Kent and Medway Medical School

Full Business Case

Submitted to Kent County Council and the South East Local Enterprise Partnership for support from the Local Growth Fund

Revised
October 2019

COMMERCIAL IN CONFIDENCE

Please note that this Full Business Case is commercial in confidence and contains information that the University of Kent and Canterbury Christ Church University consider should be redacted before it is made available in the public domain.

A redacted version will be provided to Kent County Council and SELEP for publication.

The template

This document provides the business case template for projects seeking funding which is made available through the **South East Local Enterprise Partnership**. It is therefore designed to satisfy all SELEP governance processes, approvals by the Strategic Board, the Accountability Board and also the early requirements of the Independent Technical Evaluation process where applied.

It is also designed to be applicable across all funding streams made available by Government through SELEP. It should be filled in by the scheme promoter – defined as the final beneficiary of funding. In most cases, this is the local authority; but in some cases the local authority acts as Accountable Body for a private sector final beneficiary. In those circumstances, the private sector beneficiary would complete this application and the SELEP team would be on hand, with local partners in the federated boards, to support the promoter.

Please note that this template should be completed in accordance with the guidelines laid down in the HM Treasury's Green Book. https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent

As described below, there are likely to be two phases of completion of this template. The first, an 'outline business case' stage, should see the promoter include as much information as would be appropriate for submission though SELEP to Government calls for projects where the amount awarded to the project is not yet known. If successful, the second stage of filling this template in would be informed by clarity around funding and would therefore require a fully completed business case, inclusive of the economic appraisal which is sought below. At this juncture, the business case would therefore dovetail with SELEP's Independent Technical Evaluation process and be taken forward to funding and delivery.

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The process

This document forms the initial SELEP part of a normal project development process. The four steps in the process are defined below in simplified terms as they relate specifically to the LGF process. Note – this does not illustrate background work undertaken locally, such as evidence base development, baselining and local management of the project pool and reflects the working reality of submitting funding bids to Government. In the form that follows:

Local Board Decision

- Consideration of **long list** of projects, submitted with a short strategic level business case
- **Sifting/shortlisting process** using a common assessment framework agreed by SELEP Strategic Board, with projects either discounted, sent back for further development, directed to other funding routes or agreed for submission to SELEP

SELEP

- Pipeline of **locally assessed projects submitted to SELEP**, with **projects supported by strategic outline business cases - i.e., partial completion of this template**
- Prioritisation of projects across SELEP, following a common assessment framework agreed by Strategic Board.
- **Single priorisited list of projects is submitted by SELEP to Government** once agreed with SELEP Strategic Board.

SELEP ITE

- Following the allocation of LGF to a project, scheme promoters are required to prepare an **outline business case, using this template** together with appropriate annexes.
- Outline Business Case assessed through **ITE gate process**.
- **Recommendations are made by SELEP ITE to SELEP Accountability Board** for the award of funding.

Funding & Delivery

- Lead delivery partner to commence internal project management, governance and reporting, ensuring **exception reporting mechanism back to SELEP Accountability Board** and working arrangements with SELEP Capital Programme Manager.
- **Full Business Case** is required following the procurement stage for projects with an LGF allocation over £8m.

Version control	
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Author	Ross Gill
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Authorised by	Professor Rama Thirunamachandran
Date authorised	8 October 2019

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CONTENTS

1. Project Overview

1.1. Project name:
[Specify the name of the scheme, ensuring it corresponds with the name of the scheme at programme entry (when added to the LGF prioritised list of projects).]

Kent and Medway Medical School

1.2. Project type:
[Site development, skills, innovation etc.]

Skills

1.3. Federated Board Area:
[East Sussex, Kent & Medway, Essex, and Thames Gateway South Essex]

Kent and Medway

1.4. Lead County Council / Unitary Authority:
[East Sussex, Kent, Medway, Essex, Thurrock, Southend-on-Sea]

Kent County Council

1.5. Development location:
[Specify location, including postal address and postcode.]

Canterbury Christ Church University, Canterbury CT1 1QU
University of Kent, Canterbury CT2 7NZ

1.6. Project Summary:
[Provide a summary of the project; max. 0.5 pages.]

Introduction

This paper presents the **Full Business Case** for Local Growth Fund investment in the construction of the Kent and Medway Medical School (KMMS). Specifically, it sets out the rationale for the creation of the KMMS, its capital and operational costs and the economic and wider benefits that it will deliver. It then explains the additionality that would be provided by an LGF contribution of £8 million (or a smaller grant, depending on the headroom within the programme). The FBC responds to queries raised by the Independent Technical Evaluator on the Strategic Outline Business Case (SOBC) prepared in 2018, and reflects greater certainty regarding the costs and benefits of the project.

The **Kent and Medway Medical School** will be the first medical school in Kent, providing an innovative centre for medical education and research to develop the health and social care workforce. It will respond to the acute need for medical professionals in an area of rapid housing and population growth, and will drive productivity and innovation in the health

economy. It will also contribute to the development of the 'medical corridor' envisaged by the Thames Estuary 2050 Growth Commission.

KMMS will be delivered by **Canterbury Christ Church University** (CCCU) and the **University of Kent**, together with local health providers via the Kent and Medway Sustainability and on two sites in Canterbury.

LGF funding and the capital project

The LGF capital funding will bring both sites forward. Specifically, it will part fund the construction and fit-out costs of:

- 2,476 sq m of lecture theatre, classroom, anatomy and clinical skills simulation laboratory space at CCCU's Science, Technology, Engineering and Medicine (STEM) facility. £4 million of LGF is requested alongside £7.24 million from CCCU to increase the scale of the planned building

- 2,320 sq m of lecture theatre, IT suites, seminar rooms, meeting rooms and office space at the University of Kent campus. £4 million of LGF is requested alongside £9.6 million from University of Kent, to provide a new dedicated KMMS building.

The two sites are complementary, and all students at KMMS will use both. In broad terms, dissection, clinical skills and simulation facilities will be located on the CCCU site, and bioscience provision, including wet lab facilities, at University of Kent, linked with each university's areas of academic strength.

The case for LGF funding

Establishing a new medical school requires Government approval. The Government approved an application for KMMS in 2018: this unlocks revenue funding from 2020/21 for an initial cohort of 107 undergraduate places. However, while the Government will fund new student places as a result of the decision to establish KMMS, **there is no Government capital funding available**. Given the project's regional importance, the Universities agreed to proceed at risk, on the basis that a mixed funding package would be sought, including University borrowing, corporate and philanthropic sponsorship and public sector contributions. Given the significance of KMMS' contribution to regional growth, Local Growth Fund investment has been assumed as an important part of the funding mix.

The SOBC supported a request to the South East LEP for £8 million LGF. However, while the LEP currently has headroom within the LGF programme to potentially allocate £4 million, subject to the Full Business Case, the availability of additional funds will depend on underspend elsewhere in the programme. This business case therefore sets out how the project could proceed with total LGF funding allocations of either £4 million or £8 million, and explains the additionality associated with each amount.

In summary, **LGF, matched with University funding, will provide the capital investment for KMMS to proceed as planned.** This will:

- enable the development of the KMMS clinical placement offer, distributed across the breadth of clinical provision in Kent and Medway
- ensure that KMMS has the capacity to grow to a sustainable level over the medium term, scaling to an estimated 200 students by 2029/30

- provide capacity to enable KMMS to expand its provision to include postgraduate and continuing professional development places
- help to de-risk future university and Government investment

The Government's approval for KMMS means that the Medical School must open for the first cohort of students in September 2020, and must be fully staffed and operational at that point. The Universities have therefore pressed ahead with delivery (which is now well underway) and have guaranteed the completion of the capital build. In practice, this means that without LGF, the capital phase will be funded through the delay or cancellation of investment elsewhere on within the universities.

This would place a significant burden on KMMS, given that its viability is marginal, especially in the early years. In practice, the absence of LGF funding will lead to higher net costs and (as a result of slower expansion) significantly reduced benefits. In addition, weaker momentum in building student numbers from a 'standing start' will have a negative impact on the longer term viability of the Medical School and its ability to act as a key driver of a new approach to Kent and Medway's health economy. This is explained further in the Economic Case.

The timing and phasing of LGF funding

As indicated above, SELEP has stated that LGF funds may (subject to headroom, the Full Business Case and the Accountability Board's decision) be made available in two tranches, with an initial approval for £4m, and approval for a second £4m tranche at a later date.

Informally, these two tranches of funding have sometimes been referred to as 'Phase 1' and 'Phase 2'. However, for practical purposes, the KMMS project is not phased (i.e. it is not possible to achieve any benefits from a first stage of capital expenditure: the project will only deliver benefits if it is delivered in its entirety). Development on both sites is now underway, and it is envisaged that any contribution from LGF would be divided equally between the two universities. Both tranches of funding, if made available, will therefore contribute to the project as a whole: the additionality of each 'tranche' is set out in the Economic Case.

1.7. Delivery partners:

[List all delivery partners and specify the lead applicant and nature of involvement, as per the table below.]

Table 1-1: Delivery partners

Partner	Nature of involvement (financial, operational, etc.)
Canterbury Christ Church University	For the CCCU site: • Site owner • Management of construction phase • Delivery of educational provision following start of KMMS operations • Financial contribution of £7.24 million
University of Kent	For the University of Kent site: • Site owner • Management of construction phase • Delivery of educational provision following start of KMMS operations • Financial contribution of £9.6 million

1.8. Promoting Body:

[Specify who is promoting the scheme.]

Canterbury Christ Church University
University of Kent

1.9. Senior Responsible Owner (SRO):

[Specify the nominated SRO and provide their contact details. The SRO ensures that a programme or project meets its objectives and delivers projected benefits. This is not the same as a Section 151 Officer.]

Professor Rama Thirunamachandran
Vice Chancellor and Principal, Canterbury Christ Church University
Tel: 01227 922200
Email: vc@canterbury.ac.uk

1.10. Total project value and funding sources:

[Specify the total project value, how this is split by funding sources, any flexibility in funding scale and profile and any constraints, dependencies or risks on the funding sources, as per the table below.]

The table below indicates the total value of the capital project (consistent with the approach taken in the SOBC). However, additional running and operational costs are considered within the economic appraisal.

Table 1-2: Funding sources

Funding source	Amount (£)	Flexibility of funding scale or profile	Constraints, dependencies, risks and mitigations
Canterbury Christ Church University	7,240,000	The funding for the capital development of the Medical School is incorporated within an overall project for the establishment of STEM facilities within Building 2. The original capital scheme did not include a Medical School but once the universities' application for a school was approved, the building design was reconfigured and the additional costs added into the project to accommodate the facilities required for the provision of medical education There is flexibility to profile this funding across the period of the project, depending on the conditions attached to LGF grant	The funding of facilities is through a combination of accumulated reserves and borrowing. The use of these funds has been approved through the University's governance arrangements, and overseen by a project board and is fully committed as an institutional priority. The risk of failure to secure the Universities' contribution is therefore very low. However, in the event that the contribution from the universities has to increase to offset any reduction in LGF grant, there would be negative consequences for the Universities' wider capital programmes.
University of Kent	9,600,000	Funding approved by the University There is flexibility to profile this funding across the period of the project, depending on the conditions attached to LGF grant	
LGF	8,000,000	See 1.11 below	
Total capital	**24,840,000**		
Total project value	24,840,000		

1.11. SELEP funding request, including type (LGF, GPF etc.):

[Specify the amount and type of funding sought from SELEP to deliver the project. Please also confirm that the funding will not constitute State Aid.]

SELEP funding request

Local Growth Fund: £8 million (capital). SELEP has stated that potentially, this could be made available in two tranches of £4 million, subject to separate approvals. The net costs and benefits associated with each tranche are set out in the Economic Case.

State Aid

The primary activities of a university (e.g. tertiary education, independent R&D, dissemination of research results, etc) are considered 'non-economic' activities: the State Aid Manual notes that *"the fact that universities charge tuition fees does not change the fundamentally non-economic nature of their education remit".* It is not proposed that KMMS will carry out commercial activities or that the KMMS buildings will be used for commercial purposes. Public grant funding therefore does not constitute State Aid.

1.12. Exemptions:

[Specify if this scheme business case is subject to any exemptions (and provide details of these exemptions) as per the SELEP Assurance Framework 2017, Section 5.7.4 and 5.7.5]

No exemptions apply.

1.13. Key dates:

[Specify dates for the commencement of expenditure, the construction start date and the scheme completion/opening date.]

Commencement of expenditure	
Canterbury Christ Church site	April 2018
University of Kent site	October 2018
Construction start	
Canterbury Christ Church site	October 2018
University of Kent site	April 2019
Completion	
Canterbury Christ Church site	June 2020
University of Kent site	July 2020
Project opening (both sites)	September 2020

1.14. Project development stage:

[Specify the project development stages to be funded, such as inception, option selection, feasibility, outline business case, detailed design, procurement, full business case, implementation, the current project development stage, and a brief description of the outputs

from previous development stages. Add additional rows as necessary. Please note, not all sections of the table may require completion.]

Table 1-3: Project development stages completed to date

Task	Description	Outputs achieved	Timescale
KMMS Business Case	Application to HEFCE/ HEE for additional medical school places	Application submitted and approved by Government	Submitted Nov 2017. Approved Mar 2018
Canterbury Christ Church site			
Feasibility	Feasibility study	Feasibility study to extend STEM building proposals	March 2018
Detailed design	Detailed design	Detailed design report	June 2018
Planning consent	Full planning consent	Full design for approval	August 2018
Procurement	Appointment of architects	Hamilton Architects appointed	February 2018
	Appointment of contractor	Main contractor appointed	October 2018
Implementation	Construction start	Construction start	October 2018
University of Kent site			
Feasibility	Feasibility study	Feasibility study prepared (Willmott Dixon)	August 2018
Detailed design	Stage 3 design	Stage 3 design sign-off	March 2019
Planning consent	Full planning consent	Full planning consent	March 2019
Procurement	Appointment of contractor	Appointment of contractor	April 2019
Implementation	Construction start	Construction start	April 2019

Table 1-4: Project development stages to be completed

Task	Description	Timescale
Approval of SELEP funding	Approval of funding linked with this business case	Nov 2019 expected for initial tranche
CCCU site completion	Construction completion	June 2020
University of Kent site completion	Construction completion	July 2020

1.15. Proposed completion of outputs:

[Include references to previous phases / tranches of the project (link to the SELEP website) and to future projects to be funded by SELEP. Please see SELEP Programme for more information.]

All construction outputs will be delivered by August 2020. KMMS will then open to its first cohort of students in September 2020.

The first cohort of undergraduate students will graduate in 2025.

Relationship to previous projects funded by LGF

In 2017, Canterbury Christ Church University secured £6.12 million from LGF Round 2 for the Kent and Medway Engineering, Design, Growth and Enterprise (EDGE) Hub. This will be housed in the new 'Building 2' on the former Canterbury Prison site, now referred to as the 'STEM (Science, Technology, Engineering and Medicine) building.

The STEM building will also accommodate CCCU's part of the Kent and Medway Medical School. To accommodate KMMS in this building, CCCU has revised the building design to accommodate two additional floors. This has resulted in additional costs of £9.74 million (inc. VAT), which it is intended will be covered as follows:

Table 1-5: EDGE Hub and KMMS summary cost breakdown

	Source of funding	Cost (£m)
General building	Other funds*	34.233
EDGE Hub	LGF	6.120
	Other funds	14.382
	Total	20.502
PLUS		
KMMS	LGF	4.000
	Other funds*	7.240
	Total	11.740
Whole building	LGF	10.120
	Other funds	55.855
	Total	65.975

(* Other funds include reserves, borrowing and £6.5 million Catalyst funding).

The LGF request for KMMS is therefore for investment which is entirely additional to the previous grant allocation for the EDGE Hub.

There are no current LGF allocations relevant to the University of Kent.

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2. Strategic Case

The Strategic Case should present a robust case for intervention, and demonstrate how the scheme contributes to delivering the SELEP Strategic Economic Plan (SEP) and SELEP's wider policy and strategic objectives. It includes a rationale of why the intervention is required, as well as a clear definition of outcomes and the potential scope for what is to be achieved.

The outlook and objectives of the Strategic Case need should, as far as possible, align with the Monitoring and Evaluation and Benefits Realisation Plan in the Management Case.

Key changes to the Strategic Case since the SOBC

As well as updating the Strategic Case to reflect elapsed time and new information, the Independent Technical Evaluator requested a more detailed explanation of the opportunity cost should Local Growth Fund investment not be secured. This is set out in response to sub-section 2.5, and is also reflected in the Economic Case.

2.1. Scope / Scheme Description:

[Outline the strategic context for intervention, by providing a succinct summary of the scheme, issues it is addressing and intended benefits; max. 2 pages.]

Scheme summary

The **Kent and Medway Medical School** (KMMS) will provide a centre for medical education and research to develop the health and social care workforce, drive productivity and innovation in the health economy and contribute to the development of the 'medical corridor' envisaged by the Thames Estuary 2050 Growth Commission.

KMMS will be delivered by Canterbury Christ Church University (CCCU) and the University of Kent, together with local health providers via the Kent and Medway Sustainability and Transformation Partnership (STP). It will include new education and research facilities, located on two sites in Canterbury. Specifically, these are:

- 2,476 sq m of lecture theatre, classroom, anatomy and clinical skills simulation laboratory space at CCCU's Science, Technology, Engineering and Medicine (STEM) facility. £4 million of LGF is requested alongside £7.24 million from CCCU to increase the scale of the planned building
- 2,320 sq m of lecture theatre, IT suites, seminar rooms, meeting rooms and office space at the University of Kent campus. £4 million of LGF is requested alongside £9.6 million from University of Kent, to build and equip a new dedicated KMMS building

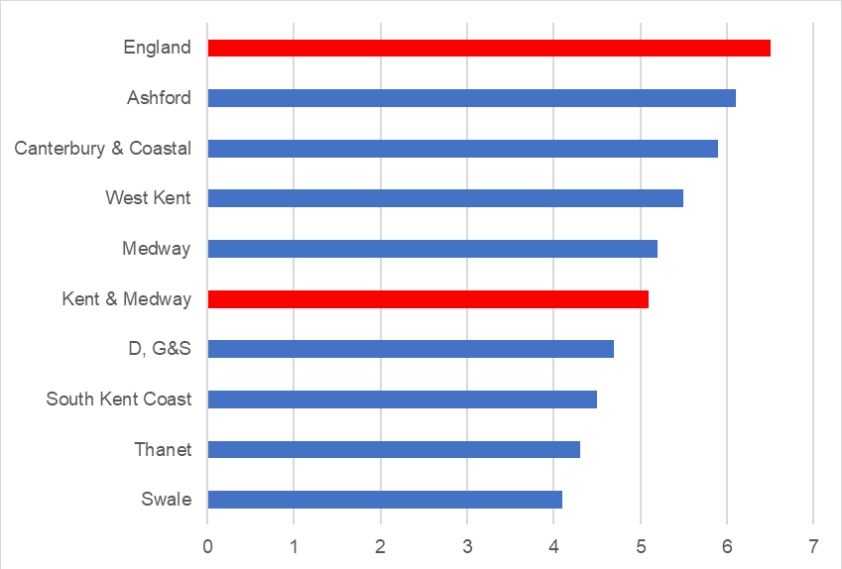
All students at KMMS will use both sites. In broad terms, dissection, clinical skills and simulation facilities will be located on the CCCU site, and bioscience provision, including wet lab facilities, at the University of Kent, linked with each university's areas of academic strength.

KMMS will open to an initial cohort of 107 students in September 2020. It is anticipated that this number will rise to a maximum cohort of 214 by 2029/30, and will be supplemented by additional postgraduate and continuing professional development students.

The issues that the project is addressing

Fundamentally, **KMMS responds to the need to grow the medical specialist workforce in Kent and Medway**. The local health system faces severe workforce challenges, including a 31% vacancy rate among medical staff in mental health, a 21% vacancy rate for consultants in acute and emergency medicine, and a ratio of GPs to the population that is substantially below the national average (as Figure 2-1 indicates), especially in more disadvantaged parts of the county. This imposes significant costs on the health system, as shortages of GPs and other health professionals leads to patients being diverted to A&E inappropriately, increasing the burden on emergency care.

Figure 2-1: GPs (FTE) per 10k weighted population[1]



These recruitment challenges are a national issue for the health system: this is reflected in the NHS Ten Year Plan, which highlights the need for additional medical schools. However, **the shortfall in the clinical workforce is especially acute in Kent and Medway**. Without urgent action, the situation is likely to worsen, given the county's high levels of housing and population growth.

