Flood risk: Physical and human factors

Urban land use increasing flood risk

* **New houses** – In the UK, thousands of new homes are built every year. Property developers are trying to squeeze several houses into a plot formerly occupied by only one house. 7% of new dwellings In England in 2011 where built in areas of high flood risk. These places are covered in impermeable roads and pavements. There is a lot of water runoff into gutters and drains, which will be put into a river, increasing flood risk
* **Disappearing gardens** – people have put concrete over their gardens in urban areas. This may be done so they don’t have to mow the lawn. Some people also concrete over their front gardens to accommodate their cars
* **New infrastructure** – As the UK’s population increases, new roads, shopping centres, schools and leisure centres are built. The greater the area covered by buildings and roads, the greater the flood risk

Rural land uses increasing flood risk

* **Forestry** – Chopping down trees (felling) reduces interception and roots no longer take water from the soil. A dense forest uses up 40% of any precipitation. After felling, the soil soon becomes saturated, runoff occurs, river discharge increases quickly so the flood risk is high. Also felling may result in exposed soil to wash into rivers, decreasing the river capacity.
* **Farming** – on farmers’ fields, hedges are ripped out to help the farming process. Loss of hedges means less interception. Once crops have been harvested, they leave the soil bare in the winter. This means there is no vegetation to intercept the rainfall. Also, when fields are ploughed, the furrows create channels for water to flow down easily. More soil is transported into rivers, raising their beds and so increasing the flood risk.
* **Disappearing fields** – some fields near towns are being sold to property developers, and others may be converted to riding stables. As large-scale factory farming increases, fields have been replaced with huge sheds and concrete years. Pastures have been over-grazed. This has compacted soil and degraded pastures, resulting in muddy runoff into rivers and an increased risk of flooding. In addition to this, some fields have been covered in polythene to let crops grow all year. This means that the ability to soak up water is reduced

“river flooding is a natural phenomenon”. To what extent do you consider this statement to be correct? (6 marks)