Land Stability

What is Ground Behaviour, Geodiversity and Land Stability?

Ground behaviour is the natural processes that take place in local soil and rock, including gentle natural movements, how water passes through and over the ground and how local soils and rock change with the seasons. These combined processes shape our landscapes and result in a range of challenges for the built environment. Geodiversity is the variety and quality of soils, rocks, fossils, landforms and processes. Local geodiversity is important for local biodiversity, as it creates the conditions for the habitats we have present in the Borough. Geodiversity is also important for the enjoyment of the natural geological features through geotourism and for education.

Why are these important?

The design of a proposed development, including drainage, planting, biodiversity net gain, buildings and aftercare all need to be guided by ground behaviour, local geodiversity information and an understanding of land stability both in the development site itself and in the area around it. Excavations into bedrock also present opportunities to improve our understanding of local geology and may reveal unique features or fossils that should be recorded.

Developments where the ground conditions are not well understood can be dangerous, causing collapse, flooding and biodiversity loss.

What is the ground in Hastings like?

Hastings is a coastal area with two main types of soil and rock. A porous sandstone that water travels through easily that can be very soft in places (like a sandcastle), and soft clays that water cannot penetrate (like plasticine). Because Hastings is a town with a long history of development, there are also areas where soil and rock have been taken from one place to make space for something, like a railway tunnel, and then left in another place. This is called artificial or “made” ground.

Hastings also has cliff faces throughout the town, and areas where both natural and man-made caves and tunnels sit under the surface.

What does the draft policy say?

The policy (SC15) sets out a clear position that development in the town must be informed by assessments of ground conditions for both the site and the surrounding area. These assessments will need to consider what the ground is doing at the moment, what the impact of construction activity might be and what the impact of the finished development might be on soils, slopes, existing buildings and so on. This includes how any drainage might work as well.

The policy sets out how assessments should be conducted, so everyone uses the same process.

The policy is also clear that we need to understand how the land and the land around it will be kept stable during construction.

The policy recognises that development can improve land stability in areas demonstrated to be unstable. It is clear about how these improvements (known as 'remedial work') should be designed, tested and looked after, and for how long they should be looked after.

Lastly, it recognises that extensions or changes to existing buildings must also be able to be developed safely and last a long time.

If there is no safe way to develop a site, then permission will be refused.

What can't the draft policy do?

The policy can't change how things have been built in the past, or be applied to planning permissions that have already been granted.

I am worried about the possibility of landslides where I live, what should I do/ How do I keep my own home safe from landslides?

The council has a landslide toolkit that provides useful advice.

Are there any other policies I should read if I am interested in soil or land stability?

Policy SC16: Flood Risk and Drainage has information on how we want to protect and control our groundwater (water inside soil and rocks), how we want to control the flow of water into rivers and streams to reduce the risk of collapse, and how we seek to prevent 'washout', which is where soil or road surfaces are worn away by water travelling over the ground.

Policy SC17: Coastal Change Management identifies and sets strict planning controls for areas at risk of the effects of coastal change, including where the risk is in the form of land being lost to the sea.

Policy SC18: Pollution and Hazards sets out pollution should be kept out of water, soil and the air.

Would you like to Know More about local Geodiversity?

In the Dinosaur Gallery at **Hastings Museum and Art Gallery**, you can discover more about our local geology and see fossils found along the coast and in local quarries. You can also search the museum's website to look at fossils in storage **here**.

Volunteers have recently been examining archives and newspapers for evidence of historic land movements. Get in touch through museum@hastings.gov.uk if you are interested in helping out in this project.

You can also find out more about the hidden geology of Hastings by exploring feely accessible online content from the British Geological Survey including **local geological maps**.

What should I do if I see a landslide?

First of all, make sure you are safe. If you believe you are near a landslide the first thing to do is leave the area and contact the emergency services if you think there is immediate danger. Once you are clear of the area and are safe, you can let us know about landslides or ground movement using our reporting form. Do not return to locations of landslides to pick up belongings or similar unless you have been told by the emergency services that it is safe.

If the ground movement or landslide is on a highway (the road or pavement) then you should contact East Sussex County Council.

If the movement is in a structure, like a wall or set of steps, report it as a dangerous structure.

If you are unable to return to your home due to a landslide, contact:

In person: Muriel Matters House, Breeds Place, Hastings, TN34 3UY.

Call (Office hours): 01424 451100

Call (Out of hours): 01424 451999