KMMS therefore aims to recruit and retain more health professionals in Kent and Medway, through a new curriculum offer that exposes students to significantly more primary care experience than current medical students[2], and by recruiting more widely from all parts of the community to achieve a more diverse and representative workforce. At the same time, KMMS will provide a central point for career development within the healthcare workforce, by offering continuing professional development and acting as a centre for research and the dissemination of best practice. The Government recognises the need for a greater geographical distribution of medical school places to help drive local recruitment and retention, and this is reflected in the recent creation of new medical schools.

[1] Kent and Medway Sustainability and Transformation Partnership (2018), *Kent and Medway: Case for Change,* p.49 (https://kentandmedway.nhs.uk/wp-content/uploads/2018/07/KM_STP_case_for_change__March_2018_vF2.pdf) (NB: D,G&S refers to Dartford, Gravesham and Swanley; Kent and Medway figures are a mean average of the CCG figures)

[2] This reflects evidence that primary care experience at medical school increases rates of entry into general practice. See *British Medical Journal* (2017), https://www.bmj.com/content/356/bmj.j1010.

KMMS also responds to the need – and opportunity – to **develop Kent's presence in the medical research and bioscience sector**. The partner universities have significant academic strengths in this area (described further below, and which has recently been recognised through the award of a collaborative Applied Research Centre[3]), and there is a growing 'stock' of commercial expertise linked (for example) with the life science cluster at Discovery Park, the sector remains 'emerging', and opportunities for interaction between medical practice, health research, bioscience and engineering have been limited. KMMS will help to build an environment conducive to greater collaboration.

Intended benefits

KMMS will:

- **Deliver Kent and Medway's first medical school**, initially supporting 107 undergraduates per year, rising to 214 from 2029/30, and with additional capacity for postgraduate and CPD education
- **Deliver a new curriculum model to support the Kent and Medway health economy**, with much greater exposure to primary care from the start – helping to address the key areas of workforce shortage
- **Recruit more – and more diverse – people into the health service workforce**, through an outreach model that will broaden the medical talent pool
- **Over time, reduce the workforce challenges** that affect the sector
- **Build a new centre for medical knowledge and research,** complementing the established Brighton and Sussex Medical School (with which KMMS is working closely) and the new Anglia Ruskin School of Medicine in Chelmsford, and building strong relationships with University of Kent's and Canterbury Christ Church's research expertise

2.2. Location description:

[Describe the location (e.g. characteristics, access constraints etc.) and include at least one map; max. 1 page excluding map.]

KMMS will be based at two sites in Canterbury, both of which are currently under construction (see Figure 2.1 below):

- In a new, purpose-built facility at the University of Kent, at the northern end of the campus, near to the Sibson Building.
- In a second new building at CCCU's former Canterbury Prison site, now being developed as an extension to the University's main North Holmes Road campus.

Being based on the universities' main campuses, each site benefits from good transport access, security and facilities for students, including nearby living accommodation. The two sites are also within easy reach of the main East Kent acute health care facilities (Kent and Canterbury Hospital (Canterbury), the William Harvey Hospital (Ashford) and the Queen Elizabeth the Queen Mother Hospital (Margate)).

[3] https://www.nihr.ac.uk/news/new-nihr-applied-research-collaborations-to-tackle-the-biggest-challenges-faced-by-the-health-and-care-system/21373

Figure 2-2: Map of KMMS Locations at University of Kent (upper left, shaded red) and Canterbury Christ Church University (lower right, shaded red)

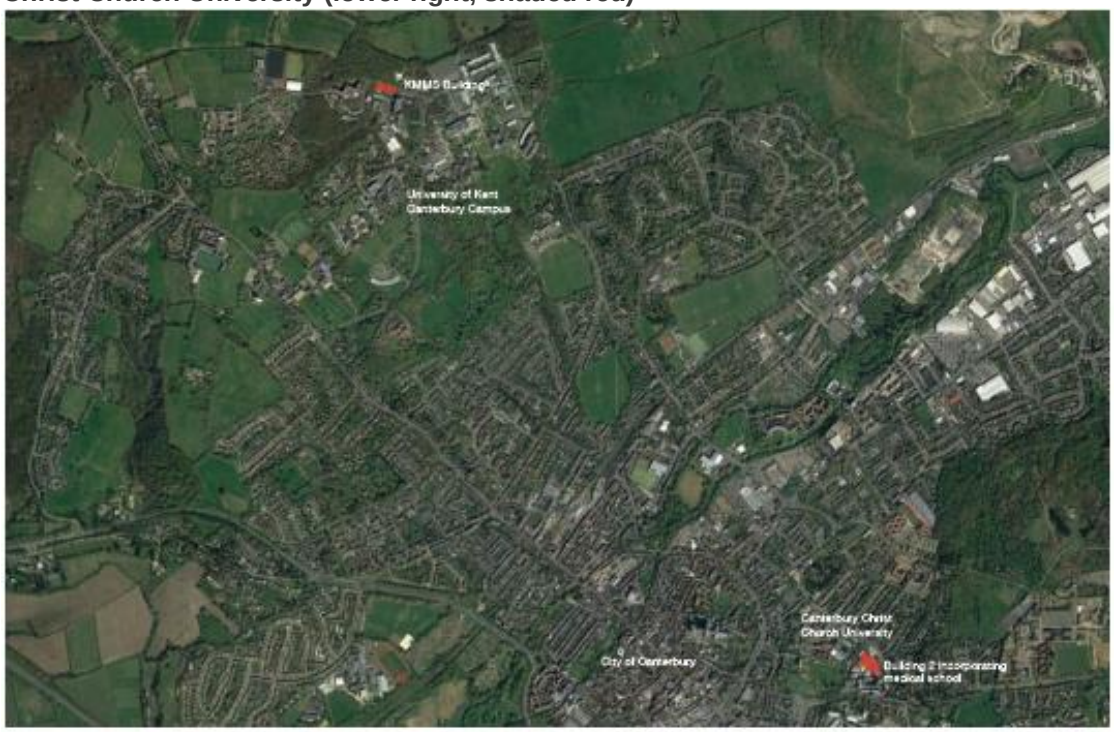


Figure 2-3 (below) provides recent architect-developed images of the two sites:

Figure 2-3: Architect-developed Images of the two KMMS sites

The CCCU facility (right) will be at the new 'Building 2', which has now been re-specified to incorporate the Medical School alongside other science, technology and engineering facilities, including the LGF-funded KM Engineering, Design, Growth and Enterprise (EDGE) Hub. This site also enjoys good access, being adjacent to the A257, one of the main routes into the city.

The University of Kent building (left) will be a purpose-built facility adjacent to Parkwood Road, one of the main access roads to the campus.

2.3. Policy context:

[Specify how the intervention aligns with national/regional/local planning policies and the SELEP SEP; max. 3 pages.

Smaller schemes: *(less than £2 million) are required to complete this section in line with the scale of the scheme; max. 1 page]*

The KMMS project aligns with national, regional and local policies in relation to both health and economic development:

National policy context

The establishment of KMMS is directly related to the Government's policy to expand the number of 'home grown' clinical staff in the light of significant workforce pressures in the NHS. In 2014, the *NHS Five Year Forward View* set out the urgent need to address skills gaps in specific parts of the health economy; two years later, the Government announced its intention to increase the supply of undergraduate medical places by 25%, particularly in those areas where pressure is greatest.

Following a process managed by HEFCE and Health Education England, five new medical schools were announced in March 2018, including the new medical school at Canterbury. As part of this process, Canterbury Christ Church University and the University of Kent submitted a full proposal for an allocation from the Government-controlled medical student numbers. The Government approved 107 enrolments per year from 2020, with the associated revenue package covering student fees and placement cost. **This approval demonstrates explicit UK Government support for KMMS.** However, unlike any previous bids for medical student numbers, the creation of the Medical School has no capital funding, despite a clear requirement for capital development in order for the project to proceed.

The development of the health sector is also increasingly important in national economic strategy. The *Industrial Strategy White Paper*, published in November 2017, identifies the 'ageing society' as one of four 'grand challenges' that the UK economy will need to address through innovation: in particular, it notes the economic value of developing new approaches to the organisation of health and social care. Related to the White Paper, the *Life Sciences Industrial Strategy* recognises the need to develop higher-level skills across the 'health and science' sector in its broadest sense, calling for a plan for "high quality STEM education" across "the NHS, commercial and academic sectors"[4]. This relationship between medical and wider science skills is explicitly recognised in the design of KMMS and its operational model, which includes curriculum delivery within the Science, Technology, Engineering and Medicine (STEM) facility at CCCU, and the contribution of the School of Biosciences at University of Kent.

Regional and local policy context

South East LEP Economic Strategy Statement

Since the SOBC was prepared, the South East LEP has published a new *Economic Strategy Statement*, in anticipation of the development of a new local industrial strategy over the coming year. The Strategy Statement notes the importance of the health and life sciences sector, and the universities' relevant strengths (highlighting for example University of Kent's strength in biosciences), specifically referencing Kent and Medway Medical School as a key opportunity[5].

[4] Life Sciences Industrial Strategy (September 2017), p.8
[5] South East LEP, *Smarter, Faster, Together: Towards a Local Industrial Strategy*, p.15

However, it also highlights the significant economic challenges faced by the coastal areas of the South East: these directly relate to the high levels of demand and low levels of workforce supply within the local health sector, which KMMS explicitly seeks to resolve.

SELEP Skills Strategy 2018-23

SELEP's *Skills Strategy* identifies health and social care as a priority sector, and one which is impacted both by workforce skills shortages and the need to make better use of technology. Most importantly, the core focus of the Skills Strategy is on ensuring that local provision meets with employer demand and that employers are engaged in course design: KMMS addresses this through a delivery model which has been designed in conjunction with NHS employers through the Sustainability and Transformation Partnership, and which aims to resolve employer-identified shortfalls in specific areas of the health economy.

More broadly, KMMS addresses the aim of the Skills Strategy to "promote careers where there are future vacancies to adults and young people" and to promote access to skills in disadvantaged areas. The delivery of KMMS specifically incorporates an outreach programme, working with local schools and colleges, and aims to develop a locally-grown workforce.

Kent and Medway Sustainability and Transformation Plan

Within Kent and Medway, the key strategy relevant to KMMS from the perspective of the health economy is the *Sustainability and Transformation Plan*. This was adopted in November 2016: approved by the local authorities and NHS providers, this sets out a high-level framework for the better integration of all parts of the health and social care system, identifying as a priority the need to *"attract, retain and grow a talented workforce – and use them to the best effect"*[6]. Engagement with the Sustainability and Transformation Partnership directly informed the proposal for KMMS to Government, and all STP partners are supportive of the project.

Kent and Medway Growth and Infrastructure Framework

While the Sustainability and Transformation Plan sets out the need for changes in organisation and delivery to address rising health and social care demand, the *Growth and Infrastructure Framework* (GIF) identifies the scale of capital investment that will be needed to accommodate a growing and changing population. As highlighted above, this notes the significant workforce challenges faced by the health sector; in that context, it identifies KMMS as a major capital project.

Thames Estuary 2050 Growth Commission

Taking a different perspective, the Government-appointed *Thames Estuary 2050 Growth Commission* reported in 2018 on the development of a long-term vision for North Kent, South Essex and East London to bring forward additional housing and economic opportunity. The Growth Commission report identified 15 'priorities', one of which is the development of a 'Health Supercentre' driven by the need for modern health facilities to accommodate growth, and by the potential to link this with the Estuary's emerging concentration of health and life science businesses. While conceptual at this stage, the Commission identified Canterbury as a key focus for the 'Supercentre', stating that: *"the universities should be supported by Government… to boost medical research and services while supporting workforce retention"*[7].

[6] Transforming Health and Social Care in Kent and Medway: The Sustainability and Transformation Plan (Summary), p.6

[7] Thames Estuary 2050 Growth Commission: 2050 Vision, p.25

Relevant complementary initiatives

The KMMS project is relevant to a number of other initiatives which have been supported by (or are seeking funding linked with) SELEP. In particular, these include:

- the EDGE (Engineering, Design, Growth and Enterprise) Hub project at Canterbury Christ Church University, with which KMMS will be partly co-located (this relationship is set out in greater detail in *LGF Required* below)
- the Enterprise Zone at Discovery Park, which has a focus on life sciences, and with which both University of Kent and CCCU have strong connections (including a physical presence in the case of CCCU)
- the Kent Medical Campus Innovation Centre at Maidstone, which has secured funding through the South East European Regional Development Fund programme. This project is not competitive with KMMS, although both could potentially benefit from it, particularly through the opportunity to grow the medical research base in the South East

Planning policy alignment

Full planning permission is in place for both the Canterbury Christ Church and University of Kent sites.

2.4. Need for intervention:

[Specify the current and future context and articulate the underlying issues driving the need for intervention referring to a specific market failure, need to reduce externalities, Government redistribution objectives etc.; max. 2 pages.]

The key challenges

In broad terms, it is essential that we:

- Grow the healthcare workforce in the context of population growth and demographic change;
- Deliver innovation and improved productivity in the health economy; and
- Grow the South East's life sciences and medical technologies sector.

The following sub-sections considers each of these needs in more detail:

1. Growing the healthcare workforce

Kent and Medway has a rapidly growing population. Between 2016-36, the area's population is projected to grow by around 386,000. This represents an increase of 21%, substantially greater than the 12% growth projected across the UK as a whole[8]. At the same time, the population is ageing: in the 20 years to 2036, the number of people in Kent and Medway aged 75+ is expected to grow by 85% (compared with 63% across the UK), leading to increased and changing demands on the health system.

In this context, the Kent and Medway Sustainability and Transformation Partnership (STP), which brings together local NHS organisations and local authorities to address future health and social care needs, has identified an urgent need to grow the local healthcare workforce. Currently, the system faces significant challenges within the medical workforce: according to the STP, these include:

[8] Kent County Council Housing Led Forecasts (Kent and Medway); ONS estimates (UK)

- insufficient GP numbers: currently, the ratio of GPs to population in Kent and Medway is just 79% of the national average. As the workforce ages, the number of GPs is declining (despite rising demand), and vacancy rates are high
- a 21% vacancy rate for consultants in acute and emergency medicine, impacting on service quality and standards
- a 31% vacancy rate among medical staff in mental health

These issues are particularly acute in parts of Kent and Medway, where they are compounded by high levels of demand and relatively high deprivation. They are also impacted by competition for recruitment from London, and by Kent and Medway's inability (at present) to 'grow its own' clinical workforce through the lack of a medical school.

> *"Fragility within local care is characterised by low numbers of GPs and practice nurses per head of population, high vacancy rates and high stand-in use. Local care is struggling, with practices closing, workforce issues and variable infrastructure"*
>
> Kent and Medway Growth and Infrastructure Framework, 2018

2. Delivering innovation and improved productivity in the health economy

While KMMS will deliver a quantitative increase in the supply of trained clinical staff into the health economy, plans from the Kent and Medway STP recognise that in order to meet the future needs of a growing and changing population, there will need to be significant improvements in productivity across the health economy. In particular, this is associated with greater collaborative working between primary and secondary care, and with a strengthened ability to tackle challenges that prevent the system from working for the benefit of the patient.

3. Growing the life sciences and medical technologies sector

The first two needs relate to the workforce and productivity in the field of healthcare provision, the majority of which is delivered or funded by the NHS. However, there are also significant opportunities for commercial innovation in life sciences (including pharmaceuticals and medical technologies): an area in which the UK has a major comparative advantage and which is characterised by high productivity, high-value employment and a propensity to innovate.

In Kent and Medway, the life sciences sector is widely recognised as an area of growth, and the county contains significant assets, notably in the concentrations of activity at Discovery Park and Kent Science Park. The recent Thames Estuary 2050 Growth Commission report also set out the concept of a North Kent 'medical research corridor' and future 'health supercentre', linking population-driven demand for healthcare with potential commercial opportunities.

However, the sector is relatively small, accounting for around 250 businesses in Kent and Medway[9], and has largely been developed from historic private sector investments and assets. While Kent's universities have relevant research expertise (such as the University of Kent's Schools of Biosciences, Engineering and Pharmacy and CCCU's Stem Cell and Bio-Engineering Laboratory (SCraBEL)) and there are a number of businesses (for example at Discovery Park) which have important links with the university knowledge base, the absence of a medical school means that there is no nationally significant concentration of clinical research expertise.

[9] Office for Life Sciences, Locate in Kent

Summarising the need

In summary, there are 12 key problems that KMMS must tackle – which we return to below in addressing the project objectives:

Table 2-1: The need: 12 key problems

	Key problems
1	There are significant shortages in the medical specialist workforce in Kent and Medway
2	These current shortages in acute specialist fields (such as mental health, stroke services, etc.) are leading to delays in assessment and treatment and are impacting detrimentally on the health of the population
3	Shortages of GPs and the large number of 'single handed' practices lead to patients being diverted to A&E inappropriately, leading to burdens on the emergency care system
4	Pressures in community settings also delay discharge from A&E, when care packages are difficult to set up
5	Current recruitment to vacant primary care posts is unattractive due to large caseloads and a lack of support
6	Recruitment to vacant primary care posts is made less attractive by the current difficulties in Kent and Medway NHS Trusts
7	Medical students tend not to be representative of the community – a large number of potential students miss out on medical careers, despite the potential they could bring
8	Current medical students do have clinical placements in Kent and Medway, but they tend not to pursue senior posts in the county, especially once families are settled in London
9	Career development opportunities for current medical practitioners is limited, as there is no clinical education or research post associated with a local medical school
10	The potential for medical research and innovation has not received the support that it should, despite the emerging life science and medical technologies cluster locally
11	Life science and medical innovation start-ups are limited in Kent and Medway
12	Opportunities for cross-disciplinary collaboration to effect innovation are currently limited, despite the universities' strong presence in relevant subjects

2.5. Sources of funding:

[Promoters should provide supporting evidence to show that:

- *all reasonable private sector funding options have been exhausted; and*
- *no other public funding streams are available for or fit the type of scheme that is being proposed*

Public funding is regarded as a last resort. Promoters are encouraged to think carefully about and provide strong evidence that the intervention they are proposing has exhausted all other potential sources of funding and there is a genuine need for intervention from the public sector; max. 1.5 pages.]

Proposed sources of funding

The capital cost of the project is £24.84 million.

The University of Kent and Canterbury Christ Church University are committed to the delivery of KMMS. Both institutions have therefore committed capital funding to the project (through borrowing and reserves) and construction is underway. However, it is anticipated that this commitment will be partially offset by a Local Growth Fund contribution of £8 million, capping the Universities' combined contribution at £16.84 million.

LGF and the funding strategy

As the universities have already made a funding commitment and the construction of KMMS is underway, the LGF grant request is not a straightforward 'gap funding' proposal. Instead, it is part of a wider funding strategy.

KMMS – like all medical schools – is a 'public good'. Historically, new medical schools have been funded with direct Government capital grant. However, although the Government will fund new student places as a result of the decision to establish KMMS, there is no Government capital funding available. Consequently, the Universities agreed to proceed at risk to enable KMMS to happen, on the basis that a **balanced funding package** would be sought, recognising the distribution of costs and benefits between three key stakeholders:

- first, the **Government**, which bears responsibility for the long term future of the health system, and which has recognised the shortfall of medical professionals in the national health economy. The Government's direct contribution is delivered through payment for student places.
- second, the **universities**, which have responsibility to deliver education and research, and which will receive income associated with the delivery of the KMMS curriculum. The Universities will contribute around two-thirds of capital costs (assuming that the full £8 million LGF grant is made available) and will also bear the risk of the viability and effectiveness of the new School. The universities' contribution is a combination of reserves and borrowing.
- third, **local partners**, recognising that the workforce challenge is particularly acute in Kent, is already imposing local costs and will present a barrier to sustainable housing growth. KMMS offers a bespoke local solution to this. It will also have positive spillovers into the local economy, in the form of long term savings to the NHS and the social care system, and strategic economic benefits from the expansion of the research and innovation base. (as well as local consumption-driven benefits in Canterbury). **Local Growth Fund responds to this third area of interest, funding the local economic and social benefits that will arise from the project.**

Consideration has also been given to alternative sources of funding, including corporate sponsorship and philanthropic contributions.

