

20 September 2018

## **THE IMPACT OF THE NEWDIGATE EARTHQUAKES ON THE ADJACENT POPULATION & ENVIRONMENT**

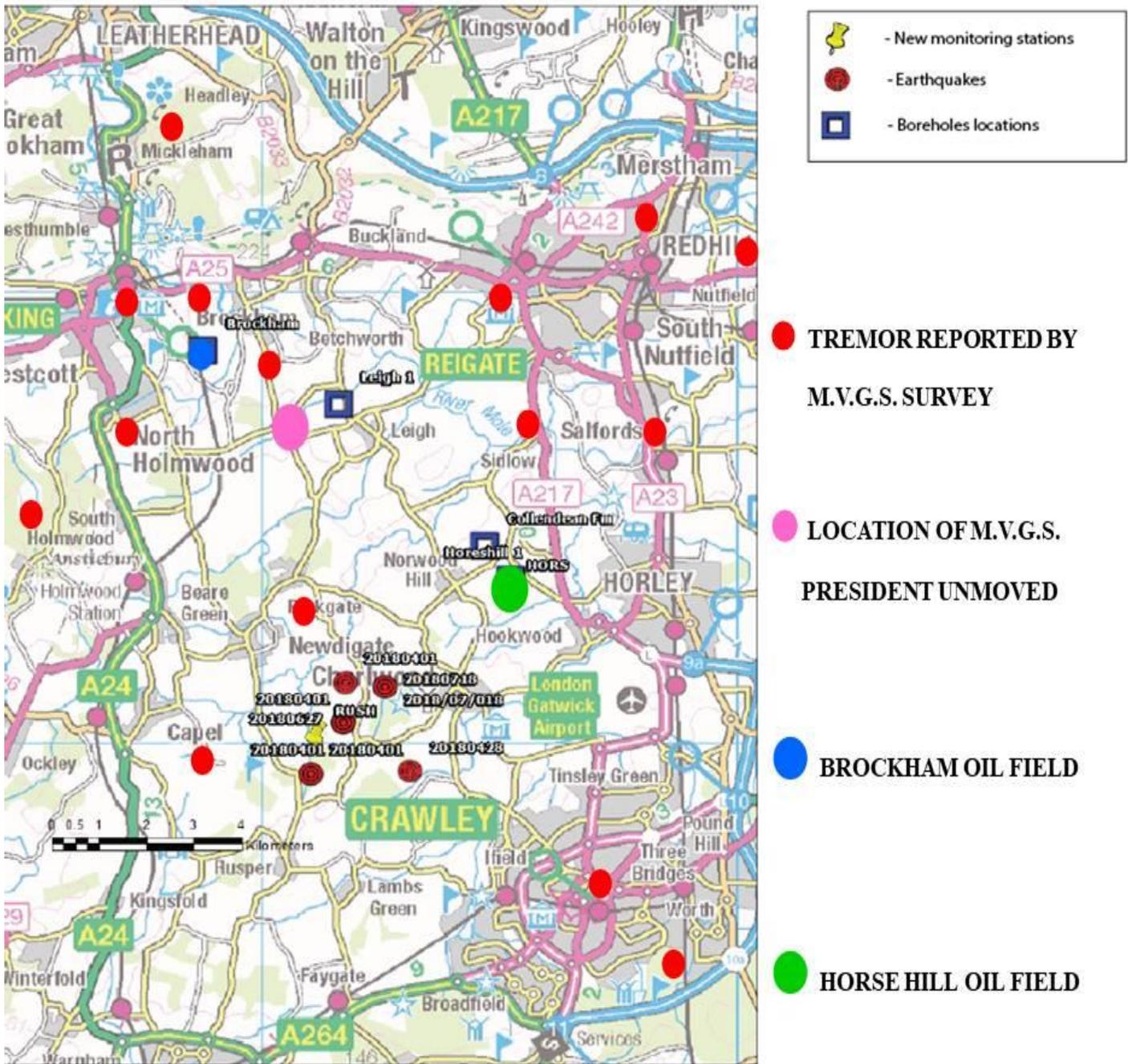
The population of the Weald in general, and around the sites of the Brockham and Horse Hill oil fields in particular, anticipate that the area will soon be covered in drilling rigs and hydraulic fracturing units triggering multiple earthquakes. These beliefs are based on Mr Lenigas' announcement of the billions of barrels of oil that lie beneath the Weald discovered by the 'Gatwick Gusher' at Horse Hill, coupled with the BGS statement that in Lancashire, 58 earthquakes were linked to fluid injection during hydraulic fracturing.

( <http://www.earthquakes.bgs.ac.uk/research/BlackpoolEarthquakes.html> ) .

The swarm of earthquakes around Newdigate have confirmed these expectations.

Since the 1<sup>st</sup> of April the Mole Valley Geological Society (A Local Group of the Geologists' Association) has received many requests for comments from the local and national media. The Mole Valley District Council has referred all calls about the tremors from the general public to the MVGS. With a membership of 90 scattered all over the area the MVGS has been able to compile a data base of the psychological effects of the Newdigate quakes on the general public and any physical effects on the inhabitants and landscape.

