



DEVELOPMENTS OF THE 3D CADASTRE IN NORWAY

An introduction to the latest developments on the law on the cadastre in Norway with the possibility to create 3D parcels.
New software has made it possible to visualize the underground 3D parcels that has been registered in Oslo in the last 20 years.

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CITY OF OSLO



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STATISTICAL DATA FROM OSLO

- Oslo has a population of 539.000
- Oslo has an area of 454 km² with a built up area of 120 km²
- The municipality employs 43.000 persons with a yearly budget of 3.800.000.000 Euro
- There are 65.000 properties, 96.000 self owned apartments (leaseholds) and 125.000 buildings in Oslo

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PLANNING AND BUILDING SERVICES

- The agency is part of the city administration of Oslo and has about 400 employees
- The main tasks are designing overall development plans and granting local development plans and building applications.
- The agency is responsible for the maintenance of base maps, cadastral maps and development plan maps as well as cadastral surveying and the municipal land information system

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THE CADASTRAL PROCESS

- The process of subdivision starts with an application from the owner. A municipal map showing the new boundary must accompany the application
- The agency handles the application according to the planning and building act and the overall and local development plans covering the area
- If the new parcel is of a suitable size to build a house upon, the application will be granted
- The permission is valid for three years

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THE CADASTRAL PROCESS

- The actual surveying and registration of the new parcel is carried out according to the land subdivision act



A meeting in the field is carried out with the owner and any concerned neighbours and the new parcel is surveyed and the boundaries marked

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THE CADASTRAL PROCESS

- The surveying are carried out with the use of a robotic total station or with a GPS rover
- Survey calculations are done with Norwegian software and a survey certificate is issued that show the details of the new parcel
- The map details are transferred to the digital cadastral map and details about registration number, area, address and owner are registered in the municipal information system (the same data will also be registered in a similar national database)
- At last the survey certificate is sent to the Land Registry. This is the legal part of the cadastre (Grundbuch) and has up to now had a separate administration from the technical cadastre. It is now in the process of being established in the same organisation (The Norwegian Mapping Authority), but it is still not what can be called a unified register

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THE CADASTRAL SYSTEM IN OSLO

The 3D Cadastral System of Oslo

- The present law on subdivision from 1978 had no provision for three-dimensional parcels so the City of Oslo established a system called the Oslo Method in 1987 based on an agreement between the City of Oslo and the local court
- About 100 3D parcels have been registered since
- An underground parcel is precisely defined in all three dimensions and ownership is limited to the constructed volume only
- Special register number, since 300 are added to the area number of the surface parcel
- Underground parcels may also be surveyed, but usually we accept the contractors drawings
- Survey certificates are always made and used to register the new parcels in the national property register

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CADASTRAL SURVEYING IN OSLO



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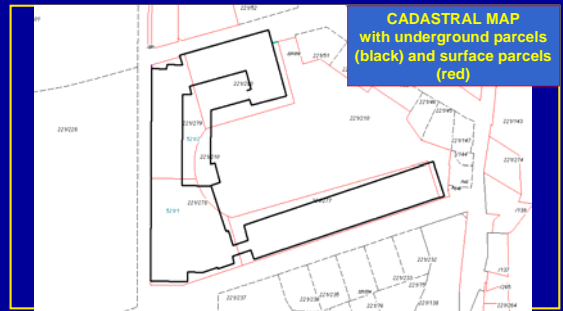
NEW LAW ON THE CADASTRE

New Law on the Cadastre

- A new law to replace The Subdivision Act has been in the making since 1998. It was approved in the Parliament in 2005 and was supposed to be enacted in 2007. But the present government want to change the law and we will not have any new law on the cadastre before 2008
- This law does not make any property three-dimensional, but it opens up for the creation of special "construction parcels". These are three-dimensional and can be both below or above the surface parcel. The system will be very similar to the Oslo Method
- Under the present law all cadastral surveying are a municipal responsibility. The new law proposed to end this monopoly and open up for qualified private surveyors. The government now want the whole cadastral system to remain as a municipal responsibility