The implications of a 'no LGF' or 'reduced LGF' scenario

In the event that either no LGF, or a reduced amount of LGF, is made available, the development of KMMS would still proceed, as the universities are contractually committed to delivery in order to open the Medical School in September 2020. This would need to be funded through emergency borrowing (at a significantly higher net cost and with a negative impact on project benefits), or the deferral of other priorities within the universities.

100% university funding (to a limited extent offset by philanthropic contributions) is very challenging, given changes in the operating and financial environment for universities in the past year. In particular:

- **Medium term income sources are constrained:** The maximum level of student fees that it is possible to charge is frozen at £9,250 per year. At the same time, demographic change is an acute challenge, at present with the number of 18-year-olds looking to enter HE currently at a lower level than in recent years

- **Operational costs are rising:** for example, institutions are being obliged to significantly raise their contributions to the main sector pension schemes (TPS, LGPS and USS) from October 2019. This will add around £5m to the annual pension bill across both universities.

- **It is harder for institutions to increase their exposure to debt:** Further borrowing is likely to be accompanied by strict covenants and the resultant actions to remain compliant with these may lead to further redundancies and compromised service delivery. It should be noted that while local authorities have recourse to prudential borrowing, university debt is from commercial providers and priced accordingly.

In addition, there are some **additional revenue cost pressures** specifically associated with KMMS, given the geographically distributed nature of the new School's facilities. For example, KMMS's 'parent' institution, Brighton and Sussex Medical School is updating the medical degree curriculum, which has increased the cost of course validation to KMMS, which, in turn, will increase the cost of maintaining GMC accreditation. A further revenue cost pressure is that the GMC has also stipulated that the School should be fully staffed by 2020 (rather than allowing staff numbers to grow with student volumes).

In this context, there will be **two major negative consequences of a 'no LGF' or 'reduced LGF' scenario**:

- **First, KMMS' long term viability will be impacted.** In its early years, it is anticipated that the viability of KMMS will be marginal. Analysis of the financial model within the bid to HEFCE and Health Education England demonstrated that the minimum viable number is 84 home students per cohort; the approved level of 107 student entry in 2020/21 is therefore close to the margins of viability. Based on approved numbers, KMMS will also not break even in revenue terms until Year 6. Consequently, the HEFCE/ HEE bid to Government noted that *"any shortfall in the assumed level of capital funding will challenge this position and the School's ability to break even within a reasonable length of time".* Assuming no LGF is forthcoming**, the likely revenue cost of borrowing to make up the difference will be between £240k - £400k per year**, placing a substantial additional burden on the viability of the School.

  Weaker viability will limit KMMS' ability to scale up and reach its full potential. Brighton and Sussex Medical School has serially increased home student numbers when more government funding has become available, in addition to growth in research capacity and CPD. To reach the economic benefits outlined in Section 3, KMMS will seek to replicate this, increasing the annual undergraduate cohort beyond the initial 107 and investing in further postgraduate and research opportunities. This will be impeded if there is insufficient revenue capacity for expansion. If KMMS is unable to expand at pace, it is also likely to face challenges in recruiting and retaining the calibre of staff needed to drive it forward.

- **Second, other university capital investment and revenue expenditure will be reduced**, as a failure to secure external funding leads to pressures elsewhere. At the University of

Kent, this will put on hold planned investments in life sciences, including the final phase of developments to provide bespoke facilities for the new Institute of Biotechnology and Molecular Medicine (IBaMM). This will, in turn, undermine the benefits of KMMS, particularly those associated with research and innovation links between life sciences and health and the 'halo effect' of the life sciences development in encouraging recruitment of medical students and in other STEM subjects.

Boxes 2-1 and 2-2 below provide further detail for each institution on the impact of a failure to secure LGF. They demonstrate that **LGF funding is, in practical terms, a 'last resort':** the universities have had to progress delivery since the original LGF expression of interest was submitted in August 2018, otherwise KMMS would not open in 2020. But while they have proceeded at risk, this has been on the assumption of a mixed funding package including LGF grant and loans and other investment decisions have been made on this basis.

Box 2-1: Institutional impacts of a failure to secure LGF funding: University of Kent

The University of Kent has prioritised the KMMS construction over all other capital expenditure plans, due to the need to provide suitable teaching and academic office accommodation for the Medical School in advance of its scheduled opening in September 2020. This, together with changes in the University's financial projections brought about by a reduction in student numbers across the sector, has led to capital budget cuts over the next five years.

In a competitive environment, where high quality up-to-date and fit-for-purpose facilities feature high in students' criteria in their choice of university, this inability to invest creates a real challenge. Whilst KMMS is a major element of the University's growth and sustainability strategy, the high start-up and capital costs of this venture mean that there is considerable pressure on other schemes that the University could have progressed.

This planned build is also requiring the University to seek new borrowing for the full amount from its existing lenders, thus not only preventing them from moving ahead with other income-generating schemes, but also leading to significant additional costs (funding, legal and advisory costs).

The provision of the full £4m (50% share of the £8m SELEP bid) will ease pressure on cash flows at a time when income is significantly constrained but operating costs continue to rise. This would then assist in bringing other schemes forward, particularly high priority refurbishments and provision of new space for further growth, putting Kent in a better position to respond to the demographic upturn in 18-21 year olds from 2022

Box 2-2: Institutional impacts of a failure to secure LGF funding: Canterbury Christ Church University

The capital development of the Medical School is the highest profile investment that the institution is currently making and has been appropriately prioritised within the University's spending plans for the next two years.

The institution has already incurred costs through the modification of the design of its Building 2 development (which incorporates other STEM facilities including those funded through the KM EDGE initiative). This has meant creating space within the

building which has impacted upon proposed capital developments and improvements in other parts of the University's curriculum offer.

Should the institution be unsuccessful in its bid for funding, then there would likely be an impact upon the further development of the Medical School as there is further capital investment and subsidy required during its start up before it moves to a financially sustainable operating model. Whilst there is some support from the health economy for these ongoing revenue costs, both institutions are underwriting operating losses and it is inevitable therefore that if the capital costs of the construction are not supported through this bid, that the amount of money available for both investment and operation of the facility will be negatively impacted. This would be a huge blow to the profile of the Medical School and could detrimentally impact upon the quality and attractiveness of the offer both for the necessary workforce talent that needs to be recruited to establish an outstanding Medical School as well as its appeal to local students who are so essential for the Kent economy.

However, it is unlikely that the impact would be restricted purely to the further development of the Medical School as it would undoubtedly require continued under investment in other aspects of the University offer. This in turn would reduce the institution's attractiveness in what is a highly competitive higher education market. Along with the University of Kent, the institution provides huge economic benefit to the Kent and Medway area through recruiting students from the UK, EU and internationally. In a heavily constrained funding environment for HE, any further constraints on the universities to develop and innovate will undoubtedly result in lower student numbers and therefore a detrimental impact upon local economies.

The University has already had to divest of a number of properties within Canterbury as well as its campus in Broadstairs to reflect the economic realities of the sector. It remains committed to maintaining a presence across its other campus locations in Canterbury, Medway and Tunbridge Wells but needs to ensure that these continue to operate on a financially sustainable basis.

Any reduction in the amount of LGF available will therefore impact significantly on both the viability of KMMS and investment across the wider university estate. This is discussed further in the Economic Case.

The additionality of the proposed LGF grant is explained further in the Economic Case (within a new Section 3.9).

2.6. Impact of non-intervention (do nothing):

[Describe the expected outcome of non-intervention. Promoters should clearly establish a future reference case and articulate the impacts on environment, economy and society, if applicable. The future reference case should acknowledge that market conditions are likely to change in the future, with or without any intervention. 'Do nothing' scenarios where nothing changes are unlikely; max. 1 page.]

A 'do nothing' option was, in principle, possible at the time the SOBC was prepared and would have meant that CCCU and University of Kent would not have committed to any additional capital costs. However, given that the universities are now committed to the scheme and costs have been incurred, the 'do nothing' option is now essentially theoretical.

Since the bid to Government for a medical school assumed (based on the experience of the Brighton and Sussex Medical School) that a new buildings of at least 4,500 sq m would be required to deliver the School), the 'do nothing' option would have meant that KMMS would not have proceeded, since it would not be possible to deliver the project without capital investment.

In practice, the 'do nothing' option would have meant that the Government would continue to fund the additional student numbers (to which it had already committed) but would do so elsewhere, probably via Brighton and Sussex Medical School. This is the assumption that we have made for the 'do nothing' option described in the Economic Case.

The specific impacts of 'do nothing' are anticipated to be as follows:

- **Environment**: The net environmental impact of the scheme not going ahead would be marginally positive, in that the level of construction activity would be lower and there would notionally be less student and staff travel. The small negative impact of the scheme going ahead, though, is trivial compared to the economic and social benefits (and in any case, most of the environmental costs would simply be transferred elsewhere)
- **Economy**: the Economic Case of this document details the significant positive economic impact that would be foregone if the scheme does not proceed. This relates to a range of factors that contribute to impact, including direct and induced jobs created, added income attracted to the local NHS, staff and student spend in the local economy, and missed opportunities in terms of life sciences and medical technologies innovation.
- **Society**: the health and wellbeing of residents of the SELEP and Kent and Medway areas would be significantly impacted, given that the identified workforce and innovation and productivity challenges would not be met, resulting in sub-optimal and inefficient services being delivered to local communities. A core rationale for KMMS is the need to respond to the specific workforce challenges in Kent and Medway: while additional places would be taken up elsewhere (given the national shortage), the benefits to Kent would be minimal.

Changes in relevant future market conditions are difficult to predict but tend to reinforce the undesirability of the 'do nothing' option. On the demand side, the likely growth in demand for health care services is well documented, taking into account demographic change and the ageing population.

In terms of supply-side factors, the most relevant to this project is the issue of the available clinical workforce, where skills shortages currently pose major problems (see 2.4 above). This challenge could be reduced if more clinical staff could be accessed from outside the UK, but an easing of immigration restrictions currently appears to be unlikely, and Brexit could reduce the scope to recruit staff from EU27 countries, who currently play such a key role in the makeup of the NHS. This recruitment problem is clearly exemplified by slow uptake of the government-backed International GP Recruitment Programme (IGPR).

2.7. Objectives of intervention:

[Outline the primary objectives of the intervention in the table below, and demonstrate how these objectives align with the problems presented in the Need for Intervention section.]

Linking back to our 'key problems'

Linking back to the '12 key problems' that we introduced earlier, the table below sets out how KMMS will resolve some of the key challenges facing the health workforce and support the development of Kent and Medway's health economy:

Table 2-2: Resolving the need: Problems and solutions

	Key problems	Solutions
1	There are significant shortages in the medical specialist workforce in Kent and Medway	KMMS will provide an opportunity to build the pipeline of future medical staff
2	Shortages in acute specialist fields lead to delays in assessment and treatment	KMMS will help to develop a local workforce which, over the long term, will start to fill some of these vacancies
3	Shortages of GPs and the large number of single handed practices lead to patients being diverted to A&E inappropriately	KMMS' focus on primary care will help support the drive to transform GP practices into 'local care hubs'
4	Pressures in community settings also delay discharge from A&E	KMMS students will work inter-professionally to develop their understanding of the entire health team, encouraging future innovation, collaboration and productivity
5	Current recruitment to vacant primary care posts is unattractive due to large caseloads and a lack of support	KMMS students will be exposed to primary care practices significantly more than current medical students, enabling greater choice in future career paths
6	Recruitment to vacant primary care posts is made less attractive by the current difficulties in Kent and Medway NHS Trusts	KMMS students will provide opportunities for clinical experts to share, celebrate and develop their practice to enhance retention
7	Medical students tend not to be representative of the community	KMMS will actively draw from all parts of the community to contribute to the diversification of the workforce
8	Current medical students do have clinical placements in Kent and Medway, but they tend not to pursue senior posts in the county	KMMS will offer an opportunity for individuals to develop a local affiliation, helping local applicants to become embedded in the Kent and Medway community
9	Career development opportunities for current medical practitioners is limited, as there is no clinical education or research post associated with a local medical school	KMMS will offer opportunities for CPD and career development
10	The potential for medical research and innovation has not received the support that it should, despite the emerging life science and medical technologies cluster locally	KMMS will provide an impetus for enhanced collaboration and greater partnership working
11	Life science and medical innovation start-ups are limited in Kent and Medway	KMMS will work in partnership with SMEs to raise the profile of innovation in promoting health care delivery efficiencies
12	Opportunities for cross-disciplinary collaboration to effect innovation are currently limited	KMMS will work closely with other university departments to develop new opportunities for innovation and collaboration

Linking these with our objectives…

[Complete the following using a system of 0, ✓, ✓✓, ✓✓✓which maps the objectives to their ability to address each problem. Add rows and columns as required and note not all sections of the table may require completion; max. 1 page.]

Table 2-3: Linking the problems and opportunities with the objectives identified in the Need for Intervention

	Objective 1: Growing the healthcare workforce	Objective 2: Delivering innovation in the health economy	Objective 3: Driving growth in the life science and medtech sector
There are significant shortages in the medical specialist workforce in Kent and Medway	✓✓✓	✓	
Shortages in acute specialist fields lead to delays in assessment and treatment	✓✓✓	✓✓	
Shortages of GPs and the large number of single handed practices lead to patients being diverted to A&E inappropriately	✓✓✓	✓✓	
Pressures in community settings also delay discharge from A&E	✓✓✓	✓✓	
Current recruitment to vacant primary care posts is unattractive due to large caseloads and a lack of support	✓✓✓	✓✓	
Recruitment to vacant primary care posts is made less attractive by the current difficulties in Kent and Medway NHS Trusts	✓✓✓	✓✓	
Medical students tend not to be representative of the community	✓✓✓	✓✓	
Current medical students do have clinical placements in Kent and Medway, but they tend not to pursue senior posts in the county	✓✓✓	✓✓✓	
Career development opportunities for current medical practitioners is limited, as there is no clinical education or research post associated with a local medical school	✓✓✓		
The potential for medical research and innovation has not received the support that it should, despite the emerging life science and medical technologies cluster locally		✓✓✓	✓✓✓
Life science and medical innovation start-ups are limited in Kent and Medway		✓✓✓	✓✓✓
Opportunities for cross-disciplinary collaboration to effect innovation are currently limited	✓✓	✓✓✓	

Overarching the three objectives, KMMS also aims to improve health outcomes for people in Kent and Medway, contributing ultimately to healthier, more resilient individuals and increasing the potential of the workforce in the local economy

The following paragraphs consider each objective in more detail:

Objective 1: Grow the healthcare workforce, in the context of population growth and demographic change

If Kent and Medway is to deliver the housing and population growth required to meet national and local demand, it will be essential to develop solutions to this health sector workforce deficit. KMMS will provide a key component of the solution, as a facility specifically designed to develop a sustainable workforce, through a focus on local recruitment and employment within the local health sector. This builds on evidence from elsewhere in the UK that suggests that the great majority of medical school graduates gain their first career post in either the region of their medical school or their previous home[10].

As part of the focus on developing a sustainable local workforce, KMMS will have a strong focus on 'widening participation', attracting students who would not previously have considered opportunities in medicine (or higher education generally). Building on the success of CCCU and University of Kent in working with schools and colleges to attract new entrants to HE, KMMS will incorporate targeted outreach to partner schools to provide alternative pathways into medicine for people from disadvantaged groups.

This focus on widening participation will be fundamental to the success of KMMS: creating a more diverse workforce and taking better advantage of local talent is key to addressing our workforce challenges. However, it will also have a wider impact in driving up participation in STEM subjects, recognised as a priority in the South East LEP's *Skills Strategy*, and discussed further below.

Objective 2: Deliver innovation and improved productivity in the health economy

KMMS aims to provide a new model of delivery that will drive productivity, and is linked with the nature of the Kent and Medway health economy. Learning from the success of the Brighton and Sussex Medical School, this will include:

- curriculum design to ensure early placements in primary care (encouraging career choices in areas of shortage) across the Kent and Medway footprint
- a focus on attracting students in 'shortage' areas, such as psychiatry and acute and emergency medicine
- placements linked with a variety of NHS, private, voluntary and independent services offering community mental and public health support

This approach has been supported by Government as part of the agreement to establish – and provide revenue funding for – KMMS. In addition, KMMS (with full funding) will support the health economy through the provision of continuing professional development (CPD) courses and postgraduate qualifications.

Objective 3: Drive the growth of the South East's life sciences and medical technologies sector

In the first instance, KMMS will be a teaching facility. However, over time, its medical research and innovation capacity should increase as it becomes established. This is likely to be achieved

[10] Oxford Medical Careers Research Group

as KMMS grows its student numbers and links with the wider health economy and attracts clinical academics and postgraduate researchers.

By having a presence on both universities' campuses, KMMS will take advantage of connections with other university departments and with the universities' innovation support functions and business links. For example, both universities have thriving life science provision: KMMS will contribute to the University of Kent's existing expertise in molecular medicine, electronics (including assistive technologies and telehealth), pharmacy and medically-related physical sciences, and to CCCU's experience in medical innovation and its planned expansion into bio-engineering

The opening of CCCU's STEM building in 2020 will bring KMMS students into contact with engineering and health care professionals studying and researching at CCCU, providing the inter-professional experience and insight that are vital to the transformation of modern healthcare practice. At the University of Kent, the launch of the new Institute for Biotechnology and Molecular Medicine (IBAMM) in 2020 will also provide opportunities for interdisciplinary collaboration, and the University's new (and separately funded) Life Sciences building will accommodate wet lab space that will be used by KMMS.

KMMS is well placed to respond to the emerging local and national opportunity to grow medical technologies innovation. From a local perspective, for example, CCCU's Professor Rahul Kanegaonkar is one of only two Chairs of Medical Innovation in the country and has established (July 2018) a new Kent, Surrey and Sussex Medical Innovation Partnership involving the Academic Health Science Network, Clinical Research Network, local industry, local innovators and KCC. The Partnership is now progressing its first three projects through work involving local clinicians and companies such as Cupris (an i-phone otoscope manufacturer), Adam Rouilly (simulator and anatomical models maker) and NCL Technology Ventures. This new partnership builds on foundations from CCCU Institute of Medical Sciences (IMS) Medical Innovation Hub, which has bought together over 150 medical practitioners with an interest in innovation. This compliments other IMS work, which supports the recruitment of practitioners to local NHS Trusts by providing relevant PG programmes, which include an innovation component, to enable career progression. At the University of Kent, KentHealth - the University's "one stop shop" for showcasing and sharing medically-related expertise in education, training, research and innovation - utilises its Strategic Research Support Fund and targeted PhD scholarships to enhance collaboration and innovation by bringing together academic experts with their clinically active colleagues.

KMMS will work with both these areas of excellence to unlock the development of additional medical innovation projects by offering industry-sponsored Masters and PhD-level research projects made possible by LGF funding. Such projects are also building a local evidence base of the clinical effectiveness of projects, which will encourage a rapid adoption of the new technologies by doctors. This will be reinforced by the recent approval of funding for an Applied Research Collaboration and the forthcoming establishment of a Joint Research Office between Kent and Medway's universities and NHS Trusts.

CCCU's practice in developing medical innovation skills and knowledge within its postgraduate students can feed into the KMMS undergraduate curriculum, building a 'pipeline' of innovating clinicians in the process. Innovation is increasingly seen as a key feature of modern doctor education, but the NHS Research and Innovation function has traditionally focused on research, rather than innovation. So there is a now major opportunity to develop this aspect of medical education at KMMS.

Nationally, the KMMS will also seek to work with national bodies, such as the NHS England National Innovation Accelerator, which would assist with enabling the adoption of new technologies across the country. The NIA Director, Tony Young, is engaged with the local Medical Innovation Partnership and supportive of the KMMS initiative. KMMS will also engage with the Clinical Entrepreneurship Programme that the NIA offers and the IMS Chair of Medical Innovation supports as a mentor.

Further work needs to be done to estimate the potential impact of KMMS on medical research activity and its commercial applications. However, other 'new', teaching-focused medical schools established in the past 20 years have demonstrated success in growing their research base. For example:

- the Medical Research Centre at Brighton and Sussex Medical School (the GMC approved partner to KMMS) currently accommodates around 70 researchers focused on human genetics, cancer and infection and immunity, while the Clinical Imaging Science Centre provides an important resource for translational research in oncology and neuroscience
- elsewhere in the SELEP area, the new Anglia Ruskin University Medical School at Chelmsford, is closely associated with MedBIC, the University's innovation centre for businesses associated with health and medical technologies
- Hull York Medical School, established in 2003, recently opened a major palliative care research centre at Hull, funded by the Wolfson Foundation.

