



Gabion Corner



Slip 2



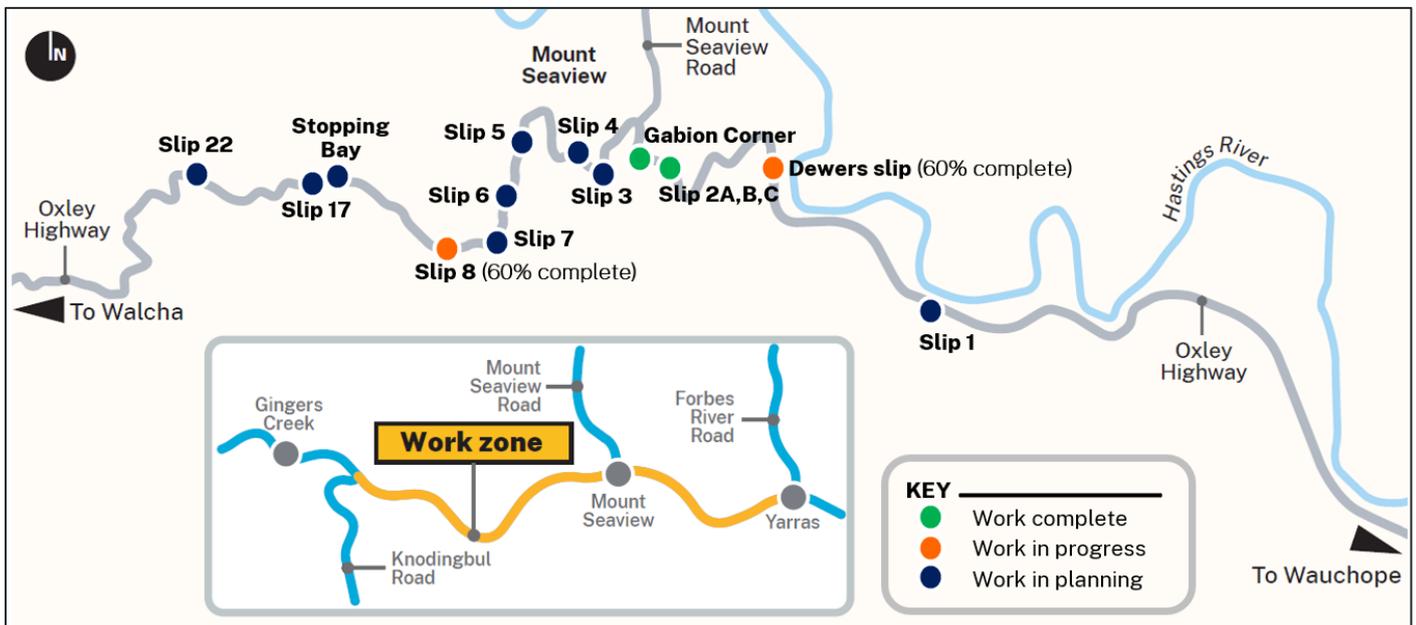
Dewers Slip



Slip 8

The NSW Government has committed funding for essential disaster recovery work on the Oxley Highway at Mount Seaview to provide continued access through natural disaster affected areas.

Transport for NSW is continuing major restoration work on the Oxley Highway at Mount Seaview to return the road to pre-2021 flood condition.



Land slip locations on the Oxley Highway, Mount Seaview

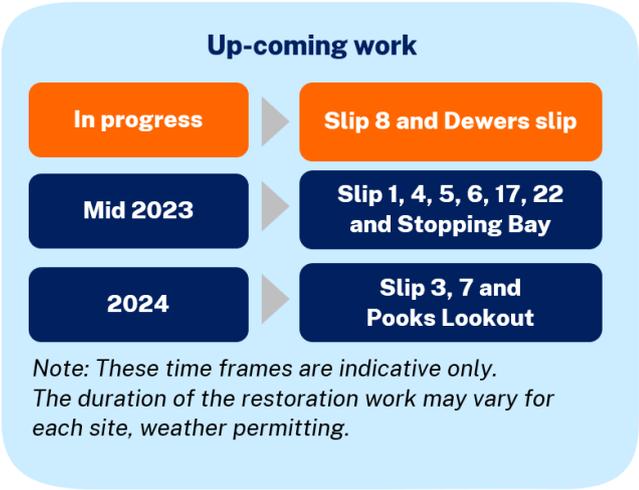
Work is expected to take about two years to complete and will require the road to be closed at different times to ensure the safety of workers and motorists.



region.north@transport.nsw.gov.au  
nswroads.work/oxleyrecovery  
1800 653 092  
transport.nsw.gov.au

