

**Institute of Physics – London & South East Branch – Retired Members Section**  
**TERLING PLACE**  
**Thursday 25 MAY 2017**

---

This visit has been organised by George Freeman

This is an afternoon trip to Terling Place, Lord Rayleigh's home, to see his laboratory.

**Lord Rayleigh III** (John William Strutt, 1842 – 1919) was a British physicist and mathematician who worked in many disciplines including electromagnetic, optics, and sound. He defined the limits of resolution for a diffraction limited image and developed the equations for Rayleigh scattering. His biggest prize was the Nobel Prize for the discovery of Argon. He wrote over 446 papers many of which influenced the areas that we worked in. He only attended the House of lords when they were dealing with scientific matters.  
<https://micro.magnet.fsu.edu/optics/timeline/people/rayleigh.html>

Lord Rayleigh's laboratory is much as he left it. He worked there with his assistant for many years and in many areas. His chemicals are all still on the shelves and many of the experiments are as he finished with them.

Prof Ted Davis of Cambridge University has organised this visit and will be our guide.

As this was a working laboratory space is limited and we are restricted to groups of 10. You enter at your own peril. If there are two groups then perhaps the 6<sup>th</sup> Lord Rayleigh or his wife will show the second group around the garden.

**MEET** in the Rayleigh Arms in Terling from 12:00

**LUNCH** will be taken in the pub. (Adnams beer!) I will contact you a few days before the meeting with the menu and ask for your order.

10:48 – 11:33	Train from Liverpool Street to Witham
11:40	Taxi to the Rayleigh Arms
12:00	Lunch in the Rayleigh Arms
13:45	Walk to Terling Place
14:00	Tour starts

**GETTING THERE.** Those travelling by car assemble in the pub. From Liverpool Street (Ipswich line) get the train to Witham. Catch the train at 10:48 (or earlier at 10:38) arriving at 11:33 (45 minutes). I will arrange a taxi from the station to the pub for this train.

For those who miss this train please phone Knights Taxis 01376 520 510, about £10.

**COSTS**

£15 per person; most of this will go to the Rayleigh Project at the Cavendish Laboratory. Maximum 2 groups of 10 Coffee, lunch and tea at cost.

After lunch we will reassemble at the Farm Office. Prof Davis will join us there if he does not at the pub.

Booking closes 23 May. Remember, maximum of 20.

