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Dear Greg,

### Science and Technology Committee: diversity and inclusion in STEM

Thank you for your letter of 22<sup>nd</sup> June following my appearance before your committee with your questions on funding for Mathematical Sciences and on Horizon Europe.

#### 1. Funding for Mathematical Sciences

Research in mathematical sciences is key for the advancement of all areas of science and technology, and a vital area of science in itself. The Engineering and Physical Sciences Research Council (EPSRC, a council of UKRI) routinely funds Mathematical Sciences from its core budget, typically spending c£25-30m/per annum for grants, fellowships, and studentships. You'll appreciate that the commitments to mathematical funding predated my return to government.

The Additional Funding Programme for Mathematical Sciences was announced in January 2020 as part of a Prime Ministerial commitment to invest **up to** a further £300 million to fund experimental and imaginative mathematical sciences research over a five-year period<sup>1</sup>. To date UKRI - EPSRC have committed £124 million out to 2028-29 on top of its core Mathematical Sciences funding, as part of the Additional Funding Programme for Mathematic Sciences (AFPMS) commitment.

The £124m has been allocated as follows:

Description	Total £m
Training grants	32
Research Associates	12
Fellowships	12
Small grants	3
Standard Research grants	27
Programme grants	3
Maths Institutes	35
<b>Total</b>	<b>124</b>

<sup>1</sup> This was followed by a ministerial letter from Minister Skidmore which stated "the £300m package to support advanced mathematics research over 5 years. The average annual commitment of around £60m new money, which subject to business case approval, will be included in future UKRI budget allocations from 2020/2021".



As part of the allocations process following SR21, the UKRI Board considered the amount of funding already committed to Maths and other Ministerial priority areas without ringfenced budgets, both within EPSRC and across councils. This required making difficult choices across UKRI's portfolio to balance these considerations. To absorb the remaining £176 million of the AFPMS would reduce critical capabilities in disciplines such as engineering and information communications technology which, alongside mathematical sciences, are key foundations for the UK's ambitions in areas such as Net Zero and AI. Absorbing the remaining £176 million from wider UKRI budgets would lead to a reduction of funding in other areas of Ministerial priority, such as investments to support world leading talent and skills, as well as critical funding to support the disease mission at the heart of the Life Sciences Vision landed by the Prime Minister, Sajid Javid and Kwasi Kwarteng last summer.

UKRI is moving towards greater collective management of its funding, which will also allow for more flexible and holistic thinking to address specific areas of growing need. Rather than ring-fenced budgets addressing single priorities, the aim is to create a portfolio of investments where each pound contributes to delivering multiple priorities, providing much better value for money and leveraging the benefits of UKRI as an integrated R&I funder. In this strategic context, UKRI is looking for opportunities to support foundational mathematical research across its portfolio, for example in planned programmes to support tomorrow's technologies, address major national and global challenges through UKRI's five strategic themes<sup>2</sup>, extend UKRI's Future Leader Fellows programme, and explore innovative funding approaches for interdisciplinary research. On this basis the UKRI Board took the difficult decision to advise BEIS Ministers not to hypothecate a further uplift for the mathematical sciences at this stage.

EPSRC Core funding for Mathematical Sciences will continue at the level of c£25-30m/year for grants, fellowships, and studentships, along with the £124m AFPMS funding provided to support activities that have been started to date.

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<sup>2</sup> These themes are: *Building a Green Future* - helping to improve the health of our environment and deliver net zero, ensure UK energy security, securing prosperity across the whole of the UK; *Securing Better Health, Ageing, and Wellbeing* - advancing people's health and promoting wellbeing to maintain prosperous, productive and resilient communities throughout the UK and globally, supporting the UK Life Sciences Vision by addressing challenges around ageing, living with multiple conditions, mental health and health inequalities; *Tackling Infections* - protecting and enhancing health, our food supply and our natural capital by building knowledge and capabilities to detect and disrupt the emergence and spread of human, animal and plant diseases, accelerate new vaccines and therapeutics, and halt the 'slow motion pandemic' of antimicrobial resistance; *Building a Secure and Resilient World* - strengthening social and economic resilience, and enhancing national security across virtual and physical spaces, by improving awareness of risks and threats; preparedness, decision making and response; and allowing change to be understood as a force for good; *Creating Opportunities, Improving Outcomes* - understanding the causes and effects of place based disparities and finding empowering new solutions that promote prosperity and improve outcomes for people and communities across the UK.



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## 2. Horizon Europe

Turning to Horizon Plan B, consultation to date has focused on seeking feedback on the plans we are developing, and what the sector requires to maintain support for excellent research and innovation. This consultation has taken the form of various bilateral meetings and roundtables. I and my officials have engaged regularly and frequently over the last 10 months with the UK National Academies, Devolved Governments, UKRI, universities and their sector bodies such as the Russell Group and Universities UK, academic societies, business representative organisations, a series of business roundtables, and researchers from early career to leading professors. Some of this has been on the overall picture of 'Plan B' but much of it has been on specific aspects of the package, such as the flagship talent fellowships and the opportunity for a more agile and multi-disciplinary approach to innovation.

Our Plan B proposals also draw on a wider range of sector led evidence, including the Changes and Choices review undertaken by Professor Sir Adrian Smith and Professor Graeme Reid, and the call for evidence and sector roundtables which were conducted as part of that review.

As I mentioned to the committee, we will shortly be publishing further detail on both our transition and 'Beyond Horizon' plans. This will not include an impact assessment, as per the Green Book these are considered appropriate for legislative or regulatory changes rather than the provision of funding. The publication of our plans will allow us to increase our rate of engagement over the coming months and build on the informal consultation with the sector completed so far. Further policy development will take place through engagement with interested parties across all aspects of research and innovation.

Yours sincerely,

**GEORGE FREEMAN MP**  
Minister for Science, Research and Innovation