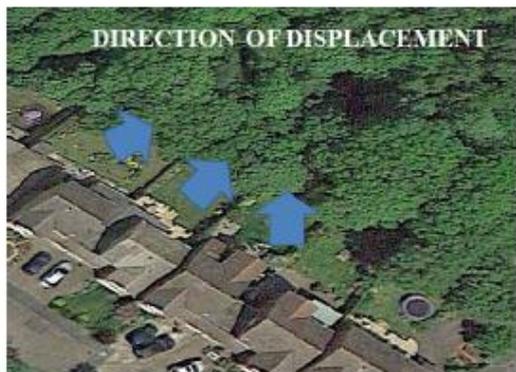
MVGS membership is distributed in a kite shape stretching from Newdigate northwest to Guildford, north to Woking and Esher and northeast to Reigate and Redhill. Members of the general public recorded multiple tremors in the area of Newdigate, Parkgate, Charlwood, Crawley and Dorking. The most distant tremor reported was at Mickleham, some 15km from the epicentres in Newdigate. The tremors were reported as 'like a heavy lorry passing by', rumbles, and shaking of the ground. Tremors rattled crockery and opened drawers leading one person to believe that their house was hosting a poltergeist. Tremors during a pop concert SE of Crawley caused a lateral to and fro movement leading one reveller to initially attribute the tremors to a special effect created by the rave organisers.



Map of locations where tremors were felt compiled by the Mole Valley Geological Society superimposed on OS map with BGS data locating boreholes, epicentres and monitoring stations. Multiple tremors were felt at Dorking, Reigate, Newdigate, Capel, Crawley & Salford. © NERC & OS.

A dentist in Dorking reported that a tremor caused her hand to shiver when she was carrying out a delicate procedure on a patient. There were multiple reports from Tower Hill on the SW side of Dorking at 130m OD but surprisingly there was no collapse of the nearby South Street caves, even though they were excavated in weakly cemented Folkestone Sands.

The most serious environmental damage reported was a landslide at noon on 1 April some 10km from the epicentres. This occurred in Weald Clay adjacent to a fault shown on the BGS Geological map. The landslide was some 50 metres in length with a vertical displacement of some 10 metres. It removed half the gardens of three adjacent properties. The toe of the slide disturbed the roots of many trees causing them to tilt towards the slide and having to be removed. Remedial work to stabilise what is left of the 3 gardens is estimated at £600,000. The householders will pay the damage themselves (Normal house insurance does not extend to the grounds of a house).



**LEFT PAIR: 2015 Google images of a landslide in the Weald Clay © Google Earth.**  
**RIGHT PAIR: views of collapsed gardens © author.**

The main conclusion of the general public is that the quakes are due to hydraulic fracturing. Some folk anticipate flames emerging from their water taps (The Gasland ‘documentary’ casts a long shadow). It is very hard to get the message across that the one cause that can be ruled out is hydraulic fracturing. Indeed when the President of the MVGS was interviewed by ITN News at 10 that was the first point he made. This section of the interview was edited out. One media correspondent holds that hydraulic fracturing is the only possible trigger of earthquakes *‘there isn’t anything else that effects the structure of the ground like that does’* (!?) See next page.

**NEWDIGATE SHAKES:** Seismic activity makes Surrey wonder what is coming

# Earthquakes surprise local people and shake others from their slumber

By Alex Boyd and Mark Davison  
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TWO earthquakes in Newdigate in the space of three days last week means there have now been six recorded there since April 1.

On Wednesday and Friday last week, the village was at the epicentre of minor earthquakes, with a magnitude of 2.6 and 2.4 on the Richter scale respectively, which were felt in Dorking, Capel,

*'It's likely to just be a natural phenomenon, like the planet just breathing'*

— Chas Cowie

areas, with tremors following Friday's quake at 5.54am felt in

and the whole house shook like a truck had crashed into it".

Richard Selley, 78, president of the Mole Valley Geological Society, described the feeling of a 2.6 or 2.7 magnitude quake as being "something like a heavy goods vehicle going past your front door".

**Tremor**

Mr Selley was ruining another missed opportunity to witness an earthquake in Surrey, after miss-



Dorking Advertiser 18 July 2018 sought comments on the Newdigate earthquakes from the Mole Valley Geological Society Treasurer, Hon Secretary & President.

These are typical examples of almost weekly local press reports since 1 April.

## WEBCHAT

### Parking charges, earthquakes and lanes closed on the M25

■ **MORE THAN 4,400 PEOPLE SIGN PETITION AGAINST CONTROVERSIAL RURAL PARKING CHARGES IN JUST FOUR DAYS:**

Without adequate public transport, parking charges stop the poorest in our communities from enjoying our countryside.

**Peter Boxshall**

I have just driven past Newlands Corner, and for

me the most annoying things were the new large charge warning signs at the entrance spoiling the view into the Surrey Hills. Stepping Stones car park next I suppose!

**Phil Boyce**

■ **COUNCIL JOINS CALLS ASKING FOR MORE CLARITY ON POTENTIAL EARTHQUAKE AND DRILLING LINKS:**

Doesn't take a genius to

look at the possibilities. Fracking is the most likely cause because there isn't anything else that effects the structure of the ground like that does.

**Iain Colvill**

■ **LANES CLOSED ON M25 FOLLOWING LORRY AND CAR CRASH WITH TRAFFIC BUILDING - RECAP:**

Another M25 crash.  
**Howard Avery**

Dorking Advertiser 30<sup>th</sup> August 2018

An informal group FOBOF (Friends of Brockham Oil Field) composed of local independent oil industry retirees has met with and engaged in delicate liaison with the various local protest groups including DOD (Drill or Drop) WAG (The Weald Action Group), BOW (Brockham Oil Watch) and the LHAG (Leith Hill Action Group) The latter now presumably is disbanded. All the protest groups are of the opinion that the tremors are not tectonic, but are anthropogenic, caused by fluid injection and/or extraction at the Brockham and Horse Hill fields. They await the news of the conclusions of the OGA workshop with great excitement.

#### ACKNOWLEDGEMENTS:

Thanks are due to the 90 members of the Mole Valley Geological Society who contributed positive and negative reports to the data base of seismic activity. Thanks are also due to the three householders whose gardens collapsed for access to the residue of their land. They wish that their names and the location of their properties remain anonymous in order to avoid media intrusion.



*Di de Selby.*