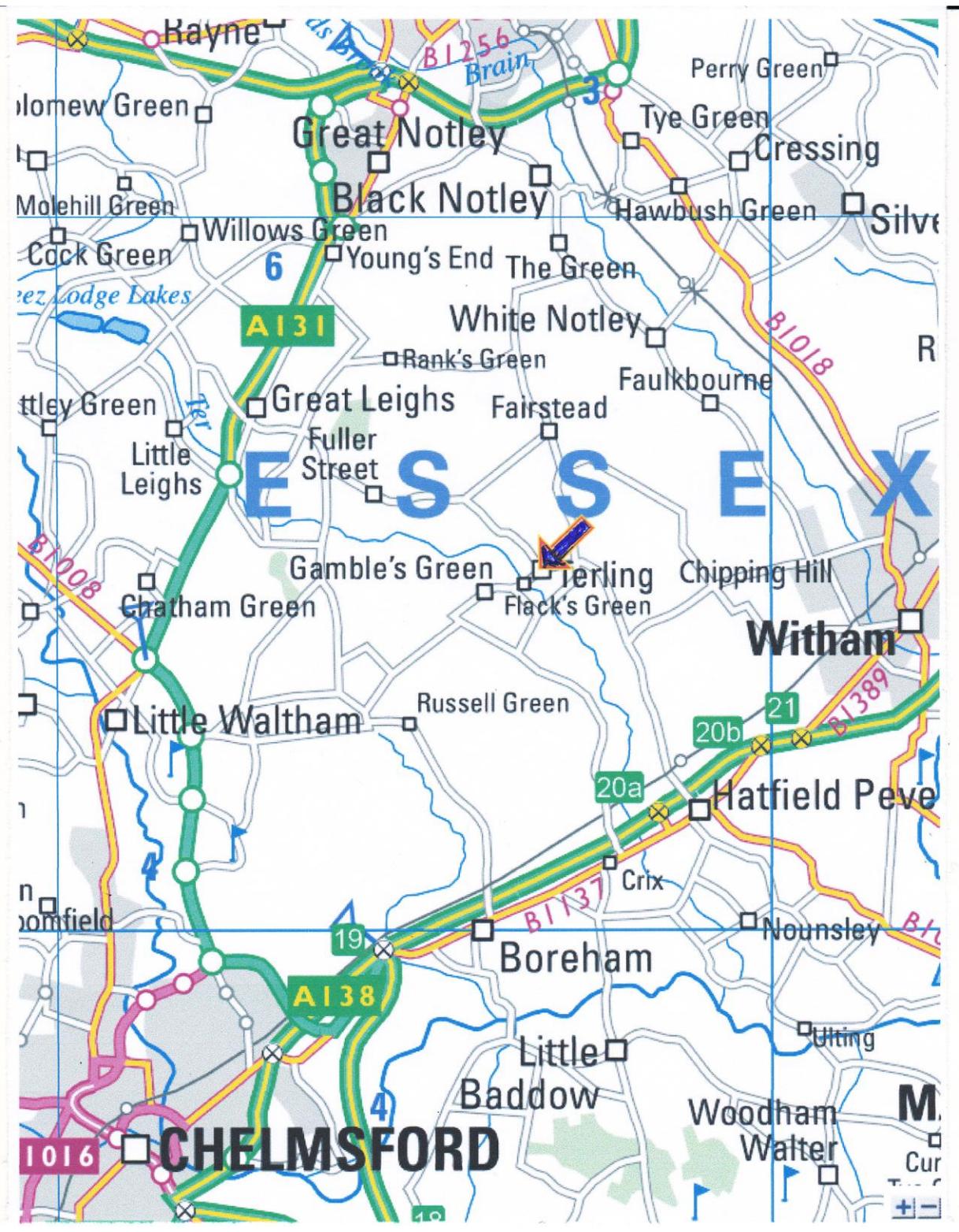
**CONTACTS**

Before the meeting. Tony Colclough 020 8398 0766 or 07930 171 307 [tonycolclough@tiscali.co.uk](mailto:tonycolclough@tiscali.co.uk)

Or [georgefreeman@georgefreeman.force9.net](mailto:georgefreeman@georgefreeman.force9.net) 020 8979 1271