Given KMMS' proximity to Discovery Park and the academic capabilities of the universities, it is expected that, over time, it will generate a significant research presence. This will not happen 'overnight', but KMMS' ability to achieve a high profile and to scale at pace will be important in enhancing the attractiveness of the universities as centres for clinical research

2.8. Constraints:

[Specify high level constraints or other factors such as social/environmental/financial/ developments/schemes/legal consents and agreements which may affect the suitability of the Preferred Option; max. 0.5 page.]

No significant constraints have been identified for the project.

The project delivers significant social benefits, with no obvious major downsides.

Construction and additional student/staff travel will have a minor negative environmental impact. Opting to adapt an established building projects at CCCU, and using established 'placements' in primary care setting which offer opportunities for shared student travel with other healthcare students may mitigate this, and there are clearly many wider positive benefits for this scheme

Financial constraints relate to the partners' abilities to raise capital investment for the project, and LGF funding, if the bid is successful, would facilitate access to other, complementary sources of capital and help to reduce cost and risk. Both projects have planning permission and are at an advanced stage in terms of other regulatory requirements (see section 2.2 above)

2.9. Scheme dependencies:

[Provide details of any related or interdependent activities that if not resolved to a satisfactory conclusion would mean that the benefits of the scheme would not be fully realised; max. 0.5 page.]

The major dependency – securing Government approval for KMMS – has now been resolved. There are no other projects on which KMMS is dependent: both sites are within the control of the universities and planning consent is in place.

2.10. Expected benefits:

[This section identifies scheme benefits (which will be achieved through delivering the scheme) which may not be valued in the Economic Case. Specify the extent of the scheme benefits referring to relevant economic, social, environmental, transport or other benefits. This is where any 'GVA based' estimates of benefits should be reported together with any dependent development (e.g. commercial or residential floorspace). Please reference the relevant section of the Economic Case where additional information regarding the assessment approach can be found; max. 0.5 page.]

The key benefits of the scheme (in addition to the quantified benefits set out in the Economic Case) are:

- **A significant improvement in the supply of skilled medical professionals** in Kent and Medway. This is the fundamental rationale for the project, and it is both quantitative and qualitative. On the quantitative side, the scheme will support a cohort of 107 students a year initially, rising to 214 per annum over time, making an important change to the size of the workforce. On the qualitative side, the innovative curriculum offer will broaden the experience that students have of different parts of the health system, particularly with a focus on increasing experience in the primary care sector, and increasing collaboration between different specialties

- **Longer term social and health benefits**, as the new workforce comes on stream. In fact, there should be benefits before students graduate, as the quality and number of placements increases, bringing both increased capacity and fresh thinking and innovation into the system

- **Benefits to the organisation of the Kent and Medway health economy**, by, over time, reducing reliance on locum staff and by encouraging more people to apply for senior jobs in the county

- **Social benefits arising from access to careers and new opportunities**, particularly facilitated by KMMS's outreach programme and commitment to recruiting new medical students who would not previously have considered the profession

- **Economic development benefits arising from the co-location of a new medical school with existing expertise** in bioscience, engineering and other relevant subjects, in an area in which the life science and health-related technologies sectors are particularly important. These benefits will include additional research outputs with potential commercial application.

Specifically in floorspace terms, KMMS will deliver 4,796 sq m of additional teaching floorspace in Canterbury.

2.11. Key risks:

[Specify the key risks affecting delivery of the scheme and benefit realisation e.g. project dependencies, stakeholder issues, funding etc. Information on risk mitigation is included later in the template. This section should be kept brief and refer to the main risk register in the Management Case; max. 0.5 page.]

A full and detailed Risk Register for the project is provided in Appendix B of this Business Case. The Risk Register has been agreed with the General Medical Council (GMC), is live now and reviewed regularly by the KMMS Joint Management Board. 22 specific risk have been identified and are categorised into seven groups, each with an overall Risk Owner and Risk Manager:

- Financial (owned by the Joint Management Board)
- Partnership (Joint Management Board)
- Governance (Joint Management Board)
- Staffing (Joint Management Board)
- Curriculum and Assessment (Joint Quality Board)
- Patient Safety and Health and Safety (Joint Management Board)
- Student Experience (Student Experience Board)

The methodology used by KMMS is consistent with that implied in the SELEP Business Case template, and involves assigning a rating based on likelihood and impact, and a residual rating based on the anticipated effectives of the risk mitigation detailed.

SOUTH EAST
LOCAL ENTERPRISE
PARTNERSHIP

3. Economic Case

The economic case determines whether the scheme demonstrates value for money. It presents evidence of the expected impact of the scheme on the economy as well as its environmental, social and spatial impacts.

In addition to this application form, promoters will need to provide a supporting Appraisal Summary Table (AST). This should provide:

- *a calculation of Benefit-Cost Ratio (BCR) according to the DCLG Appraisal Guidance, with clearly identified, justified and sensitivity-tested assumptions and costs*
- *inclusion of optimism bias and contingency linked to a quantified risk assessment*
- *inclusion of deadweight, leakages, displacement and multipliers*

Smaller schemes (less than £2 million) are not required to provide a supporting AST, and do not have to calculate a BCR.

Key changes to the Economic Case since the SOBC

All costs and benefits have been reassessed and recalculated, building on the earlier analysis set out in the SOBC. An additional section (Section 3.9) has also been added, setting out the impact of different levels of LGF investment on the Preferred Option and building on the analysis of additionality in the Strategic Case.

3.1. Options assessment:

[Outline all options that have been considered, the option assessment process, and specify the rationale for discounting alternatives.

Promoters are expected to present a sufficiently broad range of options which avoid variations (scaled-up or scaled-down version) of the main options. The key to a well scoped and planned scheme is the identification of the right range of options, or choices, in the first instance. If the wrong options are appraised the scheme will be sub-optimal from the onset.

Long list of options considered:
Description of all options which have been considered to address the problem(s) identified in the ***Need for Intervention*** *section above, including options which were considered at an early stage, but not taken forward.*

Options assessment:
Describe how the long list of options has been assessed (assessment approach), rationale behind shortlisting/discarding each option.

Short list of options:
The 'Options Assessment' section is an opportunity to demonstrate how learning from other projects and experience has been used to optimise the proposal, and the Preferred Option is expected to emerge logically from this process; max. 2 pages.

Smaller schemes (less than £2 million) are required to complete an Options assessment which is proportionate to the size of the scheme; max. 1 page.]

Options assessment process

Following the Strategic Case (set out in the SOBC), the need for intervention is three-fold:

- **There is an urgent need to grow the local healthcare workforce**, in the context of rapid population growth, demographic change and significant recruitment competition from London
- **There is a need to increase productivity and resilience** in the local health economy
- **There is a need to support Kent and Medway's growing life science and medical technologies sector in scaling up**, and an opportunity to support this through the expansion of the area's medical research and teaching capacity.

In the light of this three-fold requirement, the following process was followed at the outset:

- a 'long list' of options was drawn up, including a 'do nothing' option
- this long list was considered prior to the submission of the expression of interest for LGF funding, with each option reviewed in the light of:
  - its 'in principle' viability and deliverability
  - its 'in principle' alignment with the three aspects of the evidence of need
- following this, three options were shortlisted and subjected to further appraisal
- this resulted in the preferred option described in detail below.

It should be noted that consideration of all options take into account the Government's existing approval for the establishment of KMMS, and its decision to fund an initial cohort of 107 students per year. All options are therefore consistent with this, and with the business case submitted to and approved by HEFCE and Health Education England. All options have also considered the crucial issue of gaining GMC approval for the delivery of the programme, which includes ensuring the ability to provide the right resources for medical students' success[11].

As set out in the Strategic Case, while all options were viable at the time of the expression of interest in summer 2018, the need to progress the project in the light of initial student entry in 2020 has meant that investment has since been made in the preferred option, which is now underway. The other options are therefore presented within this Full Business Case as evidence of the appraisal of alternatives that *would have been* viable at the time – although at this stage of the project, only the preferred option is realistic.

At FBC stage, the impact of a range of funding scenarios (assuming £8 million LGF funding, £4 million LGF funding and no LGF funding) has also been considered against the preferred option. This is presented in an addition Section 3.9 below.

Options long list

The table below summarises the options considered at longlisting stage against the Need for Intervention identified within the Strategic Case:

[11] See https://www.gmc-uk.org/-/media/documents/promoting-excellence-standards-for-medical-education-and-training-0715_pdf-61939165.pdf

Table 3-1: Options longlist: Summary

Option	Headline description	Shortlisted?
1. Do nothing	No public sector capital investment	Yes. It is not possible to deliver KMMS without capital investment. However, the Government could 'reallocate' the increased student numbers to an alternative institution.
2. Do minimum	In practice, temporary accommodation for first few cohorts while longer term options are developed	Yes. At longlisting stage, this was viewed as suboptimal, is a viable option
3. New build on single site in Canterbury	Construction of KMMS on a single site on either University of Kent or Canterbury Christ Church University	No. Consideration was given to this option, and it would, in principle be possible. However, there is no suitable site currently available, and this option would not be possible given the need to accommodate a first cohort in September 2020. To deliver a single-site new build, provision would first have to be made for either Option 1 (do nothing, and transfer numbers elsewhere at least for the first few cohorts) or Option 2 (temporary provision). As a standalone option, a single site is therefore not viable.
4. New build on two sites in Canterbury	Construction of KMMS within two entirely new buildings on University of Kent and CCCU campuses	No. This is obviously likely to be poorer value for money than Option 5, given investment to date
5. New build plus variation to planned new build over two sites in Canterbury	Construction of KMMS on two new build sites, including extension to planned facility at CCCU	Yes. This is the option presented in the original business case to HEFCE/ HEE, and is our preferred option.
6. Dispersed model from various locations	Delivery of KMMS from multiple sites across Kent (including Canterbury and Medway)	No. This is likely to be costly to manage, and unlikely to develop to 'critical mass'
7. New build in alternative location	New build on Medway campus (either as whole or partial solution)	No. No viable location option, and would fail to maximise synergy with university offer
8. Re-use of existing buildings in Canterbury	Repurposing of existing buildings on University of Kent and/ or CCCU campuses in Canterbury	No. No viable option
9.Re-use of existing buildings in alternative location	Repurposing of existing buildings on University of Kent and/ or CCCU campuses on Medway campus	No. No viable location option, and would fail to maximise synergy with university offer
10. Shared facilities with other SE medical schools	Use of existing facilities at Anglia Ruskin and Brighton & Sussex	No. Existing facilities established
11.Temporary re-use of existing building	Temporary re-use while longer term options are considered (a variation of 'do minimum')	No. Unlikely to demonstrate value for money and would fail to build 'critical mass'
12. Temporary new build	Temporary new build structure at either University of Kent or CCCU	No. Highly unlikely to demonstrate value for money

Shortlist of options

The initial assessment reduced the longlist of 12 options to a shortlist of three options. These are:

Option 1: 'Do nothing'

The 'do nothing' option would involve **no capital expenditure on KMMS**. This would mean that KMMS would not proceed, at least in the short term.

This option would still yield some benefits to the UK health economy. However, these would most likely be outside of Kent, as the consequence of not delivering new medical school places in Canterbury would probably be that the Government would redistribute medical student numbers to other institutions (in the South East, probably Brighton and Sussex Medical School). In other words, the Government's decision to create an additional cohort of 107 medical students will still stand in the 'do nothing' scenario, but these will not be accommodated in Kent and Medway (and mostly not in the SELEP area overall).

From a national perspective, this would help to meet the overall shortfall in medical student numbers, and it is likely, given the general constraints on capacity, that the increased numbers would be taken up. However, it would not respond specifically to the challenges of the Kent and Medway health economy as outlined above.

Option 2: 'Do minimum'

The 'do minimum' option involves **the minimum amount of capital expenditure that would have been needed to enable students to start at KMMS in Canterbury in September 2020**. In practice, this means a temporary solution, making use of existing facilities at University of Kent and CCCU (or hiring temporary accommodation) and postponing further investment to a future date. This would not allow capacity for growth, since it would be designed to get KMMS 'up and running' **at the minimum numbers at which it can be operationally viable**[12].

However, this would not allow capacity for future growth (since 'do minimum' caters for the minimum cohort numbers required to achieve a break-even position). There are risks associated with this, since a 'minimal' medical school without grow-on potential may struggle to attract academic staff; with attrition in student numbers, a small facility will be very close to minimum viability. For these reasons, it is possible that a 'do minimum' facility would not achieve GMC approval (although this has not been formally tested).

Option 3: Development of KMMS on two sites: a new build site on the University of Kent campus and a variation to a planned new-build on the Canterbury Christ Church University Campus

This is the preferred option. In summary, it involves:

- 2,476 sq m of lecture theatre, classroom and surgical skills laboratory space within an extension to CCCU's planned Science, Technology, Engineering and Medicine (STEM) building. The design of the STEM building has been revised to provide two additional floors to accommodate KMMS facilities

[12] These are assessed in the KMMS application to HEFCE and HEE as 84 home students, to which would be added the maximum 7.5% international students to create a minimum overall cohort of 90. The initial approved maximum home student entry of 100 is therefore close to the minimum viable number.

- 2,320 sq m of lecture theatre, IT suites, seminar rooms, meeting rooms and office space at a new building on the University of Kent campus.

This option was assessed as potentially positive against all our critical success factors at the longlisting stage[13].

The costs and benefits of these options are set out below. First, we set out the parameters for these calculations, including key assumptions, a framework for, and description of, the main costs and benefits, and development of the benefit: cost ratio for the preferred scheme and the other options.

3.2. Preferred option:

[Describe the Preferred Option and identify how the scheme aligns with the objectives. Include evidence of stakeholder support for the Preferred Option either through consultation on the scheme itself or on the strategy the scheme forms part of; max. 1 page.]

It was considered the preferred option because:

- it most directly achieves our objectives, in providing a facility that will be of **sufficient scale** to attract students and academics, is **co-located with other relevant university expertise** and clearly combines the **complementary strengths** of CCCU and the University of Kent

- it directly aligns with the vision for the Medical School that the Government supported in approving our bid, within which we referenced the value of a joint development on both campuses, within a Medical School with sufficient scale and capacity for growth

- it is the most deliverable of the three options. At the time of the SOBC, one of the sites (at Canterbury Christ Church) had full planning permission and development was about to start, and that the other (at the University of Kent) was well advanced in planning. Currently, both sites have planning and construction is underway.

Extensive engagement has taken place on the design and development of KMMS, with partners in the health sector, education and economic development. It is fully supported by the Kent and Medway Sustainability and Transformation Partnerships, and by the Kent and Medway NHS Trusts and CCGs, all of whom supported our original bid to HEFCE and HEE. In 2018, the project was discussed by Kent and Medway Economic Partnership Board, which has also been supportive of the proposal.

3.3. Assessment approach:

[Describe the approach used to assess the impacts of the scheme, describing both the quantitative and qualitative methods used, and specify the Do Minimum and Do Something scenarios. The assessment approach should be a proportionate application of the DCLG guidance; max. 1.5 pages.].

The 'do nothing' and 'do minimum' scenarios are set out in Section 3.1 above.

The approach taken to assessment was as follows:

[13] Note that a variant of this option – the delivery of KMMS through two 'freestanding' new build facilities – was discounted at the longlisting stage. This is because while it would meet most of our CSFs, there is no obvious additional site available on the CCCU campus, and further new build in Canterbury city centre would clearly be more expensive than a variation to the existing planned STEM building.

- First, we developed a 'routes to impact' model, setting out the plausible logic chains between the activities that KMMS will be engaged in, and the likely benefits that would be derived from them. A copy of the 'routes to impact' model is attached as Appendix G.

- Based on this, we identified those potential impacts that could be quantified, and those which should be considered as 'narrative only'. We tested this with key stakeholders to examine what sources of evidence we might be able to use: in the case of this project, there are several benefits which are quite hard to quantify at this stage, but which should eventually be measurable (for example, savings to the health service arising from reduced use of locum staff).

- In general, we have taken a conservative approach to assessment. It is highly likely, for example, that there will be quantifiable postgraduate student provision which would bring further substantial benefits to the University and the local economy. However, as the planning for this expansion activity is at an early stage of development, we have considered these as 'narrative only'.

For the purposes of this appraisal, **we did not consider it appropriate to use land value as a measurement of benefit**. On both KMMS sites, the land is in university ownership, within the footprint of the two university campuses, and is not available for use for any other purpose.

3.4. Economic appraisal assumptions:

[Provide details of the key appraisal assumptions by filling in the table in Appendix A, expand if necessary. Key appraisal assumptions as set out in Appendix providing justification for the figures used and any local evidence, where appropriate (different from the standard assumptions or the ones with the greatest influence on the estimation of benefits). Explain the rationale behind displacement and deadweight assumptions.

Smaller schemes (less than £2 million) are not required to complete this section].

Key assumptions, and parameters shaping the approach, are as follows:

- an **appraisal period** of 30 years is used, starting in 2018/19. This reflects the fact that KMMS will take time to build student numbers (bearing in mind the Government cap on numbers, which will limit expansion in the short term), and is likely to be operational for the long term (there is unlikely to be a diminution in demand and need for medical school places)

- all costs and benefits used in the cost-benefit analysis are stated in **2018 prices** (i.e. we have not included an inflation allowance)

- **market prices** are assumed, based on independent cost estimates for construction and equipment (see Financial Case and Commercial Case for details of the procurement process followed), standard university payscales for staff costs and actual student fees and tariffs (the details of which are set out below).

- costs are presented as **inclusive of VAT**

- **discount rates** are applied, following HM Treasury's standard guidance, at 3.5% per annum, on costs and benefits

- t**he impact area for quantifying the intervention is taken as Kent and Medway**, given that the central rationale for KMMS is to address the workforce needs of the Kent and Medway

health economy. (It should be noted in this context that there is medical school provision at Brighton and Chelmsford serving other parts of the SELEP area, and collaboration is already in place between KMMS and the Brighton and Sussex and Anglia Ruskin Medical Schools). However, some impacts will be more locally specific (for example to East Kent): this is discussed in the narrative

- the extent to which outputs are **additional and attributable** is explored in detail, with deadweight, displacement, leakage and substitution all considered

- **Optimism bias** is considered in relation to the costs and benefits.

3.5. Costs:

[Provide details of the costs of the scheme. All public-sector costs should be included:

- *Public sector grant or loan*
- *[Public sector loan repayments] (negative value)*
- *Other public sector costs*
- *[Other public sector revenues] (negative value)*

If the land is owned by the public sector, then the public sector will be incurring holding costs assumed to be 2% of the existing value of the land per year. Should the land be used for non-residential development these holding costs will be avoided. This needs to be reflected in the appraisal as a negative cost.

Please note that any private costs associated with the development should be included in the appraisal as a dis-benefit and therefore feature in the numerator of the BCR calculation rather than the enumerator.

Additional details regarding the consideration of costs as well as standard assumptions that can be used in the absence of local data can be found in the DCLG appraisal data book.]

For the purpose of this economic appraisal, a funding profile is set out for the capital and revenue costs relating to the three different options for developing KMMS. This is based on:

- for **Option 1 (do nothing):** there are no capital costs. This assumes that any additional student numbers provided at Brighton and Sussex (or elsewhere) are accommodated within existing buildings at Higher Education Institutions outside of Kent. This is plausible, given the relatively small number in the first cohort (although as set out above, Option 1 is at this stage theoretical).

  - the capital costs of Option 1 are therefore zero

  - there would be additional operational costs associated with Option 1 as alternative host institutions accommodate additional student places. We have not formally estimated these, but the marginal costs of the additional places are likely to be low, given that staffing and structures will already be in place

- for **Option 2 (do minimum):** an estimate of the minimum costs of providing additional laboratory and teaching space within the existing estate to accommodate a 107 entry cohort. This has been based on the estimated costs (by Canterbury Christ Church University) of

leasing or acquiring and refurbishing a 'temporary' facility (albeit one that could be kept in use up to the limits of capacity). Again, Option 2 is at this stage theoretical.

- the acquisition costs of Option 2 are estimated at approximately £13 million, with equipment and running costs held constant with Option 3 (described below; combined NPV of £14.9 million)
- total operational expenditure (over 30 years from 2018/19) has an estimated NPV of £125 million, assuming no increase in student numbers above the 107 cap.

