

The Rt Hon Nick Gibb MP
Minister for Schools
Department for Education
20 Great Smith Street
London
SW1P 3BT

28 November 2022

Dear Minister,

Maths Missing Millions

We are writing to you following the recent Westminster Hall Debate 'Mathematical Sciences: Contribution to Society', tabled by Sir Stephen Timms MP.

We recognise that you have been a champion of mathematics teaching over many years and welcomed your acknowledgement during the debate that *"mathematical sciences are fundamental to our success as a nation"* and that *"improving mathematical knowledge at all levels is likely to deliver significant returns in terms of labour market skills, individual success, increased productivity and longer-term economic benefit."*

As you mentioned, research in mathematical sciences is key for the advancement of all areas of science and technology, and it is a vital area of science in itself. The mathematical community is therefore extremely concerned that the Government appears to be reneging on its additional funding commitments made to mathematics research.

In January 2020, the Government announced that it would invest £300m of *additional funding* into the mathematical sciences.

£124m of this funding has been spent on projects of national importance, including on institutes, small and large research grants, fellowships, doctoral studentships and postdoctoral awards. However, £176m of this additional investment has yet to be allocated.

In your response to Sir Stephen, you said that this funding *'is not ringfenced'*, since UKRI does not have ringfenced budgets to address single priorities. However, press releases and statements from Government and UKRI, published in January 2020 and January 2021 (and appended to this letter), note specific and additional funding allocation for mathematical sciences research.

These statements clearly indicate that the Government committed to providing a £300m funding pot specifically for mathematical sciences research, *in addition* to the UKRI's existing funding plan for research across its entire portfolio.

In the Government press release of January 2020, Home Secretary Rt. Hon Priti Patel MP said:

"The reforms to the Global Talent route coincide with ambitious government investment of up to £300 million to fund experimental and imaginative mathematical sciences research by the very best global talent over the next five years."

With around £60 million funding available per year, the investment will double funding for new PhDs, as well as boost the number of maths fellowships and research projects – increasing the pool of trained mathematicians in the UK and providing more freedom for researchers to develop new ideas.

This funding will make sure the UK remains at the cutting edge of maths research, underpinning real-world technological developments, from smoother traffic flow, crime prevention, safer air travel, and smarter phone technology to the use of artificial intelligence and creating greener energy systems.”

The additional funding pot was set to be delivered by the Engineering and Physical Sciences Research Council (EPSRC) and the Royal Society over a five-year period to fund PhD studentships, career pathways and new research projects, and new PhDs and research fellows and workshops at the Heilbronn Institute, the Isaac Newton Institute, and the International Centre for Mathematical Sciences, as outlined in the statements appended to this letter. The EPSRC outlined that the funding totalling approximately £60m per year would include:

- *£19m pa additional funding for PhD studentships, doubling current funding, moving to four-year studentships as standard and offering five-year funding for research associates to compete with the US and Europe.*
- *£34m pa additional funding for career pathways and new research projects, including multi-institutional projects and programmes. This new funding will come with more flexibility on the number and length of fellowships and will not be ring-fenced between sub-disciplines, to respond to the nature of candidate applications each year; and with the freedom to grant small amounts for initial research and early-stage idea generation.*
- *£7m pa additional funding for new PhDs/research fellows at the Heilbronn Institute (Bristol), and funding to increase participants/workshops by a third at each of the Isaac Newton Institute (Cambridge) and the International Centre for Mathematical Sciences (Edinburgh).*

However, in June of this year, Professor Dame Ottoline Leyser, Chief Executive of UK Research and Innovation, told the Science and Technology Select Committee that while £124 million had been allocated, “we are unable to justify the rest of the £300 million in the really dedicated ringfenced pot that was originally conceived.”

On 7 November, Lord Callanan declined to confirm that the remaining £176m in the additional funding programme will be allocated, stating in a written answer that “UKRI will seek further opportunities to support mathematical research as it establishes a portfolio of investments.”

Protect Pure Maths is deeply concerned that the Government and UKRI appear to be deprioritising mathematical science funding, a vital part of our research ecosystem. We know that this concern is shared by your parliamentary colleagues, with the Chair of the Commons Science and Technology Committee, the Rt Hon Greg Clark MP, writing to the Secretary of State for Business, Energy and Industrial Strategy to query the status of the balance of the promised additional research funding.

Despite the difficult economic situation, which must be a priority for any new Government and Prime Minister, it is false economy and short-termism to disinvest in the mathematical sciences which underpin the technological advancements that have significantly contributed to the UK’s economic growth. In the briefing that we developed ahead of the Westminster Hall Debate, also

enclosed for your reference, we outline multiple case studies showing how mathematics research also addresses some of the most pressing challenges in our society.

Without guarantees that the remaining £176m in the additional funding pot will be forthcoming and available to be spent as envisioned by the original announcement and by EPSRC, research and innovation programmes, doctoral studentships and fellowships risk being scrapped. University maths departments need urgent clarity on the sustainability of maths funding to greenlight research and innovation programmes that will last years into the future and that will provide the next technological breakthrough. These programmes will also reinforce the UK's position as a global leader of science and innovation.

We therefore ask you to confirm whether the £176m remaining in the pot of additional funding will be disbursed as set out in the then Prime Minister's announcement and by EPSRC. We would welcome the opportunity to meet with you to discuss this issue in more detail. Please do not hesitate to contact us via Claudia Toma at puremaths@connectpa.co.uk if you would like to arrange this.

Yours sincerely,

Professor Ulrike Tillmann, President of the London Mathematical Society

Professor Paul Glendinning, President of the Institute of Mathematics and its Applications

Professor Iain Gordon, Vice President of the London Mathematical Society