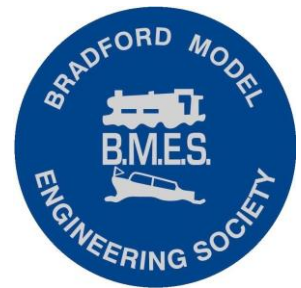


The Bradford Challenge

Saturday, 8 June 2024, 13:00 – 16:00

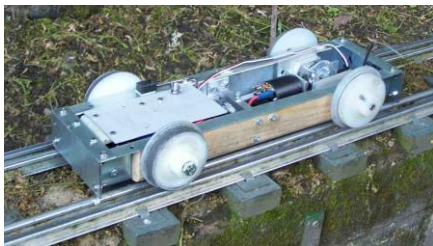


Bradford Model Engineering Society invites you to join us in:

An Afternoon of Speed & Fun

Every year, our members build locomotives that are designed to compete in a time trial around our miniature raised track in Northcliffe Woods, Shipley. This has evolved into “The Bradford Challenge” for which, as a local model engineering society/college/school, you are cordially invited to join.

We believe that this challenge offers an excellent opportunity for your students/members to design and build a bespoke high-speed locomotive that will compete to see who can circumnavigate the track twice, in the shortest time, whilst staying firmly on the rails!



Each locomotive is an excellent project in mechanical, electrical and electronic engineering, which could be part of a student’s curriculum or just a fun model to make.

To give as much opportunity as possible and to cater for all levels of expertise and pockets, we will split them into three classes of locomotive:

- “Ducted fan(s) or Propellers”
- “Wheel-driven”
- “All-comers”, a class for the innovative or just plain fun locomotive, such as “Shaun the Sheep” on the right:



We would also like to attract young engineers to the modelling world. We plan, therefore, to run a ‘Junior Section’ for anyone 16 years or younger. To help them get started, we will provide a basic kit of parts, including wheels and an electric motor.

For further details and guidelines, please see over the page. For a locomotive’s eye view of our track, please see the video at <https://www.youtube.com/watch?v=GHcult62ZPY>

If you are interested in participating or would like further details, please contact:

- Adrian Shuttleworth 07767 375 648 president@bradfordmes.uk
or: adrian.shuttleworth99@gmail.com

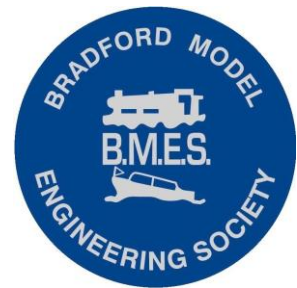
For more information on the society as a whole, please visit our website or Facebook pages:



<https://www.bradfordmes.uk/>
@ bmesTrains
Facebook: [BradfordMES](https://www.facebook.com/BradfordMES)

The Bradford Challenge

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Guidelines & Rules

The guidelines and rules are simple, thereby ensuring that the vehicles are relatively low cost to build. They are:

- The locomotive must have at least 2 flanged wheels at a gauge of 5" (127 mm)
 - The video mentioned above gives a good appreciation of the track environment and the track itself, which has a 3½" inch rails inside the 5" ones.
- Have radio-controlled speed control
- Have an effective braking system to bring the locomotive to a complete stop within a reasonable distance of 30 metres – about a quarter of the track length
- Engines using combustible fuels are not permitted!
- The time trial starts from standing, which can be held by the loco's brakes but not by the contestant, at the timing gate
- To aid timing and identification, each entry should have a suitable, unique name
 - The timing system is expected to use a light beam across the track at about 40 mm above the rail height. Therefore, to ensure correct detection of the high-speed locos, a vertical flag of 50-60 mm height and >20 mm length should be firmly fitted to the front of the locomotive.
- The loco must complete 2 laps of the track, then come to a complete stop after passing the timing gate for the second time
- Competitors will be allowed one practice run and two timed runs. Should any locomotive fail to complete a timed run, then that run will still count as one of the two allowed timed runs
- In the "All-Comers" class, the judging will be purely on the amusement value of the entry, be that the loco's construction, propulsion method or message(s) that it portrays

The raised track at Northcliffe Woods is configured in such a way that passers-by or spectators are protected from any locomotive that derails and/or leaves the track. However, to ensure the safety of the members and public, the Bradford MES organisers can, with due consideration, prohibit the running of a locomotive if it is deemed to be dangerous or unsafe.

If anyone would like to check that their loco will be acceptable, or simply to do test runs, then they are very welcome to bring it to the track prior to the event. If you'd like to do so, please do not hesitate to get in touch.

If you have any queries on the competition, track or rules, please do not hesitate to contact myself or any member on the BMES Committee.

Bradford Model Engineering Society

Adrian Shuttleworth – President
January 2024