pledge. Buildings belonging to the same owner as the land they are located on are part of the real property. A property unit may also include various rights of usufruct. It may consist of several separate parcels of land or water (*Viiitanen et al. 1997*).

The vertical extension of real property in Finland has not been strictly limited in legislation, which means that the right of ownership is based on the situation on the surface level. The ownership does not, however, include any minerals or mineral rights, and underground land use may also have been restricted by the municipal building regulations. Overground land use generally calls for a building permit and is particularly restricted by planning in the urban areas and the legislation concerning aviation (*Fontell et al. 2001*).

Underground and overground premises may be brought for the use of a third party by establishing a usufruct restricting the right to use the property. The usufruct may be based either on an agreement or a coercive measure, generally expropriation or formation of a servitude. The owner of the real property is entitled to compensation in case of economic losses (*Expropriation Act*).

Mineral rights for excavating are based on a mining claim. The prospecting rights are petitioned from the Ministry of Trade and Industry. The landowner will be compensated for the usufruct restrictions, but will mainly get a nominal compensation for the area in use and the excavated minerals. Generally the holder of the mineral rights will, however, obtain the proprietary right even for the land of the mining area (*Minerals Act*).

The proprietary rights are entered two-dimensionally in the cadastre and the land register. The mortgages may concern just the real properties. The perpetual easements and other usufructs are entered in the cadastre under the encumbered and, if possible, also the justifiable real estate. Temporary

restrictions (rights) of usufructs based on an agreement are entered in the land register (Land Code). The mineral rights are entered in the mine register maintained by the Ministry of Trade and Industry. The restrictions and rights in accordance with the Water Act are also entered in the water register maintained by the environmental administration.

In Finland the public road area is separated as an independent cadastral unit. This has, in practice, led to the establishment of the right of way up to the surface, even though the road may go in a tunnel. This has caused problems especially in the urban areas where one may want to build above the road.

### **3D USE OF BUILT UP PROPERTIES**

In the economic activity the regulations for real properties have not been very flexible or favourable, and that is why the property business, especially in the population centres, has largely been based on property securitisation. The real property is treated in the form of a company, investment company, fund, etc.

The 3D land use in buildings is rather far arranged through the limited company system in Finland. There is a specific legislation for housing stock companies, which is also applied to mutual real property stock companies. In a housing stock company the ownership of a shareholder entitles to the possession of certain premise (apartment) occupied by the company and stated in the articles of the company (*Act on Housing Stock Companies*). The share certificates may be pledged as security like the shares of an ordinary limited company. Usually the banks will grant a credit against the share certificate of a housing stock company worth some 70 % of the apartment value.

The share certificates, i.e. practically the apartments, have an active market and they are quite liquid. A new shareholder is entitled to occupy an apartment when the company has been informed about the new shareholder. He may use his rights in the company after the conveyance has been recorded in the stock register of the company. The stamp duty must be paid before this can be done. The apartments and the shareholders are not registered in the cadastre or land register.

The management and the maintenance of the message of a housing stock company or a mutual real property stock company are the responsibility of the shareholders through the company board. The same applies to the possible underground premises, e.g. parking spaces in a car park. A company may have shares entitling to various different premises, e.g. apartments, office and business premises, storage spaces, garages, etc. The

spaces and the areas not belonging to any of these are in the possession of the company.

The most important decisions, e.g. on renovations, renewing, mortgage debts and the amount of service charge are made by the meeting of the shareholders. They also accept annual accounts and release the board members from liability. Normally the companies show no profit. Service charge is collected to cover the costs e.g. for heating, rent of the site (if not owned by the company), electricity, garbage disposal, management and maintenance paid by the company. Normally the charging unit is the area of the apartment or premise or the number of the shares. The holder of an apartment or premise is entitled to rent the apartment or premise and in that way he can also make profit.

We can say that the apartments in the housing stock companies make the most liquid share of the real estate market in Finland. The conveyance of shares of a company can yet be restricted in the articles of association e.g. by pre-emption or corresponding conditions.

In the residential sector there are also other quite new forms of occupying apartments, such as residential right and joint ownership. They are some kind of mixed forms between ownership and tenancy. The basic idea is to get a better protection of residence than in tenancy, which can be achieved with an investment of a fixed amount, e.g. 15 %, of the acquisition value of the apartment by the resident (*Act on Apartments of Residential Right*).

## CONCLUSIONS

It can be said that the 3D land use in built up properties is functioning very well in Finland. The only bigger problems pertain to the registration system. The apartments in the housing stock companies are not clearly registered in public but in the company's real estate register. Public information on the apartments is therefore limited compared with the information on the "normal" real properties. This could be solved by registering the apartments and premises also in the cadastre and land register. However, as there seems to be no problems in the present systems it is unsure if there is a sense in changing the system.

There are, however, some other problems in the Finnish 3D land use especially when there is a need to use the space underneath or above an existing real property and when there is also a need to mortgage that right. Further, it can be noted that the Finnish Land Use and Building Act prescribes the 3D planning and plans. The Act, and in fact the whole legislation does not, however, include the implementation procedure of a

3D plan, except for easements and corresponding usufructs. This is a matter, which should be corrected.

When considering the establishment of a 3D cadastral system the primary issue is the need of such a system. Should there not be an economically justified need for the system it is not worth developing just for the sake of interest. In the Finnish cadastral system the need for a 3D system can be justified by four reasons:

1. When building above public roads or taking a road in a tunnel under the ground it is not possible to create mortgageable proprietary rights except by artificial solutions. System tricking is not, however, convincing.
2. In the urban areas the cadastre would be more explicit if the premises built above and underneath the street area, which is one of the real estate types in Finland, were clearly indicated. The present two-dimensional system is not illustrative enough and can thereby cause misinterpretations.
3. A 3D planning system would also require a 3D implementation system. The benefits of the 3D planning will otherwise be limited.
4. Privatisation of the spaces for municipal technology and other infrastructure may lead to the need of mortgaging the premises. The potential for transactions and registration of the premises are, however, preconditions for mortgage. It seems at the moment that this is not possible even with a mutual real property company.