It should be noted that these costs potentially under-state the long term costs of Option 2, since Option 2 is based on a 'temporary' solution. Additional facilities would need to be acquired were KMMS to expand beyond its initial student numbers cap: over the appraisal period, developing these would likely be significantly more expensive than developing facilities with scope for expansion at the start (especially since developing new facilities while KMMS is operational would incur running costs at the same time as new development). As Option 2 is at this stage theoretical, we have not developed costings for a long-term expansion option – but in the long run, Option 2 is probably more expensive than we have assumed for the purposes of this appraisal.

- for **Option 3 (split site, preferred option):** current estimated costs are as follows:

Table 3-2: Estimated construction costs for Option 3 (£, 2018 prices), over appraisal period

	Canterbury Christ Church University	University of Kent	Total	NPV
Construction	9,440,000	12,995,070	22,435,070	
Equipment	1,800,000	604,930	2,404,930	
Total	11,240,000	13,600,000	24,840,000	23,900,000

Table 3-3: Combined other costs for Option 3 (£, 2018 prices), over appraisal period

	Total	NPV
Running costs	10,287,889	
Capital equipment & replacement costs	10,378,080	
Operational costs	311,789,672	
Evaluation	30,000	
Total	332,325,641	191,110,533

Table 3-4: Total costs for Option 3 (£, 2018 prices), over appraisal period

	Total	NPV
Initial construction costs	24,840,000	23,900,441
Other costs	332,485,641	191,110,533
Total	357,325,641	215,010,974

These costs are based on the following:

- **Construction and equipment costs** are based on actual and estimated expenditure provided by each University in August 2019. The process through which each capital project was competitively tendered is set in the Commercial Case. All initial construction and equipment costs are incurred in 2018/19, 2019/20 and 2020/21

- **Running costs** include energy, water and sewerage, maintenance and cleaning costs over the 30 year appraisal period. These are calculated using an annual floorspace-based formula for each site, as follows (in 2018/19 prices):

Table 3-5: Running cost formulae (£ per sq m GIA)

	University of Kent	CCCU
Energy	13.97	18.13
Water and sewerage	3.33	4.53
Maintenance	29.65	41.42
Cleaning	20.33	21.27

- Capital equipment and replacement costs are based on a 3-5 year replacement cycle, depending on equipment type.

- **Operational costs** are based on a schedule of resource requirements, which includes:
  - Staff costs (academic posts, professional and administrative services, clinical posts and project management).
  - Bursaries and student support payments
  - Non-capital specialist equipment and consumables
  - Other costs, such as travel, marketing and recruitment, licensing, etc.

  A full schedule of operational costs is set out in the supporting spreadsheet.

- **Evaluation costs** are based on an allowance for £30,000 to support evaluation of the LGF project (based on experience of similar scale evaluations elsewhere).

It should be noted that all options involve land in the universities' ownership. **There is therefore no additional cost of land.** As all options would be delivered within the university campuses, there are no potential non-university use options.

Changes in costs since the Strategic Outline Business Case

The estimated construction costs for Option 2 are unchanged since the SOBC: as indicated earlier, they are at this stage theoretical (and there are no costs related to Option 1).

The cost of Option 3 has changed in the light of greater information since the SOBC was prepared. This includes:

- changes to construction costs following full competitive tender
- separate calculation of ongoing repair and maintenance (this was requested by the ITE, but had not previously been incorporated as a separate line in the SOBC)

- a detailed schedule of staff costs. In the SOBC, we used an earlier estimate of staff requirements, which has since been developed further and now includes provision to meet the GMC requirement that the School should be fully staffed by 2020.

Greater detail on operational and running costs developed for Option 3 has also been applied to Option 2 for consistency.

Adjusting costs for optimism bias

While our cost estimates are conservative and are justified on the basis of the factors set out above, it is good practice to consider 'optimism bias' in business case development. We have adjusted the total costs for optimism bias as follows:

- **Construction costs:** The risk of any overrun in construction costs is low, given that construction on both sites is underway and risks have been mitigated through the project management and governance arrangements described in the Management Case. Reflecting low risks at this stage of the capital phase, we have adjusted total construction costs by 5% in each year of activity (consistent with the approach taken to the calculation of the Quantitative Risk Assessment in the Financial Case).

- **Equipment costs:** Risks are somewhat higher, since not all equipment has yet been procured, and much of the equipment required will be high-value and specialist. While the risks are offset through the procurement strategy outlined in the Management Case, we have adjusted equipment costs by 10%, again consistent with the approach taken in calculating the QRA.

- **Other costs** (running costs, operational costs and evaluation): The estimates set out above are derived from actual running and staff costs incurred by the universities, both of which run complex estates and programmes and have substantial experience. Operational costs have also been based on 'full costs', including costs to central services. In view of this cautious approach, we have made an adjustment of 5% to all other costs.

The table below shows the effect of the adjustments for optimism bias on the overall costs:

Table 3-6: Total costs, adjusted for optimism bias (£, 2018 prices), over appraisal period

	Construction & initial equipment	Other costs	Total
Option 2			
Total costs (unadjusted)	15,404,930	204,241,477	219,646,407
NPV of unadjusted costs	14,899,522	125,196,577	140,096,099
Total costs (adjusted for optimism bias)	16,295,423	214,406,278	230,701,701
NPV of total adjusted costs	**15,757,902**	**131,409,133**	**147,167,035**
Option 3			
Total costs (unadjusted)	24,840,000	347,668,757	372,508,757
NPV of unadjusted costs	23,900,441	199,001,160	222,901,601
Total costs (adjusted for optimism bias)	26,202,246	353,308,496	379,510,743

	Construction & initial equipment	Other costs	Total
NPV of total adjusted costs	**25,208,867**	**202,655,965**	**227,864,832**

3.6. Benefits:

[Provide details of the benefits of the scheme identifying the 'initial' and adjusted benefits that were used to calculate the 'initial' and 'adjusted' BCR. The DCLG Appraisal Guidance provides additional details regarding the initial and adjusted benefit calculations on page 17.

'Initial' Benefits
All impacts quantified based on the Green Book Guidance and Green Book Supplementary and Departmental Guidance should feature in the 'initial' BCR calculation. These impacts currently include:

- *Air quality*
- *Crime*
- *Private Finance Initiatives*
- *Environmental*
- *Transport (see WebTAG guidance)*
- *Public Service Transformation*
- *Asset valuation*
- *Competition*
- *Energy use and greenhouse gas emissions*
- *Private benefits e.g. land value uplift*
- *Private sector costs if not captured in land value*
- *Public sector grant or loan if not captured in land value*
- *Public sector loan repayments if not captured in land value*

'Adjusted' Benefits
There are several external impacts to the users or entities already present in a development area or to the society that are additional to the impacts included in the Green Book Supplementary and Departmental Guidance.

Such external impacts include potential agglomeration impacts on third parties, health impacts of additional affordable housing and brownfield land clean-up, educational impacts of additional housing, transport externalities, public realm impacts, environmental impacts, and cultural and amenity impacts of development. Such externalities should still form part of the appraisal and included in the 'adjusted' BCR.

Promoter should present here additional estimates of impacts based on their own evidence. These estimates might be based on tentative assumptions where the evidence base is not well established. Additional guidance regarding the identification of externalities and ways of estimating the 'adjusted' impacts are available in Annex F of the DCLG Appraisal Guidance.]

Initial quantified benefits

Initial benefits include:

- direct job impacts
- educational impacts
- short-term impacts on the health economy
- longer-term health economy impacts resulting from an increase in medical staff
- research impacts

The following sections present the expected benefits in each of these categories, taking account of deadweight, displacement and leakage. In all cases, we assumed no discount for substitution. The business case for KMMS presented to HEFCE and HEE was based on the viability of the Medical School taking into account income from student tariffs (i.e. KMMS is not subsidised in revenue terms by central University funding), so posts created as part of the KMMS project would not otherwise be deployed elsewhere in the University.

Direct job impacts

FTE jobs

KMMS will directly create additional employment, within the Medical School itself and within university central services. A full schedule of posts (by full-time equivalent) has been drawn up by the universities and has been revised since the SOBC was prepared. The schedule is presented in the accompanying spreadsheet:

- For **Option 1**, the job impacts are zero, as no jobs will be created in Kent and Medway.

- For **Option 2**, we assume that KMMS will not be able to expand beyond the maximum initial cohort (i.e. 107 students). In this scenario, direct jobs created will rise from 16 in 2018/19 to 66.4 FTE by 2025/26 and will remain static thereafter. This includes new posts created at KMMS, as well as posts partially allocated to KMMS within central services.

- **For Option 3** (the preferred option), initial job creation is the same as for Option 2. However, in 2025/26, an allowance is made for 6.82 additional FTE to accommodate growth, rising to 64.3 FTE by 2033/34 (i.e. a total of **130.7 FTE**, 'new' jobs, including the jobs created anyway in the 'do minimum' scenario).

Discounting for deadweight, displacement and leakage

Government guidance assumes full employment, and that new jobs will effectively involve displacement from elsewhere. However, in the case of KMMS, the nature of the 'offer' is unique in Kent and Medway. Some posts are therefore likely to be filled by people from outside the county: it should be noted in this context that in 'scaling up', KMMS aims to attract additional, high calibre staff over time and will draw on a national market.

The direct job impacts have been discounted as follows:

- **Deadweight:** all jobs identified are named posts and are specific to KMMS. We have therefore assumed no deadweight.

- **Displacement:** A high displacement rate of 75% has been applied, recognising Government guidance and the fact that some posts will be displaced from other, existing employment

- **Leakage:** We have assumed no discount for leakage: all the jobs created will be located within Kent and Medway. It is very likely that some will be filled by people from outside the county: however, this represents a net inflow of talent and an addition to Kent and Medway's GVA.

Applying these discount factors, we might expect around 33 net additional direct jobs created for Option 3 and 17 for Option 2

Monetising the direct job impacts

We have assumed salary costs as a proxy for benefit. To reach assumed salary costs, we have taken the actual total employment costs for each post, as calculated by the universities and adjusted for FTE, and assumed 75% of total costs as the salary contribution (salary costs as a proportion of total employment costs vary between 70% and 80% depending on grade). The impacts are presented below, by employment type:

Table 3-7: Monetised direct job impacts (£, 2018 prices), over appraisal period

	Option 2 **Do minimum**	**Option 3** **Preferred option**
Academic posts	34,820,379	34,820,379
School professional services	19,224,633	19,224,633
Central professional services	8,714,480	8,714,480
Clinical posts	17,540,439	17,540,439
Project management posts	166,468	166,468
Additional workstream requirements	150,852	150,852
Pay increment	7,904,962	7,904,962
Future growth requirement (from 2025/26)	0	65,022,373
Total approximate salaries	88,522,213	153,544,585
LESS displacement at 75%		
Total direct job impact	22,130,553	38,386,146
NPV of total direct job impact	**13,574,867**	**22,022,858**

Educational impacts

Increasing the supply of medical professionals in Kent and Medway (and the SELEP area) and ensuring that the future workforce meets the needs of the local health economy is at the heart of the strategic case for KMMS. We would therefore anticipate the student and learner-related impacts to be significant. We have broken these down into two categories: educational impacts (considered in this sub-section) and impacts on the health economy derived from student numbers (considered below).

Estimating educational impacts

We have estimated the educational impacts through the teaching grant and tuition fees that the universities receive, and (in Years 3-5 of the undergraduate course) the contribution from the Undergraduate Tariff that is received by the universities. In this context, the fees and Tariff are a proxy for the value of the educational benefit. This means that the benefit is effectively quoted "at cost": in reality, the value of medical education has much greater value, although we have captured these benefits elsewhere below. Currently, the undergraduate fee is £9,250 for home and EU students and £55,000 for overseas students.

For **Option 1**, there will be a national educational benefit (since we assume that the additional student places will be provided at other medical schools), but as this will not be delivered within Kent and Medway, we assume that the level of this which accrues to the area of benefit is minimal.

For **Option 2**, KMMS will have an initial cohort of 107 students in 2020, with all undergraduate courses taking five years (six in total for students electing to take an intercalated year). The initial cohort will consist of 100 home students and 7 international students (based on the business case to HEFCE/ HEE, which states that international students will account for no more than 7.5% of the total cohort). This annual cohort is currently 'capped' by Government, and Option 2 does not provide capacity for the cap to be increased, so the maximum number of undergraduates at KMMS will be 509, by 2024/25 (i.e. five years after the initial cohort)

For **Option 3**, we assume that the increased capacity will enable Government to lift the 'cap', allowing KMMS to grow to a maximum of 214 per cohort by 2029/30. This results in a maximum of 1,018 students enrolled at KMMS by 2033/34 (i.e. five years after the first expanded cohort).

Discounting

These additional student numbers have then been discounted as follows:

- **Deadweight:** We assume that this is zero within the area of impact, since there are no medicine courses currently provided in Kent: all the undergraduate student places offered at KMMS are net additional

- **Displacement:** A proportion of students will have otherwise enrolled on a different undergraduate course, either in Kent or elsewhere. Competition for medical school entry is typically exceptionally high and part of the rationale for the new models of delivery offered through the new wave of medical schools is a recognition that "medicine, as a subject, remains particularly skewed toward more socio-economically advantaged entrants, and that latent capacity is being left untapped". It therefore appears that there is both an excess of student demand for places over (capped) supply at the same time as cultural and perception-driven barriers which currently act to suppress demand. We therefore assume that there will be a very low level of displacement from other medical schools. However, for the purpose of monetising the economic impact of student numbers, we should consider that some students will have taken non-medical courses (including courses within other Schools at CCCU and University of Kent): we have therefore assumed displacement of 25% for Options 2 and 3.

- **Leakage:** We assume this to be zero, as all student places will be in Kent and Medway.

Student numbers are also discounted for **attrition**. Nationally, medicine has one of the lowest rates of attrition of any subject at undergraduate level: according to HESA data, 1.4% of students in medicine and related subjects leave the course after Year 1, with lower 'drop out' rates in subsequent years. We have assumed the following undergraduate retention rates (which are built into the KMMS financial model):

- First to second year: 97%
- Second to third year: 97%
- Third to fourth year: 98%
- Fourth to fifth year: 99%
- Fifth to sixth year: 99%

Monetising the educational impacts

Using student fees, teaching grant and the HEE Undergraduate Tariff as proxies, we have monetised the educational impacts as follows:

Table 3-8: Monetised educational impacts (£, 2018 prices), over appraisal period

	Option 2 Do minimum	Option 3 Preferred option
Teaching income	78,677,485	136,625,225
Home/ EU student fee income	114,663,000	200,253,250
International student fee income	47,355,000	85,030,000
Undergraduate Tariff	26,086,305	45,218,257
Total educational benefits	266,781,790	467,126,732
LESS displacement at 25%	200,086,343	350,345,049
NPV of educational benefits	**116,775,045**	**194,349,085**

Short-term impacts on the health economy

There will also be direct impacts on the health economy in the short to medium term, as students take up placements within NHS Trusts in Kent and Medway, making a direct impact on capacity within the health system.

The value of these can be measured in the element of the Undergraduate Tariff received by NHS Trusts during Years 3-5 of the undergraduate course, reflecting the contribution that students are making, and the costs of facilitation. Essentially, this serves as a proxy for the direct benefits to the Health Service, given that undergraduates in Years 3-5 will be making a substantive contribution to the NHS workload (especially, given the curriculum offer at KMMS, in primary care).

The current value of the tariff to Trusts is around £27,000 per student, reflecting the value of the placement. This is discounted (for both Options 2 and 3) as follows:

- **Deadweight:** Zero, since all student places are net additional
- **Displacement:** 25% (consistent with that applied in the student educational benefits, and reflecting the fact that some students would otherwise have taken places at other institutions)
- **Leakage:** Zero, given that the KMMS business case is explicitly geared to the needs of the Kent and Medway health economy. There is a significant unmet need for trainee medical staff

in Kent, and there is more than sufficient capacity to accommodate the increased supply. It is not envisaged that students will be placed outside of Kent and Medway.

- **Attrition** is accounted for in the student number model, as described above.

These benefits have been monetised as set out in the table below. It is likely that there would be some benefits arising from Option 1 ('do nothing'), since some placements in Kent could be supported by students at other medical schools if the numbers that would have been created at KMMS are redistributed elsewhere. However, as Option 1 is essentially theoretical at this stage, we have not formally estimated these:

Table 3-9: Monetised short-term impacts on the health economy (£, 2018 prices), over appraisal period

	Option 2 Do minimum	Option 3 Preferred option
Tariff income to NHS Trusts	201,231,000	349,920,000
LESS displacement at 25%	150,923,250	262,440,000
NPV of educational benefits	**86,783,061**	**143,511,614**

Long-term benefits to the health economy

Estimating the long-term benefits

In the longer term, KMMS will increase the overall stock of professional medical staff in Kent and Medway, meeting the fundamental challenges set out in the Strategic Case. These benefits will build relatively slowly over time, given the length of medical training. While KMMS will not itself create any additional medical jobs, it will have an impact on the severe vacancy rates cited in the Strategic Case.

We have used salary costs as a proxy for the longer-term health economy benefit, assuming that salary levels build over six years as follows (based on salary levels from Health Careers):

- Year 1 (Foundation Year 1): £26,614
- Year 2 (Foundation Year 2): £30,805
- Years 3-5 (Specialist Training): £36,461 (salaries rise to £46,208, but we assume the lower bound for a conservative estimate)
- Years 6+ (salaried GP): £56,525 (salaries rise to £87,003 – and up to £105,000 for consultants, but we assume the lower bound for a conservative estimate)

Reflecting a conservative estimate, it should be noted that these figures reflect basic salaries, with no provision for out-of-hours payments, etc.

Discounting

These benefits have been discounted as follows:

- **Deadweight:** All of the new student places at KMMS are net additional, and there is a substantial pool of vacancies which are difficult to fill at present. However, it is plausible that some vacancies would anyway be filled by recruits graduating from other medical schools,

especially if capacity nationally is increased. We have assumed 10% deadweight (a relatively low amount, but reasonable given the persistence of vacancies in the health system over time).

- **Displacement:** We have applied a 25% displacement discount consistent with the educational benefits, to account for those graduates from KMMS (and therefore new entrants from KMMS into the health economy) who would have anyway qualified at other institutions.

  We also assume that all graduates from KMMS would have secured employment in some form: there is virtually full employment, and all of those graduating will be highly qualified. As a proxy for the "added value" of the Medical School, we have subtracted from the salary benefits the average all-industries full-time salary for Kent (£28,184 in 2018)[14].

- **Leakage:** While the aim of KMMS is to recruit people to work in the Kent and Medway health system, some will leave the profession altogether (due to career change, family responsibilities, early retirement, ill health, etc.) and some will progress their careers outside the county (including people living in Kent, but working in London). Overall, leakage could be quite high (perhaps especially so in Kent, given the scale of the South East labour market and the salary premiums and specialist opportunities available in London). For the purposes of calculating the benefit, we have assumed:

  - 'initial leakage' of 20% on graduation, to account for graduates taking initial jobs outside of Kent and Medway. For Option 2, this means that the number of new graduates entering the labour market is 78 in every year from 2025/26 For Option 3, the number rises to 157 by 2034/35.
  - attrition of 2% per year in each subsequent year, to account for career exits.

Monetising the longer-term health economy benefits

Applying these average salary levels and discounts, the longer-term health economy benefits have been monetised as follows:

Table 3-10: Monetised longer-term health economy benefits (£, 2018 prices), over appraisal period

	Option 2 Do minimum	Option 3 Preferred option
Gross salary benefits (including leakage)	872,093,879	1,326,550,092
'Additional' salary benefits (over and above average all-sectors salary, including leakage)	347,542,670	512,715,587
LESS deadweight at 10%	312,788,403	461,444,028
LESS displacement at 25%	225,902,735	333,265,131
NPV of educational benefits	**104,907,610**	**150,955,593**

Research-related impacts

Estimating the research impacts

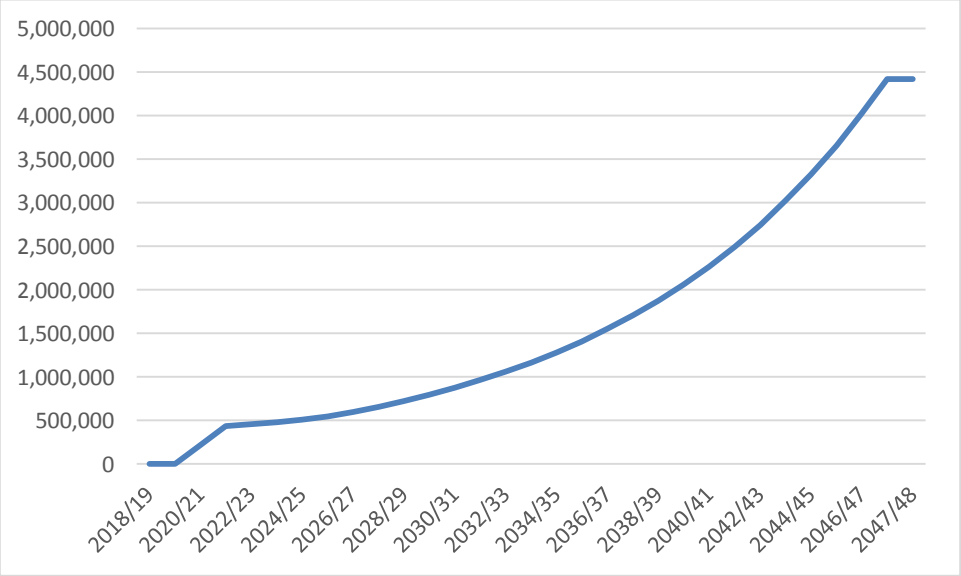
[14] Foundation Year 1 salaries are lower than the average all-industries salary, so we have assumed an 'added value' of zero (rather than a negative value)

While KMMS will be primarily a teaching institution (at least initially), the business case to HEE and HEFCE included an element of research activity, and it is anticipated that the Medical School will add value to the universities' wider capabilities in bioscience and related areas of research.

