

Foam at Ruislip Rugby Club – Frequently Asked Questions

High Speed Two (HS2) is the new high speed railway for Britain. We have produced this document to answer commonly asked questions about the incident that occurred at Ruislip Rugby Club recently and to explain what we will do to prevent this happening again during our works.

On the morning of Saturday 18 February 2023, members of the public contacted the HS2 Helpdesk to report that foam was appearing from the ground in an area of the Ruislip Rugby Club playing fields. HS2's contractor in the area, SCS, is currently tunnelling using Tunnel Boring Machines (TBMs) to build the new HS2 route. SCS attended the site to investigate and secure the area. The foam was cleared on the same day (Saturday 18 February 2023).

What was the foam?

During the tunnelling process, 'conditioning fluids' and water are added to the soil in front of the TBM. When these 'conditioning fluids' mix with the water foam is created, such as the foam seen at the Ruislip Rugby club fields. Even a small amount of this conditioning fluid can make a lot of foam when it mixes with water.

What is conditioning fluid?

Conditioning fluid is commonly used to treat the ground in front of a TBM during tunnelling to help make the material that is excavated easier to move on the conveyors which carry the material out the tunnel.

It is biodegradable and not toxic to plant or animal life. It was approved for use in advance by the Environment Agency and there is no danger to the groundwater aquifer. The foam is a mixture of the conditioning fluid and water and is not harmful.

Where did the foam come from?

The foam is a normal product of tunnelling and usually doesn't have space to expand so stays with the ground mixture in the tunnel machine and conveyor system. The foam escaped out of a borehole that was created earlier in the project to investigate the ground conditions in the area.

How did the foam come to the surface?

The TBM passed through the bottom of the borehole, which had two 3.5cm plastic monitoring pipes installed, used to observe the groundwater levels during the works. The foam was able to expand all the way up these monitoring pipes to the ground surface.

Is the foam harmful?

No. The conditioning fluid is biodegradable and not toxic to plant or animal life. It was approved for use in advance by the Environment Agency and there is no danger to the groundwater aquifer. The foam is a mixture of the conditioning fluid and water and is not harmful.

Is the Environment Agency aware of the incident?

Yes. They visited the site on Saturday 18 February and SCS have met with them since. They are satisfied that there has been no harm caused to the environment.

Has the tunnelling stopped?

We stopped the TBM for a short time on Saturday while we worked out what had happened. It started again after a couple of hours. As the concrete rings that the TBM puts in place to support the tunnel had sealed off the bottom of the borehole, no more foam will escape.

Is the area safe to walk on?

Yes, but at the request of Hillingdon Council we have fenced off the area temporarily so that it cannot be walked on.

When will you replace the grass and remove the fence?

We are working to restore the affected area and will inform local residents when the work will take place.

Are there more boreholes in our area?

There are more boreholes following the route of the tunnels. Most have already been sealed and we will be completing others as soon as possible and definitely before the TBMs arrive in that location. Following this incident we are carrying out a full review of all of the boreholes to ensure this does not happen again.

Could the foam appear in my home?

The foam was only able to escape because the borehole gave it space to expand. There are no boreholes underneath people's homes or businesses.