ABSTRACT

On December 17, 2004, a landslide movement happened at Cibangkong village in Grumbul Gandusari which caused damage to residential houses and other public facilities. This situation caused great losses for the people because it made their life uncomfortable and frightened that the next landslide will be bigger and will cause greater financial losses or possibly casualties. In order to reduce the danger of landslide then we need to countermeasure the landslide.

Research method which has to be done according to the stages of activity as follow, i.e.: secondary data information: topographical map of Grumbul Gandusari (scale 1:25,000), geographical map of Banyumas area (scale 1:100,000), topographical map (scale 1:500), rainfall data, the result of the geoelectric section analysis, the result of soil mechanic tests in laboratory; primary data: geological mapping, land use, ground water level, the making of digital maps using mapinfo software; analyses of landslide type; analysis of landslide blocks; analysis of land movement mechanism; analysis of slope stability using geoslope software; landslide countermeasure.

Result of this study shows that the areas mentioned is more affected by landslide with a safety factor less than 1 (one). This situation is caused by the increasing of ground water level during rainy season and also the burden from expansion housing along with more permanent forms of housing. Landslide countermeasure in Grumbul Gandusari priorities to the decreasing ground water level by the use of surface and underground drainage works, to return to the style of paddy field land use, and to avoid the increasing construction of new buildings.

Keywords: landslide type, landslide mechanism, safety factor, slope stability.