Medical research clearly has a high economic value. However, capturing the value is complex: research for the Medical Research Council highlights some of the difficulties in demonstrating the value of university research, noting that the 'social rate of return' (the value to the wider economy and society through research that is open to all) is generally much higher than the private rate of return[15].

As a proxy, we have used research income that is likely to be secured through KMMS through public and charitable research grants and contracts, estimated within the KMMS financial model. This is imperfect, since it effectively states the value of the research at cost, but it provides a conservative starting point. Based on this, we anticipate modest levels of research income in the early years, rising (within preferred option 3) to around £1 million per year by 2032/33, and around £2 million per year by 2039/40, rising thereafter as KMMS becomes established:

Figure 3-1: KMMS estimated research income, £



Source: University of Kent/ Canterbury Christ Church University

This is a conservative trajectory, and it is likely that it could be accelerated, given that:

- **There are strong and developing research relationships with the NHS.** The universities are already receiving approaches for research from the NHS Trusts. Work is currently underway within the acute sector to establish a Joint Research Office, involving all the NHS Trusts in Kent and Medway and the universities, with the aim of joining up the research agenda and increasing collaboration. In other areas where this has happened (such as in Liverpool and the Wessex ASHN area), there has been a substantial increase in research volumes: it is plausible that this could happen in Kent, especially given the role of KMMS itself as an additional 'driver of change'.

[15] Medical Research Council (2011), *Measuring the link between research and economic impact* (https://mrc.ukri.org/documents/pdf/measuring-link-between-research-economic-impact/)

- **There is a successful track record of attracting research activity.** For example, by 2038/39, KMMS will be of a similar size (based on student number projections) to the Kent School of Biosciences, which currently brings in around £3.5 million per year in research income, with an income per FTE similar to that of many Russell Group institutions. Other relevant departments include Canterbury Christ Church University's Stem Cell and Bio-engineering Laboratory (SCraBEL); the launch of the University of Kent's new Institute for Biotechnology and Molecular Medicine (IBAMM) in 2020 will help to opportunities for additional research.

- **There are current proposals for an increase in research activity, in which KMMS could play an important role**. An application for an Applied Research Collaboration (ARC) across Kent, Surrey and Sussex has recently been approved by the NIHR, bringing an additional £7.5 million into the health research infrastructure across the three counties. Focused *(inter alia)* on social care, mental health and living with dementia, the themes of the ARC align closely with those of KMMS, and are likely to lead to future research and funding opportunities.

- **There is likely to be greater capacity for research in the early years than envisaged at SOBC stage.** This is because of the GMC requirement to ensure that KMMS is fully staffed sooner than originally anticipated, so there should be scope for early involvement with the research agenda (this will also help to drive recruitment and KMMS's reputation).

It should be noted that the research income highlighted above will only be possible in preferred Option 3, given that in Option 2, there would only be capacity within the KMMS facilities to provide core teaching resource to the maximum initial cohort.

Discounting

While the research income estimates are conservative, we have discounted them as follows:

- **Deadweight:** It is plausible that some research activity would have come to the universities anyway, given the existence of university departments with significant medical science-related expertise. We have therefore applied a 'deadweight' factor of 25%.

- **Displacement:** Given the level of investment that is being made in KMMS, there is likely to be some 'opportunity cost' associated with other research activity that could have been generated in other university faculties, had additional capital investment been available. This is quite hard to quantify (and in any case, it would not have been in medically-related research), but we assume an additional 10% displacement value.

- **Leakage:** This is likely to be zero (although some research projects will be carried out in partnership with institutions elsewhere, we have only counted as the benefit the research income accruing to University of Kent and CCCU, not the value of wider projects).

Monetising the research impacts

Based on the estimates above the research impacts are monetised as follows:

Table 3-11: Monetised research-related impacts (£, 2018 prices, over appraisal period)

	Option 2 Do minimum	Option 3 Preferred option
Research grants and contracts	0	45,348,734
Less deadweight at 25%	0	34,011,551
Less displacement at 10%	0	32,877,832
NPV of total research-related impacts	**0**	**16,409,631**

Other quantified impacts

In addition to these direct benefits, there will be other benefits to the local economy from:

- Indirect employment
- Additional student spending
- Construction

Indirect employment

Estimating indirect employment

A 2015 study of the economic impact of Canterbury Christ Church University found that for every job within the university, there was a multiplier effect of 1.78 (i.e. 0.78 FTE jobs were found to be created for every university post). This is rather higher than the ONS estimated multiplier for the Education sector overall (1.13), although it is highly plausible that university multipliers will be higher than those in general education.

For a conservative estimate, we have used a mid-point multiplier of 1.455. Based on the net new direct jobs created by KMMS (outlined above), this gives 8 indirect jobs for Option 2 and 15 for Option 3.

Discounting

These jobs have been discounted as follows:

- **Deadweight:** We have already excluded the direct jobs created in 2018/19 or earlier from the benefits calculation, so the multiplier has not been applied to these. We therefore consider deadweight to be zero.

- **Displacement:** Although we already applied a displacement factor of 75% to direct jobs, it is reasonable to discount indirect employment further, given that Canterbury currently has virtually full employment (so any new job in the local economy is likely to be taken by someone in employment elsewhere). We have applied a notional discount of 50%.

- **Leakage:** Around 3% of jobs in Canterbury are taken by people resident outside Kent and Medway. However, it is highly likely given the nature of university expenditure on higher value goods and services (and spend generated by post-holders at the university) that a higher

proportion of indirect jobs would 'leak' outside the county. We have applied a further 25% discount to account for this.

Monetising indirect employment impacts

To monetise the impacts, we assume the average full-time salary for Kent (£28,184), with the profile of indirect jobs mirroring that for direct jobs over the appraisal period. This results in the following:

Table 3-12: Monetised indirect job impacts (£, 2018 prices), over appraisal period

	Option 2 Do minimum	Option 3 Preferred option
Gross indirect jobs (salaries)	5,985,658	10.010,476
Less displacement (50%) and leakage (25%)	3,741,188	6,256,548
Total indirect job impact	2,244,622	3,753,929
NPV of total indirect job impact	**1,374,188**	**2,158,571**

Additional student expenditure

Estimating additional student spend

The students recruited to KMMS will be net additional to the universities' existing student base, and will generate additional economic activity as a result of local spending.

Estimates of the value of student spending have been regularly prepared in a series of economic impact assessments for Canterbury Christ Church University by Viewforth Consulting . The most recent full report identified that annual spending per student in 2012/13 was £11,803 (or £13,497 adjusted to 2018 prices), which we have applied to the projected student numbers (net of attrition) set out for Options 2 and 3 above.

Discounting

Student spend has been discounted as follows:

- **Deadweight:** Most student expenditure could reasonably assumed to be deadweight. KMMS aims to recruit students from within Kent and Medway: had they remained in the county, they would probably have spent the same (although some might have otherwise left for courses elsewhere). We assume 90% deadweight (with the 'additional' expenditure accounted for by international students, non-Kent residents and those who might otherwise have moved away).

- **Displacement:** Assumed to be zero, given that the residual student spend is all net additional in Kent and Medway.

- **Leakage**: Likely to be high: spend on local goods and services will remain within Kent and Medway, but some (e.g. on financial services, travel, some accommodation costs) will accrue elsewhere. We have assumed 50% leakage (a more conservative estimate than that implied

by Viewforth Consulting, which estimated that 77% of expenditure was retained in the county).

No multipliers have been applied to the Viewforth estimates.

Monetising student expenditure

Taking these discount factors into account, the impact of student spend has been calculated as follows:

Table 3-13: Monetised impact of student expenditure (£, 2018 prices), over appraisal period

	Option 2 Do minimum	Option 3 Preferred option
Gross expenditure	178,929,729	313,062,915
Less displacement (75%) and leakage (50%)	169,983,243	297,199,769
Net expenditure	8,946,486	15,863,146
NPV of net expenditure	**5,257,203**	**8,742,637**

Construction

Estimating construction impacts

In the short term, there will be some economic impact generated through the construction of the two KMMS sites. This is obviously secondary to the purpose of the project, and in a generally buoyant construction market, we anticipate that the impact of construction will be relatively minor.

For Options 1 and 2, there are no construction impacts, as there is no new build (there may be some refurbishment-related benefits in Option 2, but these are likely to be minor).

For Option 3, construction of KMMS will deliver a direct output in the form of 4,796 sq m net additional educational floorspace. In addition, there will be an economic benefit arising from the construction of KMMS, as construction will generate jobs, which will contribute GVA to the local economy. We estimate that the construction costs associated with KMMS will be £17.6 million (i.e. the total capital costs minus professional and planning fees and contingency).

Guidance prepared for the Homes and Communities Agency adjusted for inflation gives a 'labour coefficient' (the number of workers required in 'job years' for £1 million of construction spend) of 9.2, at 2018 prices[16]. The gross effects of the construction phase are 162 construction years of employment for Option 3.

Discounting

These figures should be discounted substantially:

[16] http://www.nwueu.ac.uk/NWUEU/LatestUpdates/PDF/CPJ%20BPN%20%202015%203rd%20Edition%20-%20Final.pdf. The HCA estimated a labour coefficient of 10.7 at 2011 prices; we have adjusted this to 2018 prices using the building cost index.

- **Deadweight:** The construction project is dependent on KMMS occupying the buildings, so the additional construction activity would mostly not have happened 'anyway'. However, we might assume some economies of scale in the CCCU building, given the work already underway. It would therefore be reasonable to assume a lower labour coefficient on this element of the project. We have assumed 25% deadweight to account for this.

- **Displacement:** As demonstrated in the Strategic Case and elsewhere in the Economic Case, investment in KMMS has led to the postponement of capital investment elsewhere in the two universities. It is reasonable to assume that some other capital investment may therefore have taken place in the absence of KMMS, albeit at a smaller scale and perhaps to a different timescale. We have assumed 50% displacement to account for this.

- **Leakage:** Some construction employment will be secured by Kent-based workers. However, the construction market is national. Leakage is therefore likely to be quite high – we have applied an estimate of 50%.

Monetising the construction impacts

To monetise job years, we have used the average full-time salary for Kent (£28,184)[17]. Applying the discounts above, this results in the following (modest) impact:

Table 3-14: Monetised construction impacts (£, 2018 prices), over appraisal period

	Option 2 Do minimum	Option 3 Preferred option
Gross salary impact of job years	0	4,577,762
Less deadweight, displacement and leakage	0	3,719,431
Net construction salary impact	0	858,330
NPV of net construction salary impact	**0**	**829,088**

Combined quantified impacts

The table below brings all of the quantified impacts together, indicating a total benefit (in net present value) of £326 million for Option 2 and £537 million for Option 3:

[17] In the SOBC, we used a GVA multiplier (£47,568 per filled job in Kent and Medway). However, as we have used salaries to measure the other job-based impacts, we have applied a salary multiplier in this case, for consistency.

Table 3-15: Net present value of total quantified impacts (£, 2018 prices), over appraisal period

	Option 2 Do minimum	Option 3 Preferred option
Initial impacts		
Direct jobs	13,574,867	22,022,858
Educational impacts	116,775,045	194,349,085
Short-term (student-based) health economy impacts	86,783,061	143,511,614
Long-term (employment) health economy impacts	104,907,610	150,955,593
Research impacts	0	16,409,631
Total initial impacts	**322,040,583**	**527,248,781**
Other quantified impacts		
Indirect jobs	1,374,188	2,158,571
Additional student expenditure	5,257,203	8,742,637
Construction impacts	0	829,088
Total other quantified impacts	6,631,392	11,730,296
NPV of all quantified impacts	**328,671,975**	**538,979,076**

Adjusting the quantified impacts for optimism bias

The benefits described above have been further reviewed to account for potential optimism bias. Rather than applying a flat discount to all benefits (which would be arbitrary), we have considered the likelihood of the drivers of each impact being weaker than we have anticipated. Essentially, there are three drivers of impact: direct jobs created (which also drive indirect job estimates through multiplier effects), student numbers (which drive educational, health economy and expenditure benefits), and research activity. Each is considered in turn:

Direct jobs

Direct jobs are those jobs created by KMMS as a result of the investment. At this stage, there is a high level of certainty regarding direct job creation, given that HEE require KMMS to be fully staffed from the outset. We have therefore not applied any further discount to direct jobs (were we to do so, this would be directly linked with a reduction in costs), although there is a slight reduction in later years driven by the change in student numbers.

Student numbers

The key driver of impact is student numbers: the 'core business' of KMMS is educating students, and most of the economic impact of the project is generated by the contribution that students make to the health economy (as students and after graduation) and through educational value. We consider it highly unlikely that the initial maximum cohort of 107 undergraduate students will not be met, given the general high demand for medical school places and the restricted supply. and Higher Education England has already agreed this figure and has asked the universities to

plan operational requirements on that basis (and any increase in supply nationally will need to be approved by Government.

However, it is possible that **attrition** could be higher than anticipated. In our calculations above, we assumed a low attrition rate in line with that applying in medical schools elsewhere. However, in a new institution, higher rates of attrition would be plausible (and likely to be especially the case in Option 2, given the lower investment in quality facilities that this offers). To allow for this, we assume a higher rate of attrition of 6% between Years 1 and 2, tapering to 3% between Years 4 and 5. The 6% Year 1/ Year 2 attrition rate is equal to the UK average for all subjects and all institutions (and is approximately the mid-point of the all-subject attrition rates reported by University of Kent and CCCU.

Research impacts

The identified research impacts are independent of student numbers. As indicated above, we have set out a conservative trajectory, which could be accelerated as a result of other initiatives underway. Future research income is however uncertain, so for a prudent estimate, we have applied a discount of 10% in every year. Note that this only applies for Option 3, given that no research impacts are anticipated for Option 2.

Applying the further discounts for optimism bias

Applying these considerations reduces the net present value of quantified impacts, as follows:

Table 3-16: Net present value of total quantified impacts, inc. optimism bias (£, 2018 prices), over appraisal period

	Option 2 Do minimum	Option 3 Preferred option
Initial impacts		
Direct jobs	13,574,867	21,108,350
Educational impacts	116,085,272	183,965,624
Short-term (student-based) health economy impacts	85,487,104	133,171,863
Long-term (employment) health economy impacts	100,435,140	137,094,033
Research impacts	0	14,768,668
Total initial impacts	**315,582,384**	**490,108,539**
Other quantified impacts		
Indirect jobs	1,374,188	2,073,661
Additional student expenditure	5,228,974	8,337,103
Construction impacts	0	829,088
Total other quantified impacts	6,603,162	11,239,852
NPV of all quantified impacts	**322,185,546**	**501,348,390**

Benefit-cost ratio

Taking all the costs and quantified benefits into account gives a benefit-cost ratio (BCR) of 2.35 for Option 2 and 2.42 for Option 3. Adjusting for optimism bias (in respect of both costs and benefits) reduces the BCR to 2.19 and 2.20 respectively, as follows:

Table 3-17: Benefit-cost ratio, taking account of optimism bias

	Option 2	Option 3
Unadjusted for optimism bias		
Present value of benefits	322,040,583	527,248,781
Present value of costs	140,096,099	222,901,601
Present value of other quantified impacts	6,631,392	11,730,296
Net present public value	188,575,876	316,077,475
Initial benefit: cost ratio	**2.30**	**2.37**
Adjusted benefit: cost ratio	2.35	2.42
Adjusted for optimism bias		
Present value of benefits	315,282,384	490,108,539
Present value of costs	147,167,035	227,864,832
Present value of other quantified impacts	6,603,162	11,239,852
Net present public value	175,018,511	273,483,558
Initial benefit: cost ratio	**2.14**	**2.15**
Adjusted benefit: cost ratio	2.19	2.20

The differential between Options 2 and 3 is reduced, since the longer term benefits of Option 3 (derived from future student expansion and growth in research income) are inherently less certain than the 'capped' student numbers and zero research activity assumed for Option 2. However, as discussed elsewhere, Option 2 is theoretical, given that a commitment has already been made to Option 3.

Sensitivity analysis of quantified impacts

Sensitivity testing has been carried out in relation to the assumptions made regarding leakage, deadweight, displacement and substitution for each quantified benefit. The purpose of this is not to discount the original assumptions (which are made on the best available evidence), but to consider the potential impact on the overall benefits (and therefore the BCR) were levels of deadweight, displacement, leakage and substitution to prove less positive than originally anticipated.

The following assumptions have been applied to the sensitivity analysis:

Table 3-18: Sensitivity assumptions

	Changes to assumptions
Initial impacts	
Direct jobs	Displacement increased to 80%
Educational impacts	Displacement increased to 30%
Short-term (student-based) health economy impacts	Displacement increased to 30%
Long-term (employment) health economy impacts	Displacement increased to 30%
Research impacts	Deadweight increased to 30%
Other quantified impacts	
Indirect jobs	Displacement increased to 75%
Additional student expenditure	Leakage increased to 75%
Construction impacts	Displacement increased to 75%

Were *all* these factors to be applied to the costs and benefits *including* optimism bias, the impact is as follows:

Table 3-19: Benefit-cost ratio applying sensitivity analysis

	Option 2	Option 3
Unadjusted for optimism bias		
Present value of benefits	291,703,472	453,078,293
Present value of costs	147,167,035	227,864,832
Present value of other quantified impacts	2,843,518	4,928,706
Net present public value	147,379,955	230,142,166
Initial benefit: cost ratio	**1.98**	**1.99**
Adjusted benefit: cost ratio	2.00	2.01

In a 'worst case' scenario, the project therefore continues to represent good value for money.

Non-quantified impacts

In addition to the benefits described above, there are several additional benefits that will arise from KMMS. Some of these will be possible to monetise in due course, although the evidence base for doing so is limited at present.

Postgraduate student benefits

Within the model, we have not quantified the potential benefits from postgraduate study. However, we anticipate that KMMS will generate significant postgraduate opportunities.

The Brighton and Sussex Medical School (KMMS's 'parent' institution) has been successful in postgraduate recruitment: 40 Medicine postgraduates were enrolled at the Universities of

Brighton and Sussex in 2016/17 (compared with 685 undergraduate students). However, KMMS should be able to generate higher numbers than BSMS, since both supporting universities provide established programmes of study for an intercalated study year, and work on developing qualifications to support the education /research skills pipeline required to provide an infrastructure for KMMS development has already begun. We anticipate that postgraduate opportunities will include:

- Postgraduate qualifications delivered through the intercalated additional degree option (we estimate that around 20 students will opt for this opportunity during their period of Primary Medical Qualification study)

- CPD activity, for:
  - Early career educators, researchers or GPs, supported through completion of PGCert in Education, Management, Research or Leadership. This will generate at least 40 potential students per year
  - Mid-career educators and researchers supported through achievement of PGDip Education qualification (at least 20 students per year)
  - Experienced educators and researchers, supported through achievement of Masters in Education or Research Methods (at least 15 students per year)
  - Senior educators and researchers, supported to achieve MPhil/ PhD/ Professional Doctorate (at least 5 starting study each year)

- Specialist MCh programmes (currently supporting 15-20 clinical staff per year, and which are likely to attract additional students)
- Opportunities to expand the portfolios of both universities in relation to Integrated care, Bio-engineering and Regenerative medicine, Public Health, Social Prescribing/ Arts for health, Primary Care and emerging local specialities following local health and care service reconfiguration (potentially accounting for around 20 students per year)

These opportunities could lead to significant benefits for the health economy (for example, in improved leadership and management within primary care), and will also reinforce (and be reinforced by) the expansion of the universities' research base. However, while we are confident that postgraduate benefits can be achieved, they are not at this stage reflected in the KMMS financial model, and we have not quantified them at this stage.