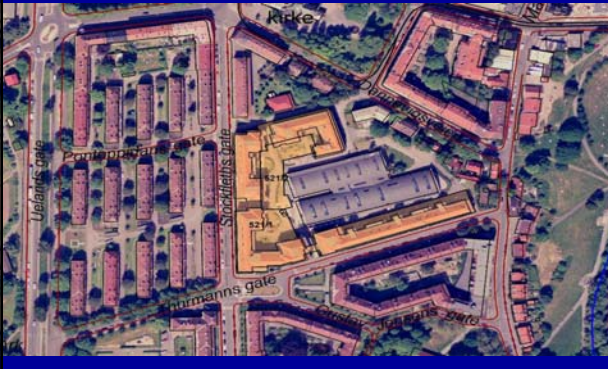
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2D CADASTRE IN OSLO

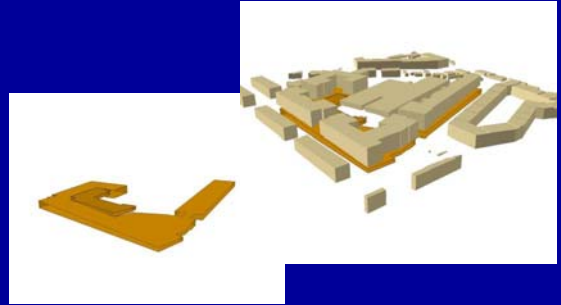


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3D CADASTRE IN OSLO



3D CADASTRE IN OSLO



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3D CADASTRE IN OSLO (Video)



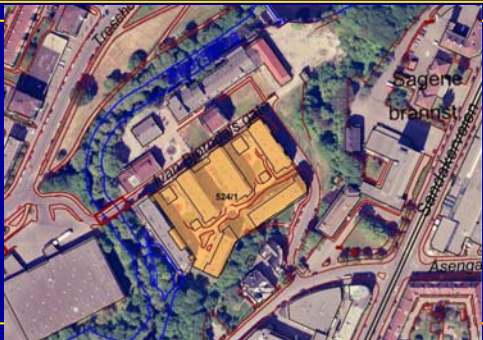
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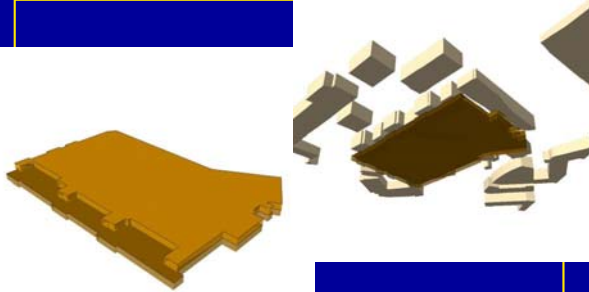
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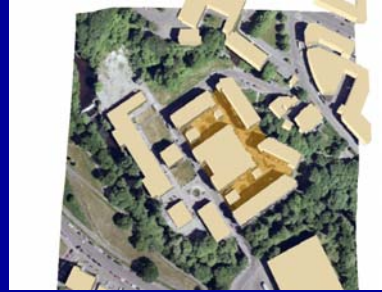
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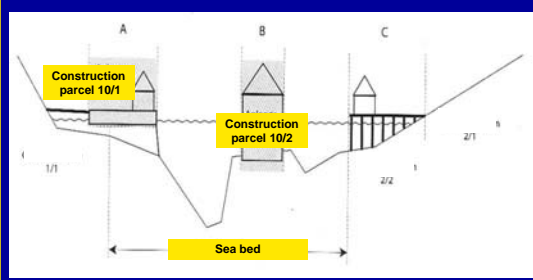
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3D CADASTRE IN NORWAY (Video)



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Thank you for your attention!

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