On day of visit. George Freeman 07941 916 944

**LATE JOINERS** - please phone me to find where we are.



**CHELMSFORD**

**Witham**

**Great Notley**

**Black Notley**

**White Notley**

**Great Leighs**

**Terling**

**Boreham**

**Little Baddow**

**Woodham Walter**

**1016**

**A131**

**A138**

**21**

**20a**

**20b**

**6**

**19**

**4**

**B1256**  
*Brain*

**B1018**

**B1008**

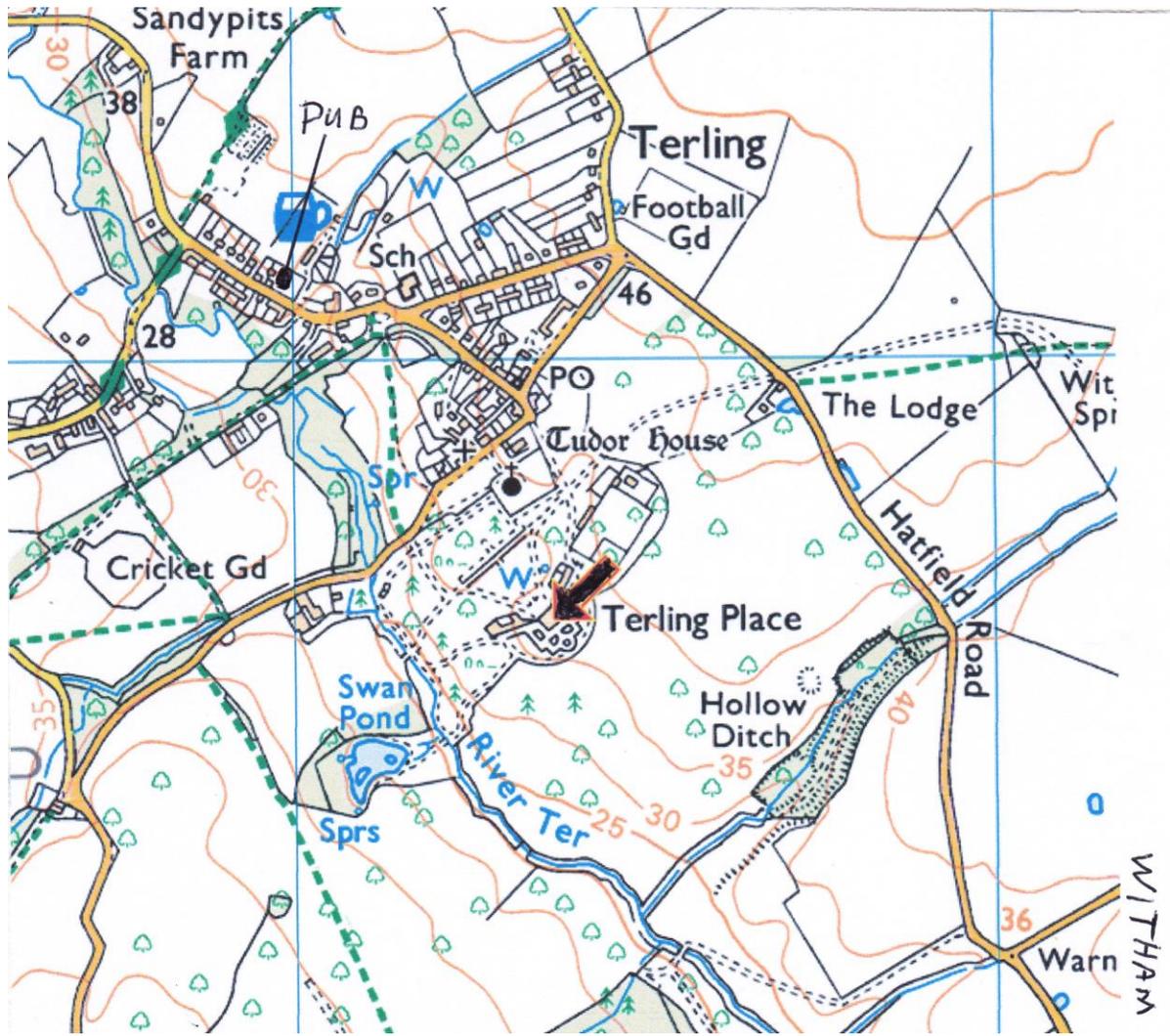
**B1137**

**B1389**

**M**

**Cur**

**+**



# The Scientific Legacy of the Third Baron Rayleigh

Professor Edward A Davis  
University of Cambridge



The legacy of the Third Baron Rayleigh (John William Strutt) is reflected in the association of his name with many effects and phenomena named after him: for example, Rayleigh scattering, the Rayleigh disc, Rayleigh waves, and the Rayleigh criterion used in optics. In addition, he was awarded the Nobel Prize for his discovery of the gas argon.

Lord Rayleigh conducted much of his experimental and theoretical work in private laboratories he had constructed at his family home in Terling, Essex, although he did take up the post of Cavendish Professor of Experimental Physics in Cambridge for five years and was appointed President of the Royal Institution in London. He also served as Chancellor of Cambridge University from 1909 to 1919.

In addition, Lord Rayleigh was instrumental in establishing the National Physical Laboratory in 1900 at Bushy House, Teddington and was influential in advising Trinity House on the design of foghorns.

The knowledge he gave to the world is still at work today in acoustics, in the design of optical instruments and antennae, in seismology, and in studies of convection in fluids, atmospheric turbulence, ink-jet technology and solitary waves. His mathematical methods, developed principally to describe wave motion, are frequently used today by quantum theorists.

The laboratories used by Lord Rayleigh are still extant at the family seat in Terling, and provide a wonderful and unique insight into the life and work of this great Victorian scientist. There are over 800 items of equipment contained within six rooms, including the balance he used to determine the atomic weight of gases - work that led to the discovery of argon.