Increased resilience in the health economy

These are to some extent demonstrated by the quantified long-term employment benefits. However, the wider benefits to the Kent and Medway health economy are central to the case for KMMS. In particular, the shortfall in clinical staff is well articulated (and is set out in the Strategic Case). Further to the submission to SELEP made in October, recent data show that parts of coastal Kent have some of the most acute under-provision of medical personnel in England (in fact, Swale has the fewest number of doctors per capita of any local authority area in the country).

Additional trained medical professionals will lead to reduced vacancies within the NHS. **There is evidence that the Kent-based acute trusts are over-reliant on the use of locums, and this imposes a high cost on clinical activity** (it is estimated for example that locum work is twice as expensive as employing a permanent member of staff for every clinical session). A more resilient and integrated health economy – to which KMMS will contribute – will also reduce unnecessary hospital admissions, and will facilitate re-entry into the community.

In the longer term, we would also anticipate benefits in improved health outcomes for the Kent and Medway population. This is entirely plausible: some of Kent's most deprived communities are those that suffer the worst health outcomes (especially in parts of coastal and post-industrial Kent) and are also those that suffer the greatest shortfall in clinical staff. The health benefits of additional staff will however be visible in the long term, and obviously hard to disaggregate from the benefits associated with changing economic and demographic changes. We have therefore not attempted to quantify these.

Finally, it should be noted that **Kent and Medway is experiencing significant and sustained population growth**. By 2035, the county's population will be 40% greater than it was in 2000: over the past 20 years, growth has been substantially greater than the national average, and this will continue for the next 20 years. In particular, growth is concentrated in those parts of the county (especially the Thames Gateway) that already experience the greatest shortfall in clinical staff. The Kent and Medway Growth and Infrastructure Framework articulates the challenge of providing sufficient community infrastructure to support this growing population: put simply, **without additional medical staff, the viability and resilience of Kent's (and SELEP's) growth agenda will be significantly compromised.** KMMS will be an important element in mitigating this.

Workforce-related benefits

These will include widening access to professional careers in the health system through student recruitment practices that seek to encourage participation from groups that would not otherwise have considered Medicine as a realistic option. KMMS will also provide access to continuing professional development through the CCCU Institute of Medical Sciences (IMS) and the Faculty of Health and Wellbeing, and through Kent's Centre for Professional Practice (CPP), although the specific nature of the CPD offer has yet to be determined.

More broadly, KMMS will add to the **increased profile of Kent and Medway, and the SELEP area more broadly, as a centre for health-related learning and research.** This is likely to have positive impacts in attracting high-calibre academics to KMMS and the two universities more generally, as well as attracting and retaining staff in the health and social care system and relevant firms in the private sector (linked with the innovation benefits outlined above). Through the links with Brighton and Sussex Medical School and the new School of Medicine at Anglia Ruskin University (linked with the Eastern Arc universities), it will also demonstrate increased cross-LEP collaboration and learning across an area sharing similar population growth, workforce retention and demographic challenges.

Other benefits associated with innovation within the NHS system

We anticipate that additional workforce capacity, combined with the multi-professional nature of the KMMS curriculum offer, will, over time, lead to operational savings and patient benefits through greater collaboration and integration.

Commercial innovation-related benefits

In addition to research measured through income to the universities, we anticipate that an increase in medically-related expertise and opportunities for collaboration with other academic disciplines in (for example) bioscience and engineering) will have spill-overs into the private sector. This may be as a result of firms in the life science and health technology sectors deciding to work in collaboration with University of Kent and CCCU in areas of activity associated with KMMS, or because of the net addition to the supply of relevant skills.

There is little evidence to quantify the benefit to commercial activity from the establishment of a new medical school. However there is in general a correlation between the distribution of firms in the life science sector and that of medical research facilities, and there is already a stock of local life science businesses (for example at Discovery Park) with which both universities have strong connections.

3.7. Local impact:

[If the scheme has a significant level of local impacts these should be set out in this section.]

There will be a number of specifically local impacts arising from the project. In particular, it is likely that KMMS will benefit student and academic recruitment to 'allied' university departments, such as biosciences and the healthcare professions; it should also support the development of inter-disciplinary and inter-professional education.

More broadly, the project will add to the 'stock' of economic assets within Canterbury, already a leading centre for cultural activity and innovation in the South East. This is likely to be reinforced by the development of a prestigious and innovative facility.

3.8. Economic appraisal results:

[Please provide details of the key appraisal results (BCR and sensitivity tests) by completing the table below. Please note, not all sections of the table may require completion.

Promoters should also include a statement which identifies other schemes which may have potentially contributed to the same benefits/impacts.
Smaller schemes (less than £2 million) are not required to complete a quantified economic appraisal but are required to include a Value for Money rationale.]

Note that we assume that Option 1 will yield no benefits to Kent and Medway, given that while it will deliver additional student places, these will not be to a Higher Education Institution within the county. For Options 2 and 3,

	DCLG Appraisal Sections	Option 2: Do Minimum	Option 3: Preferred Option
A	Present Value Benefits [based on Green Book principles and Green Book Supplementary and Departmental Guidance (£m)]	322.04	527.25
B	Present Value Costs (£m)	140.10	222.90
C	Present Value of other quantified impacts (£m)	6.63	11.73
D	Net Present Public Value (£m) [A-B] or [A-B+C]	188.58	316.08
E	'Initial' Benefit-Cost Ratio [A/B]	2.30	2.37
F	'Adjusted' Benefit Cost Ration [(A+C)/B]	2.35	2.42
G	Significant Non-monetised Impacts	Postgraduate and CPD study opportunities to further up-skill and professionalise the local health providers Increased resilience in the health economy	

	DCLG Appraisal Sections	Option 2: Do Minimum	Option 3: Preferred Option
		More highly trained workforce Additional opportunities for people to enter medicine Reduced health service costs Increased collaboration between health practitioners and researchers Increased innovation in health economy Long term cost savings to NHS and social care system	
H	Value for Money (VfM) Category	High value for money	
I	Switching Values & Rationale for VfM Category	Further adjustments for optimism bias (effectively presenting an extremely conservative assumption of costs and benefits) reduce the (adjusted) BCR to 2.19 and 2.20 for Options 2 and 3 respectively. The differential between the two options is reduced, as a result of the greater uncertainty of longer-term impacts. Sensitivity analysis has been applied as set out above. The project continues to represent good value for money (on both options). For Option 3, Scenarios 1,2 and 3 below apply constant student numbers (i.e. no increase on the 107 cohort) and a five year-delay in expansion. The BCR remains high in all cases.	
J	DCLG Financial Cost (£m)	8	8
K	Risks	Inability to expand beyond initial maximum cohort Marginal revenue viability Risk of incurring additional future capital cost	Ability to attract sufficient students as School expands
L	Other Issues	N/A	N/A

3.9. Differential economic impacts of funding options

As indicated above, a commitment has now been made to the preferred option. As construction is now underway, the alternative options (while considered in detail at earlier stage of the project) are now theoretical: it will be delivered regardless of the level of LGF investment.

However, the capital funding mix will impact on the benefits that KMMS is able to deliver (and the timescale over which they will be delivered) and the extent to which the universities are able to progress complementary investments. The following paragraphs adjust the costs and benefits of the preferred option according to the level of LGF investment secured, based on three scenarios:

- Scenario 1: No LGF investment
- Scenario 2: £4 million LGF investment
- Scenario 3: £8 million LGF investment

Scenario 1: No LGF investment

As indicated in the Strategic Case, the absence of LGF funding would have a significantly detrimental impact on the university offer and the contribution that it is able to make to the local economy.

The original business case to HEFCE and HEE assumed external grant funding from a range of partners in the health economy, and it is on this basis that LGF is sought. If LGF is not available, the capital funding mix would notionally consist of:

- Direct university investment, at the cost of reductions in capital investment elsewhere. As the statements from the universities in Section 2.5 set out, 'opportunity cost' at this scale is to some extent notional, given the cuts in capital expenditure that the universities have already had to impose to cover the two-thirds contribution that they will make to KMMS' capital costs in any case, and to respond to the currently unfavourable financial and operating context.

- Capital borrowing. Notionally, the cost of borrowing £8 million is around £320,000 per year for 35 years, with around £250,000 initial fees and set-up costs. Over the appraisal period, this would add an additional £7.9 million to the project costs. It should be noted that these will impact on KMMS' revenue viability, which is limited in the first few years, and will also impact on the universities' ability to maintain investment in other academic areas.

While within this scenario, the universities remain committed to KMMS. However, without the £8 million LGF grant, we will need to proceed with caution: as the Strategic Case sets out, the fundamental additionality of the grant is in enabling KMMS to sufficiently invest in academic excellence, quality resources and engagement with the wider health economy (and with other university departments) to enable the student cap to be lifted, and for KMMS to expand to additional student numbers from 2025/26 onwards. It should be noted that there is no commitment from the Government to increase the cap, and this will not take place unless the resilience of KMMS is assured.

To model this scenario, we have:

- kept capital costs constant with Preferred Option 3 set out above
- reflected the additional (notional) costs of borrowing £8 million over 20 years
- assumed no increase in the student cap (so the maximum student cohort is 107, with benefits derived from this

The initial benefits are essentially the same as for the 'do minimum' Option 2 (although the adjusted benefits are marginally higher, due to the (very small) construction impacts).

Scenario 2: £4 million LGF investment

£4 million LGF investment will help to defray some of the additional costs on the universities. However, any shortfall will still need to be met with reductions in capital spend elsewhere or redirection of established borrowing where possible.

Under this scenario, it will be challenging for the universities to establish a high quality medical school and sustain its other areas of provision to the necessary standard to create a high-profile facility capable of attracting a high level of academic expertise and a diverse student intake. Under this scenario, the universities would do all that they can to protect the Medical School but it would be unlikely to be able to have funding for the innovative and high quality experience envisaged in the original bid to HEFCE and HEE. This is likely to limit the attractiveness of KMMS to students and staff, and significantly slow its growth trajectory.

To model this scenario, we have:

- kept capital costs constant with Preferred Option 3 set out above
- reflected the additional (notional) costs of borrowing £4 million over 20 years
- assumed that the increase in the student cap is delayed to 2030/31, with all consequential benefits delayed accordingly

Scenario 3: £8 million LGF investment

This is the scenario as set out in preferred Option 3. It will deliver the benefits set out in the Economic Case and will create a model of best practice for innovative learning and teaching, multi-disciplinary learning and a significant attraction for talent into the local health economy workforce.

This will also enable a high quality and financially sustainable curriculum offer and will support CCCU and University of Kent in ensuring that this is complementary to provision in (inter alia) biosciences, nursing and allied health professions and other related activity.

This scenario is modelled as in Option 3 in the core Economic Case.

Quantifying the scenarios

The table below quantifies the costs and benefits for each scenario, adjusted for optimism bias:

Table 3-20: Comparative analysis of capital funding scenarios for Preferred Option 3

	Scenario 1	Scenario 2	Scenario 3
Unadjusted for optimism bias			

	Scenario 1	Scenario 2	Scenario 3
Present value of benefits	322,040,583	445,059,780	527,248,781
Present value of costs	153,734,166	199,667,638	222,901,601
Present value of other quantified impacts	7,460,479	10,354,950	11,730,296
Net present public value	175,766,896	255,747,093	316,077,475
Initial benefit: cost ratio	**2.09**	**2.23**	**2.37**
Adjusted benefit: cost ratio	2.14	2.28	2.42
Adjusted for optimism bias			
Present value of benefits	315,282,384	417,796,346	490,108,539
Present value of costs	161,474,505	205,382,362	227,864,832
Present value of other quantified impacts	7,432,249	10,007,746	11,239,852
Net present public value	161,540,128	222,421,730	273,483,558
Initial benefit: cost ratio	**1.95**	**2.03**	**2.15**
Adjusted benefit: cost ratio	2.00	2.08	2.20

In addition to these formalised impacts, it should be noted that any reduction in capital funding will present a risk to KMMS' future sustainability and viability, given its marginal viability on initial student numbers (as stated clearly in the original bid to HEFCE/ HEE).

4. Commercial Case

The commercial case determines whether the scheme is commercially viable and will result in a viable procurement and well-structured deal. It sets out the planning and management of the procurement process, contractual arrangements, and the allocation of risk in each of the design, build, funding, and operational phases.

Key changes to the Commercial Case Case since the SOBC

This section has been updated to reflect elapsed time and developments since 2018 and to set out human resources and competition issues not required at SOBC stage.

4.1. Procurement options:

[Present the results of your assessment of procurement and contracting route options and the supplier market, and describe lessons learned from others or experience; max. 1 page.]

The project requires procurement relating to two sites, one at the University of Kent and the other at Canterbury Christ Church University, each of which procure activities independently within the overarching KMMS project governance arrangements. It should be noted that the two universities have extensive experience of working together on separate, but collaborative projects (for example on the shared campus at Universities at Medway).

Canterbury Christ Church University

The University has a Procurement Strategy and is a member of the Southern Universities' Purchasing Consortium. Procurement related to KMMS is part of a more complex and highly controlled process of implementing the University's new Masterplan for the whole Canterbury campus, including former Prison site, which includes 'Building 2', the location for KMMS. As result, the approach taken was to first procure a contractor for the Estate Master Plan via a two-stage restricted OJEU tender process, and then procure design and build services for Building 2.

For Building 2, procurement options considered for the detailed design phase included single-stage design and build, two-stage design and build, and using a contractor framework. From these options, a two-stage restricted OJEU framework route was chosen, with the NHS London Procurement Partnership Framework used to identify for a multi-disciplinary practice to develop a detail design and planning submission for the Historic Listed Prison and incorporate a development brief built upon the Master Plan proposals. BDP were chosen as the successful bidder.

For the Building 2 construction contract again the full range of procurement options were considered. A two-stage negotiated procurement process with Tier 1 contractors for the delivery of the new Arts Building had been used recently but resulted in an unsatisfactory outcome. Because of the high level of sensitive design detail involved, a design and build option was also discounted.

The preferred procurement strategy was an OJEU process (with an early notification to the market generating a lot of interest from Tier 1 and Tier 2 contractors) based on a fully developed design with full Bills of Quantities, giving a high level of control over quality and design, and providing for greater transparency in cost variations. The selection was therefore a fixed-price contract on a traditional basis.

University of Kent

The University of Kent has a Procurement Strategy and all procurement is conducted in line with the Procurement Regulations and other relevant policies and procedures. For the KMMS building, the University considered the following four procurement methods, which it assesses for all major capital buildings:

- *Consultant fully designed*: team appointed to design all aspects of the building, contractors submit tenders based on the design drawings and specifications). This method would be used for a specialist facility, such as the recently built Colyer Fergusson music building
- *Single stage design and build*: design team appointed to develop the design up to the end of RIBA stage 3 of the RIBA plan of works, contractors tender to complete the design and construct the building.
- *Two stage design and build*: design team appointed to develop the design to the end of RIBA stage 3, contractors tender for their preliminaries, overheads and profits based on the University's pre-tender estimate prepared by an independent cost adviser. Successful contractor completes the design and tenders each sub-contract package.
- *Contractor framework appointment incorporating two stage design and build*: contractor selected from an OJEU compliant framework where preliminaries, overheads and profits have already been tendered. Further participation in the EU procurement processes is not required and therefore facilitates an earlier appointment of design consultants.

For the KMMS build, the overlap of design development and construction supply chain tendering and early selection of a construction partner was felt to be the key to an early completion of the building, in time for a September 2020 opening. As a result, a framework route, specifically the Scape Framework, (the procurement route used for the School of Economics building, currently being constructed) was chosen. This gives an initial free-of-charge feasibility study and a fast track route to town planning and to commencing work on site.

4.2. Preferred procurement and contracting strategy:

[Define the procurement strategy and contracting strategy (e.g. traditional, (design and build, early contractor involvement) and justify, ensuring this aligns with the spend programme in the Financial Case and the project programme defined in the Management Case; max. 2 pages.]

Robust and appropriate procurement and contracting strategies have been pursued in partnership by both universities in order to ensure that high-quality buildings and facilities are in place for the September 2020 opening of KMMS on the two Canterbury campus sites.

Canterbury Christ Church University

The University's procurement and contracting strategy for Building 2, where KMMS will be based, has been to use a two-stage restricted OJEU framework route (the NHS London Procurement Partnership framework) to appoint an architect-led, multi-disciplinary team for the detailed design phase (now concluded), and then an OJEU process based on a fully developed design with full Bills of Quantities for the construction phase. A project manager was appointed separately from a local framework to ensure governance and accountability with the design team.

The University employs two qualified procurement professionals and each year spends several million pounds in goods and services. This includes procurement through tendering, OJEU (where required) and more recently competitive dialogue. The University has recently introduced measured term contracts for its estates minor works maintenance spend. Working with professionally qualified and experienced estates colleagues and professional advisers, the

procurement team has supported significant estates and buildings development of tens of millions of pounds over the last ten years.

For the **detailed design phase**, 153 expressions of Interest were received, of whom 13 submitted a Selection Questionnaire response for the first stage of the tender process. Following the evaluation of the Selection Questionnaires, 5 bidders were shortlisted and invited to submit a tender response, with Hamilton Architects being appointed. The evaluation was based on cost and quality, with a minimum quality threshold required for final selection. The selection process involved detailed interviews with presentations on the approach to the design review within the constraints of the recently approved plans.

The successful design team which included Architects, Quantity Surveyors, Mechanical and Electrical Engineers, Structural and Civil Engineers, were retained on a 'pro valorem' basis. It was envisaged during the design team procurement process that the design of the building would require improvement to the overall layout and internal efficiencies, therefore the selection process considered those issues while considering the various submissions. The successful team demonstrated a high level of experience in the area of sensitive Architectural Heritage and also designing complex University Buildings.

The timing of the detailed design contract meant that significant changes to the originally envisaged specification for Building 2 were made possible, creating additional space and facilities not envisaged in the original building concept.

For the **main construction contract**, the OJEU process involved an early notification to the market, which generated a high level of interest across Tier 1 and Tier 2 contractors. There were approximately 35 companies which expressed an interest and visited the pre-tender open discussion and site visit. The pre-qualification process to the tender and subsequent shortlisting resulted in 5 companies being invited to submit full tenders. The strategy was designed to allow for non-compliant bids in the form of contractor proposed value engineering and also for a negotiated process with the best two contractors at the final stage of the process.

Final and best bids were received by the University on 5 October 2018 incorporating the value engineering options deemed appropriate and a recommendation was made to the University Project Board for selection which was also further endorsed by the University Senior Management Team. The main contractor commenced works on 28 October 2018, with a completion date of 20 May 2020.

In order to de-risk the construction site in terms of Archaeology and contamination issues, the University procured an enabling works contractor to undertake the demolition of the buildings on the site, remove all asbestos, expose and manage Archaeology and secure the site by erecting hoardings etc. The same contractor was retained to undertake sheet piling and reduce level excavations to prepare the site for the main construction process.

University of Kent

The University of Kent has used the Scape Framework for the selection of a contractor. The Scape Framework has been tested by the OJEU process and is open to public sector organisations to use. Consultants have also been appointed to provide Project Management and Quantity Surveying services, via the OJEU-compliant Pagabo Framework, which enables early engagement for these services.

A contractor, Willmott Dixon, was appointed with its selected design team to develop the design and obtain planning consent. Willmott Dixon developed design costs and a high-level

programme, and subsequently prepared the tender documents for sub-contractors. Sub-contractor tenders were submitted on an open book basis to ensure that all elements of the build costs are validated by the University's cost consultants.

The benefits of this procurement and contracting strategy outweigh the disadvantages. The key benefits are:

- Lower upfront design costs reducing financial risk if project is cancelled prior to construction.
- Much faster start on site if project programme is critical.
- Potential to involve a Contractor from the early stages of a scheme with the benefit of his resources, expertise and collaborative working.
- The opportunity to achieve a high level of certainty of a fixed Contract Sum at the end of the second stage before Contracts are executed.