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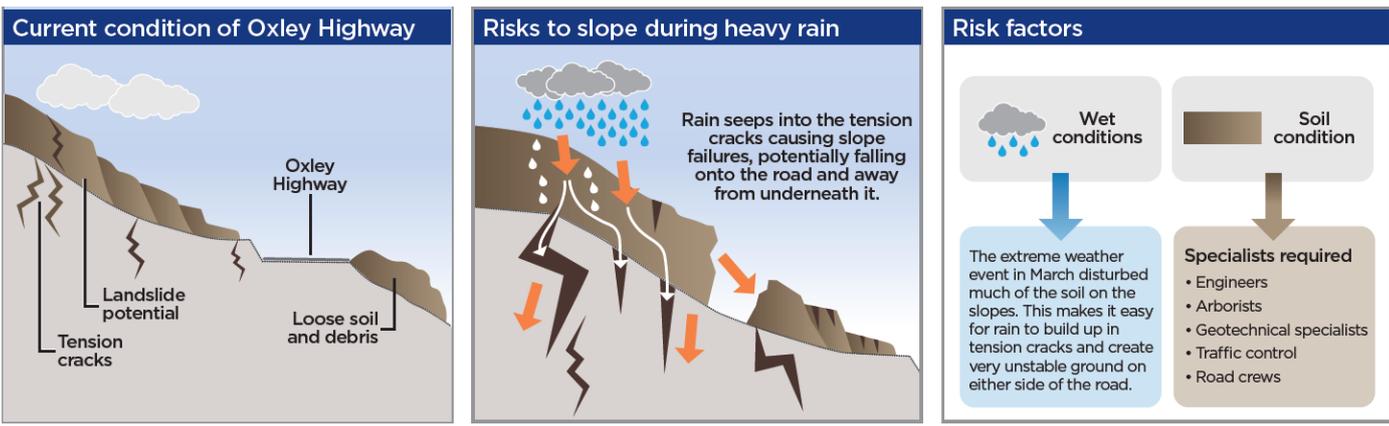

**70+ landslips**  
of varying levels of severity



**10+ major landslips**  
requiring immediate attention

**Why is the Oxley Highway at risk of landslides?**

The ground of the Oxley Highway has a mix of natural geographical formations that make it unstable. These include layers of sedimentary rock that lie at various angles, intrusions of volcanic rock that penetrate through the sedimentary layers and loose soil from prehistoric landslides. Soil density and permeability also varies across the site, allowing water to penetrate deep into the ground which, in turn allows the soil to move, increasing the risk of landslides.



**What type of work are we doing?**

Each slip site location is influenced by a different set of circumstances contributing to the slip. As a result, there is a range of construction techniques required to repair the damaged sites.



**Soil Nails:**  
Installing soil nails involves drilling holes into the soil so steel bars can be inserted to stabilise the ground. This process is difficult because the holes can collapse while they are being drilled. There are also floating boulders in the material being drilled which can cause the drill head to become stuck. Drilling is noisy and dusty with workers next to the edge of a very high drop, so falls from heights are a big risk. This work requires the use of fall restraint systems and in some cases, workers need to hang off the face of the slope to do the work.



### **Reinforced retaining structures:**

Reinforced concrete retaining structures are used in slip sites to provide support where material has been lost from the road embankment. A typical road embankment is composed of a mix of soil and crushed rock placed on the natural terrain to provide a level platform to build the road on. When a slip occurs, large volumes of that material is lost, and the road is no longer supported properly. Retaining structures are reinforced with large amounts of steel and sometimes used in combination with soil nails to ensure enough strength is provided to support the road permanently.



### **Mass retaining structures:**

Mass retaining structures perform the same function as reinforced retaining structures, but they are generally built without large amounts of reinforcement. Instead, they rely on the weight of the materials they are made off to hold the soil in place. While these structures require larger volumes of material and more room to build they are a good option because they can be quicker to construct than reinforced concrete structures.



### **Shotcrete:**

Shotcrete is concrete that is applied to a structure in spray form. The concrete mix is specially designed to be applied with this method and is able to achieve high strength within a few days. Unlike traditional concrete, shotcrete does not need extensive formwork. Structural shotcrete walls contain steel reinforcement, and they are built up in multiple thin layers until enough thickness is achieved to provide the required strength and fully cover all the steel. Some of the advantages of shotcrete include high speed of construction and the ability to easily achieve complex shapes.



### **Subsoil drainage:**

Water in the soils around and under the road is a big contributing factor to the occurrence of land slips. As part of the repairs to slip sites, a large network of subsoil drainage is installed to drain water away and keep the soil as dry as possible. This helps minimise the risk of a slip happening at the repaired site in the future.

**Slip 1 – initial work complete. Permanent work expected to start 2023**



**Slip 2 – complete**



**Slip 3 – expected start 2024, highly complex, may require full road closure**



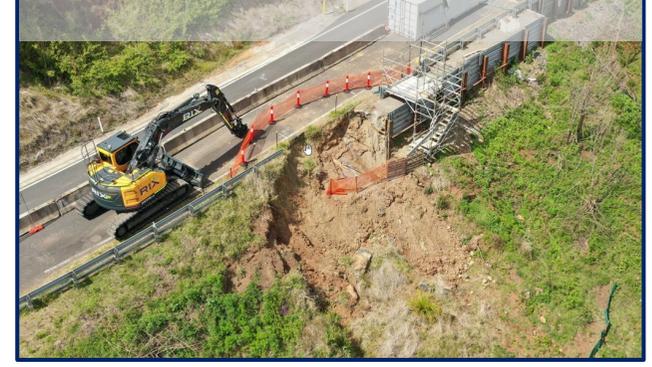
**Gabion corner – complete**



**Slip 7 – expected start 2024, highly complex, may require full road closure**



**Slip 8 – about 60% complete**



**Dewers slip – emergency stabilisation about 60% complete, final work expected start 2023**



**Slip 22 – expected start 2023, highly complex, may require full road closure**



**Pooks Lookout – temporary work complete. Permanent work expected to start 2024, highly complex, may require full road closure**

