

Historic centre of San Gimignano

Historical background - Engineering geological conditions and problems:

The town of San Gimignano (in the Tuscany region) served as an important relay point for pilgrims on the *Via Francigena* to and from Rome. The patrician families, who controlled the city, built some 72 tower-houses (up to 50m high) as symbols of their wealth and power. Only 14 have survived.

Since the town is built on a sandy substratum, the main geological problem concerns landslides. The studies, realized by GNDCI and the Autorità di bacino of Arno River, recognized three landslides (see the first image). Two of them are classified as complex landslides and one (represented with the blue colour in the figure) as fall. All the landslides are considered dormant.

Particularly, the complex landslide located in the southern part of San Gimignano is considered very dangerous for this part of the town. On December 20, 1982 a fall caused damage to the *Parco della Rocca* and to the tower of the Town Hall. Landslides reactivated on March 28, 1985 because of the geological conditions: the nature of substratum and the variation of the aquifer.



Map representing the main landslides in the area (by Autorità di bacino del Fiume Arno)



The town of San Gimignano

(www.sangimignano.com)

Investigations and protection measures already realized:

Both the GNDCI and the Autorità di Bacino of the Arno River realized a map with the location and the description of the main landslides in the area.

After the last movement in 1985, the protection measures realized concerned:

- Canalisation;
- Drainage
- Terracing
- Consolidation with concrete



The
Town
Hall

(www.sangimignano.com)

Supplementary information:

San Gimignano has retained its feudal atmosphere and appearance. The city also contains masterpieces of 14th and 15th-century Italian art. The Committee decided to inscribe San Gimignano in the UNESCO World Heritage List in 1990 because the town represents an example of architectural complex and human creative talent.

References on studies already done:

AUTORITA' DI BACINO FIUME ARNO – Carta inventario dei fenomeni franosi del Bacino del Fiume Arno.
GNDCI “Progetto AVI – Aree vulnerate italiane - Censimento delle aree italiane storicamente vulnerate da calamità geologiche ed idrauliche” (www.gndci.it)