However, no calculations on the economic grounds for the new system have yet been presented in Finland.

## REFERENCES

*Fontell, M., Ekroos, A., Viitanen, K. (2001):* Yleisen tien kattaminen tai tunnelointi - Lainsäädäntö, kaavoitus ja kiinteistönmuodostus. [Building above Public Roads or Taking a Road in a Tunnel – Legislation, Planning and Property Formation (in Finnish)]. LT-Konsultit Oy & Teknillinen korkeakoulu. LYYLI-raporttisarja 29. Helsinki. 26 p. + app. 27 p.

*Viitanen, K., Vuorio, K., Yli-Laurila, M., Anttila, K. (1997):* Urban Property Market and Land Law in Finland. Publication B80. Institute of Real Estate Studies, Helsinki University of Technology. Espoo, Finland. 76 p.

*Acts:* Act on Apartments of Residential Right; Act on Housing Stock Companies; Expropriation Act; Land Code; Land Use and Building Act; Minerals Act; Real Property Formation Act; Real Property Registration Act; Water Act.

**ABOUT THE AUTHOR**

*Kauko Jussi Viitanen* (31 August 1955), Professor of Real Estate Economics and Valuation, Ph.D., is Head of the Department of Surveying, Helsinki University of Technology (HUT) since September 1, 1999. In 1998 he became a professor at the Department of Surveying of the Helsinki University of Technology. From 1992 till 1998 he was an associate professor of Land Management at the same university. In the period 1989-1991 he was a department manager, Huoneistomarkkinointi Oy, Department of Market Research and Information. He worked as a special researcher and researcher at the Technical Research Centre of Finland, Laboratory of Urban Planning and Building Design (1986-88). He started his career as a surveying engineering at the National Land Survey of Finland (1978-86).

Memberships:

- Member of Committee of Ministry of Education for Education in Building Sector (1998-2001)
- Finnish Association for Real Estate Valuation (Chairman 1999-, Member of the Board 1994-)
- Finnish Association for Authorised Real Estate Valuers (Chairman 1999-)
- Surveying Science of Finland, Editorial Board (1994-, Member)
- Foundation for Promoting the Field of Surveying (1996-, Member of the Board of Directors)
- Finnish Association of Surveying Science (1993-96, Member of the Board of Directors)
- Finnish representative in the International Federation of Surveyors (FIG) in Commission 9, Valuation and Management of Real Estate

**CONTACT ADDRESS**

Name: Professor Kauko Viitanen  
Institution: Institute of Real Estate Studies  
Helsinki University of Technology  
Office address: P.O. Box 1200  
FIN-02015 HUT  
Finland  
Telephone: +358 9 451 3870, Mobile +358 50 560 3873  
Fax: +358 9 465 077  
E-mail: kauko.viitanen@hut.fi

**SOME PUBLICATIONS**

*Fontell, M., Ekroos, A., Viitanen, K. (2001):* Building above Public Roads or Taking a Road in a Tunnel – Legislation, Planning and Property Formation. LYYLI-Publication 29, 53 pages, Helsinki. LT-Konsultit ltd & Helsinki University of Technology. (In Finnish)

*Viitanen, K. (2000):* The Finnish Urban Land Readjustment Procedure in an International Context. Publication 4:84, 397 pages, Stockholm, Royal Institute of Technology, Real Estate and Construction Management, Real Estate Planning and Land Law. (In Swedish with a summary in English)

*Viitanen, K. (2000):* Plannyskifte – The Finnish Urban Land Readjustment Procedure which was not used? Publication 4:83, 54 pages, Stockholm, Royal Institute of Technology, Real Estate and Construction Management, Real Estate Planning and Land Law. (In Swedish)

*Viitanen, K., Vuorio, K., Yli-Laurila, M., Anttila, K. (1997):* Urban Property Market and Land Law in Finland. Publication B80, 76 pages, Espoo, Real Estate Studies and Economic Law, HUT.

*Pirinen, T., Palmu, J., Viitanen, K. (1997):* Renewal of Built-up Areas - Proposals for Promotion of Partnership Activities. Publication 505359, 91 pages, Helsinki, The Association of Finnish Municipalities. (In Finnish)

*Viitanen, K. (1996):* Influencing in land use planning and urban land readjustment. Publication 4:76, 44 pages, Stockholm, Royal Institute of Technology, Real Estate and Construction Management, Real Estate Planning and Land Law. (In Swedish)

*Viitanen, K., Santala, J., Mella, J. (ed.) (1994):* Environment and Real Estates. Publication 31, 231 pages, Helsinki, The Finnish Association of Surveying Science. (Mainly in Finnish)

*Viitanen, K., Mäenpää A.M. (ed.) (1994):* Land Management in Rural Areas. Publication C55, 142 pages, Espoo, Real Estate Studies and Economic Law HUT). (In Finnish)

*Labti, P., Viitanen, K., Harmaajärvi, I., Karvinen, R., Pusin, S., Tolsa, H. (1989):* The impacts of large traffic investments on community structures. Three case studies. Research Notes 1023, 246 pages, Espoo, Technical Research Centre of Finland. (In Finnish, abstract in English)

*Viitanen, K., Saari, I. (1988):* Valuation of business losses in compulsory purchases. Research Notes 865, 237 pages, Espoo, Technical Research Centre of Finland. (In Finnish)