The potential disadvantages identified for this approach are:

- Choice of contractor limited to those on each framework.
- Framework contractors may not have the experience and range of expertise required for the project.
- Tendered rates within the framework may no longer offer value for money.
- Lack of price certainty until the end of the second stage.
- Reduced University led design may result in an unacceptable reduction in specification and quality.

An independent, professional project manager has been appointed. An independent cost adviser has also been appointed to provide cost advice and analysis. Other professional advisers (for example, planning consultant, BREEAM and BIM consultants) form part of the design team alongside the architect, mechanical and electrical engineers, and structural engineers.

An internal Estates Project Manager has been appointed to the project to liaise between the professional team and the University. Regular project, design and site meetings are held and attended by Estates representative, professional consultants and contractors.

4.3. Procurement experience:

[Describe promoter (and advisor) experience of the proposed approach including any lessons learnt from previous procurement exercises of a similar scale and scope; max. 0.5 pages.]

Canterbury Christ Church University

The University's track record over recent years demonstrates that it possesses the necessary knowledge, skills and experience to deliver complex capital projects to timescale. This includes the establishment of new campuses at Broadstairs and Medway between 2000 and 2004; the construction of the iconic, award-winning Augustine House in Canterbury in 2009; and a new centre in Tunbridge Wells in 2017.

'Building 1', a key part of the Estate Masterplan, will shortly conclude in Canterbury. Despite some slippage, lesson learned are being applied to Building 2, the procurement of which avoids a two-stage process and incorporates full bills of quantities, instead of packages of work. Recognising the significant investment that the University is making for its Estate Master Plan

over the next ten years, a new appointment was made to the institution in 2016 for a Director of Estates and Facilities as a member of the Senior Management Team, followed by a new Deputy Director of Estates with specific responsibility for management of the Estate Master Plan.

University of Kent

The Estates Department has a long history of managing and undertaking large capital projects, using industry best practice, delivered on time and budget. The Estates team works to protect the University's legal and financial position; ensure 'best practice' within the UK construction industry is followed; ensure compliance with statutory regulations -planning, building control, DDA; appoint consultants and contractors who are adequately experienced and qualified to carry out the work; brief the consultants and monitoring the design process and quality; ensure that programme and cost are realistic and achievable.

The University's qualified procurement professionals spend several million pounds in goods and services annually. This includes procurement through construction related tendering, OJEU (where required) and utilisation of appropriate OJEU compliant frameworks. Working with professionally qualified and experienced estates colleagues and professional advisers, the team has supported significant estates and buildings development at the University. The implementation of individual projects is undertaken, in-house, by the Assistant Director of Estates and an appointed Project Manager to identify user needs and finalise the brief. For a major project the interests of the University are protected by the Project Board meeting at regular intervals to assess the validity of a project throughout the project duration

4.4. Competition issues:

[Describe any competition issues within the supply chain; max. 0.5 page.]
This is not required at SOBC stage.

As set out in 4.2 above, both universities have used procurement strategies which have sought to ensure open competition at both the design and construction phases, being OJEU compliant. For Canterbury Christ Church, competition is ensured through the competitive tendering of each package of work. Part of the main building contract tendering process included supply chain management and evidence from contractors to demonstrate their supply chain is fully resourced and have the capability to deliver the construction programme, giving value for money and high quality of build. For University of Kent, Willmott Dixon is required to tender each package within the Scape framework (OJEU compliant), with the University's cost consultant validating every appointment.

To date, we are pleased to confirm that, there has been a healthy market response to the procurement process, with only minimal evidence of main contractors being unwilling to tender. The unwillingness was one or two 'Tier One' main contractors who were awarded contracts elsewhere during the early tender process. These contractors held open and honest dialogue with Canterbury Christ Church and felt they would be over committed hence their withdrawal at very early stage. This still left several main 'Tier One' contractors and allowed a competitive selection process which was successful. Other smaller packages such as the AV / IT specialists attracted a healthy supply chain through the tendering process. Overall our experience of main contractors, sub-contractors, manufacturers and supply chain has been strong and encouraging

4.5. Human resources issues:

[Where possible, describe what you have done to identify and mitigate against any human resource issues; max. 0.5 pages.]
This is not required at SOBC stage.

A significant focus of the KMMS project is to secure, retain, induct and develop highly qualified and experienced academic and other staff to lead and deliver the new school. Key senior and middle management resources from both institutions have been assigned to the various governance and management functions of the emerging joint organisation. When appropriate, external consultancy expertise is being brought in to ensure that the right capacity is in place for activities that cannot be resourced by staff of the two institutions. Finally, a major area of focus will be the recruitment of KMMS staff. Professor Chris Holland has now been appointed as the Foundation Dean of the new School and other key members of the Senior Management Team (including a nominated deputy) are now also in post. Detailed organisational workforce planning has now established the initial teaching and support staff requirements, which form the basis of the costings included in this Strategic Outline Business Case.

A lot of attention has been given to the challenge of securing the right talent to lead and deliver KMMS. While it may be considered challenging to recruit the right team to an institution without a recognised track record in engineering and technology, the 'blank canvas' nature of the opportunity also means that it will act as a magnet for ambitious forward-thinking people who are committed to delivering transformative change in healthcare.

This issue is being managed in the following ways:

- The employer (and student) brand of KMMS is being present as forward looking and innovative, with the strapline, 'Inspiring the next generation of medical professionals', emphasised in key sources of information on KMMS, such as https://kmms.canterbury.ac.uk/kent-and-medway-medical-school.aspx
- The first roles (Founding Dean and Senior Management Team) are now either appointed or at an advanced stage of recruitment. This will ensure that a full complement of academic and support staff is in post to deliver programmes from September 2020.
- Staff resources have been identified within existing STEM-related departments to contribute to the teaching of new students from September 2020, such as life sciences specialists and other scientists, and those in medicine-related disciplines, such as nursing and occupational therapy. In this way, part of the KMMS offer will be built in part upon existing staff at both universities.
- There is a close partnership with the 'parent' Brighton and Sussex Medical School. This could open possibilities of staff exchanges and cross-institutional approaches to teaching and learning.
- University instructor posts will be offered so that KMMS can train a proportion of its expanding staff base
- Close links with the local and regional health economy will provide access to specialist expertise

4.6. Risks and mitigation:

Specify the allocation of commercial risks (e.g. delivery body, federated area, scheme promoters) and describe how risk is transferred between parties, ensuring this is consistent with the cost estimate and Risk Management Strategy in the Management Case; max. 1 page.]

The main risks identified in the project Risk Register (Appendix B) that will have a bearing on the commercial viability of the project are summarised in the table below, along with how they are allocated.

Commercial Risk	Number	Allocation
Failure to agree funding with Health Education Kent, Surrey and Sussex for placements in years 1 and 2	1	Delivery bodies (the universities).
Failure to secure approval from Government for student numbers	1a	Delivery bodies (the universities).
Failure to secure bank loan and other finances	1b	Delivery bodies (the universities)
Unsatisfactory outcomes from GMC visits in December 2019 and May 2020.	10	Delivery bodies (the universities).
Failure to secure enough placements for students impacting on our ability to deliver the curriculum as validated	11	Delivery bodies (the universities).
Risk of new buildings with specialist teaching facilities not opening on time for year 1 arrivals	12	Delivery bodies (universities) and construction contractors
Failure to secure planning permission.	12a	Delivery bodies (universities)
Failure to appoint the appropriate specialist teaching staff in time to deliver year 1 KMMS curriculum and assessment.	13	Delivery bodies (universities)
Failure to deliver a coherent, connected student academic experience negatively impacting on student success and KMMS reputation.	17	Delivery bodies (universities)
Failure to deliver coherent, connected student support and well-being services throughout the student journey impacting negatively on the KMMS student experience and KMMS reputation.	18	Delivery bodies (universities)

Under Risk 1b, it should be noted that failure to secure the anticipated two tranches of LGF funding (£4m and £4m), which forms a key part of the overall capital funding package, significantly increases the commercial risk of the project.

Nearly all commercial risks are allocated to the universities themselves as delivery bodies. The risk of the building not opening on time is shared with the construction contractors, who, under the contractual terms agreed, would face punitive financial sanctions in the event of either of the two KMMS new buildings opening late. Both universities have ensured that competent contractors have been appointed in the first place by operating rigorous procurement, with the CCCU construction contract let in October 2018 via an OJEU process and the Kent contract being let through a framework agreement.

4.7. Maximising social value:

[Where possible, provide a description of how the procurement for the scheme increases social value in accordance with the Social Value Act 2012 (e.g. how in conducting the procurement process it will act with a view of improving the economic, social and environmental well-being of the local area and particularly local businesses); max. 0.5 page.]

A key area of focus for the procurement of the scheme is to increase social value through the delivery of the project.

In the case of the development by CCCU of the former Canterbury Prison site, for example, the project's high-quality design is seeking not just to preserve the archaeological and heritage capital of Canterbury and the local community, but also to actually enhance it, by providing visual and direct linkages between two of the most important parts of the World Heritage Site which is located in Canterbury around our campus and the prison site. This has been achieved with enthusiastic support from the guardians of the local and national heritage and resulted in Planning Approval being processed under delegated authority with the local council in record

time. This is also a reflection of the detailed engagement between the University and the local communities and the careful consideration of feedback into the design process.

Both universities are strongly committed to maximising social value in their projects, a commitment that has been demonstrated in the work undertaken to date. Consultants and contractors appointed to the project are all required to maximise opportunities for apprenticeships and training opportunities for young people and long-term unemployed. The universities are always keen to identify new ways of improving their performance in this area, and especially welcome the opportunity to explore this with KCC through the contract management process. KCC has already provided useful case study evidence on the approach taken for the Rathmore Road development in North Kent, for example, and this is being reviewed by the CCCU procurement team for Building 2.

5. Financial Case

The Financial Case determines whether the scheme will result in a fundable and affordable Deal. It presents the funding sources and capital requirement by year, together with a Quantitative Risk Assessment (QRA), project and funding risks and constraints. All costs in the Financial Case should be in nominal values[18].

The profile of funding availability detailed in the Financial Case needs to align with the profile of delivery in the Commercial Case.

Key changes to the Financial Case since the SOBC

All costs have been updated to reflect current information (consistent with the financial model set out in the supporting Excel workbook) and to provide additional information not required at SOBC stage.

5.1. To
tal project value and funding sources:
[Specify the total project value and how this is split by funding sources by year, as per the table below (expand as appropriate). This should align with the total funding requirement described within the Project Overview section. Please include details of other sources of funding, and any conditions associated with the release of that funding. LGF can only be sought to 2020/21.]

Capital

The total capital value of the project is £24.84 million (including VAT), to be funded by Local Growth Fund (subject to approval, see section 5.2) and by the University of Kent and Canterbury Christ Church University (approved, see section 5.5).

Revenue

LGF is requested for the capital element of the project only. However, the benefits outlined in the Economic Case will also be dependent on revenue funding for the operational delivery of Kent and Medway Medical School.

The Economic Case shows how costs have been profiled over the appraisal period. In the shorter term, estimated revenue costs are around £23.4 million over the first five years from 2018/19, funded by University reserves, Health Education England grants, tuition fee income, Government teaching grant and research grants and contracts. All medium to long term costs will be covered by grants, tuition fees, research income and other income sources.

5.2. SELEP funding request, including type (LGF, GPF, etc.,):
[Specify the amount and type of SELEP funding sought to deliver the project. This should align with the SELEP funding requirement described within the Project Overview section.]

This project requests Local Growth Fund of £8 million (capital). As indicated in the Strategic and Economic Cases, the project could be progressed with a reduced amount of LGF funding,

[18] Nominal values are expressed in terms of current prices or figures, without making allowance for changes over time and the effects of inflation.

although this will impact on the benefits that can be secured from the project, and on the universities' wider capital programme.

Within the Economic Case, we have modelled the differential impacts of LGF funding at both £8 million and £4 million, reflecting SELEP's potential decision to approve funding in two tranches. As stated in the Project Overview, the project is not 'phased' in line with the anticipated receipt of LGF tranches. However, the Economic Case demonstrates that there is significantly greater value from the £8 million investment as a result of lower borrowing costs and reduced risk, enabling KMMS to scale up more quickly, accelerate student numbers and create a School of the scale and quality envisaged in the original bid to HEFCE/ HEE.

5.3. Costs by type:

Detail the cost estimates for the project by year as per the table below (expand as appropriate) and specify how the inclusion of the Quantitative Risk Assessment (QRA) and other overheads aggregate to the total funding requirement. Where conversion has been made between nominal and real cost estimates (and vice versa) please provide details of any inflation assumptions applied. The Financial Case should not include Optimism Bias. Please confirm that optimism bias has not been applied in the Financial Case. Also, include details of the agreed budget set aside for Monitoring and Evaluation, and ensure this aligns with the relevant section in the Management Case. Please note, not all sections of the table may require completion.]

A supporting spreadsheet is attached, indicating how costs have been profiled over time.

Core capital project

The cost of the core capital project (the element for which LGF is sought) is broken down in the table below. This is set out in greater detail in the supporting workbook (note that construction costs include project management costs).

Table 5-1: Costs by type for the preferred option (£, 2018 prices)

	2018/19	2019/20	2020/21	Total
Construction costs (University of Kent)	634,342	9,309,155	3,051,573	12,995,070
Construction costs (CCCU)	2,015,000	6,387,000	1,038,000	9,440,000
Equipment costs (University of Kent)	0	184,302	420,628	604,930
Equipment costs (CCCU)	0	521,000	1,279,000	1,800,000
Total construction and equipment	**2,649,342**	**16,401,457**	**5,789,201**	**24,840,000**
Inflation	67,823	308,347	71,207	447,377
QRA	132,467	855,338	374,441	1,362,246
Monitoring & evaluation		5,000	25,000[19]	30,000
Total funding requirement	**2,849,632**	**17,570,142**	**6,244,849**	**26,679,623**

[19] Includes costs of evaluation in future years

Inflation is applied at 2.56% in 2018/19, 1.88% in 2019/20, and 1.23% in 2020/21 (as per UK Tender Price and Building Cost Indices, July 2019). It should be noted that inflation is essentially notional in this context, given that construction is now underway and the majority of costs are now fixed.

Optimism bias has not been included in the Financial Case.

Construction costs are based on full competitive tenders, which have already been received and evaluated (following the process set out in the Commercial Case), and all costs have been reviewed by the universities' independent cost consultants. Work is underway and is proceeding to budget. Equipment costs are based on a range of sources.

The costs of monitoring and evaluation, inflation risks and the Quantitative Risk Assessment allowance will be borne by CCCU and the University of Kent.

Operational costs

Longer term operational costs are profiled over 30 years. Again, these are set out in detail in the supporting workbook, and include overhead costs. In summary, these are:

Table 5-2: 30-year operational costs from 2018/19 (£, 2018 prices, undiscounted)

	Total over 30 years
Running costs (utilities, consumables, etc.)	10,287,889
Capital equipment and replacement costs	10,378,080
Operational costs (academic, management and administrative resources	326,972,788
Total	**347,638,757**

5.4. Quantitative risk assessment (QRA):

[Provide justification for the unit costs and a Quantitative Risk Assessment (QRA) provisions (detailed in the capital and non-capital tables above); max. 2 pages. Please provide supporting documents if appropriate.]

Costs for the capital phase as set out in Table 5-1 and the supporting workbook are based on the following:

- Construction costs include planning fees (which have already been incurred), professional fees (all of which have been competitively tendered through the process outlined in the Commercial Case) the construction costs to the main contractor (as procured through the process set out in the Commercial Case), and the costs of project management within each of the universities. As both the University of Kent and CCCU buildings have been designed and procured and are now in the construction phase, the financial risks are, at this stage, considered to be low, and are mitigated through the project management and governance arrangements set out in the Management Case. As the summary of risks set out in Section 5-6 indicates, none of the key financial risks associated with the KMMS project overall relate to the capital phase.

- Equipment costs include fixtures and fittings (including specialist medical equipment), communications and networking, IT and audio-visual equipment, which has been competitively procured through the process outlined in the Commercial Case.

As the summary of risks set out in Section 5.7 indicates, none of the key financial risks associated with the KMMS project overall relate to the capital phase. Reflecting low risks at this stage of the capital phase, we have adjusted total construction costs by 5% and equipment costs by 10%, to provide a risk allowance of £1.36 million, as follows:

Table 5-3: Quantitative Risk Assessment for the preferred option (£, 2018 prices)

	2018/19	2019/20	2020/21	Total
Construction costs (University of Kent)	31,717	465,458	152,579	649,753
Construction costs (CCCU)	100,750	319,350	51,900	472,000
Equipment costs (University of Kent)	0	18,430	42,063	60,493
Equipment costs (CCCU)	0	52,100	127,900	180,000
Total	**132,467**	**855,338**	**374,441**	**1,362,246**

For the operational phase, costs are based on the following:

- Running costs are based on a calculation per sq m GIA for energy, water and sewerage, maintenance and cleaning, as specified in the supporting workbook

- Capital equipment and replacement costs are based on a three-year replacement cycle for IT, AV and specialist medical equipment, and a five-year replacement cycle for communications and networking.

- Operational costs are based on a full schedule of named posts, specified by FTE and broken down by academic, clinical, central professional services, school professional services and project management resources. Within the costs presented, we have excluded existing posts (i.e. posts created in 2018/19 or before). The breakdown of costs associated with each category of posts is set out in the Economic Case.

5.5. Funding profile (capital and non-capital):

[Where possible, explain the assumed capital and non-capital funding profile, summarise the total funding requirement by year, and funding source (add rows / columns as appropriate). Please note, not all sections of the table may require completion. Also, explain the external factors which influence/determine the funding profile, describe the extent of any flexibility associated with the funding profile, and describe non-capital liabilities generated by the scheme; max. 1 page.]

Table 5-2: Funding profile for the preferred option (£, 2018 prices)

	2018/19	2019/20	2020/21	Total
Local Growth Fund		8,000,000		8,000,000
University of Kent	634,342	5,493,457	3,472,201	9,600,000
Canterbury Christ Church University	2,015,000	2,908,000	2,317,000	7,240,000
Total	**2,649,342**	**16,401,457**	**5,789,201**	**24,840,000**
Inflation/ QRA/ Evaluation				
University of Kent	112,397	642,597	252,207	1,007,201
Canterbury Christ Church University	92,893	531,088	208,442	832,422
Total	**205,290**	**1,173,685**	**460,648**	**1,839,623**

There is some flexibility in the funding profile in terms of the LGF grant request. However, the key 'driver' of the timetable is the need for the Medical School to be open by September 2020, and any delay in this would significantly compromise the project.

5.6. Funding commitment:

[Provide signed assurance from the Section 151 officer to confirm the lead applicant will cover any cost overruns relating to expenditure and programme delivery, as per the template in Appendix A. Please also confirm whether the funding is assured or subject to future decision making.]

A funding commitment letter has already been supplied as part of the SOBC and is re-attached.

Funding from the University of Kent has been approved as part of the overall ten-year Capital Programme with specific approval for the construction of the new building having also been given by the Governing Body; this follows the normal process for approval of major capital projects at the University of Kent. Full commitment is being given to the delivery of these facilities within the proposed timescales and this project is being prioritised over all others.

Funding for the capital investment at Canterbury Chris Church University's campus has been approved by the Governing Body within the capital budgets for the development of its Estate Masterplan.

5.7. Risk and constraints:

[Specify project and funding risks and constraints. Describe how these risks have, where appropriate, been quantified within the QRA/contingency provisions; max 0.5 pages.]

The main risks identified in the project Risk Register (Appendix B) that will have a bearing on the financial case are summarised in the table below, along with how they are allocated:

Financial Risk	Number	Allocation
Failure to agree funding with Health Education Kent, Surrey and Sussex for placements in years 1and 2	1	Delivery bodies (the universities).
Failure to secure bank loan and other finance	1b	Delivery bodies (the universities).
Failure to secure Government approval for student numbers	1a	Delivery bodies (the universities).
Failure to secure bank loan and other finance	1b	Delivery bodies (the universities).
Institutional failure that results in withdrawal from the KMMS partnership	2	Delivery bodies (the universities).

The most significant risks relate to:

- **Insufficient student numbers**. Undergraduate student places are the major driver of income and, as set out in the Strategic Case and the Economic Case, KMMS has only marginal viability with the maximum initial cohort of 107. It is therefore important that this maximum cohort is recruited and retained, and that sufficient momentum can be gained in the early years of the Medical School for the Government to support a lifting of the cap on student numbers from 2025/26.

  We do not consider the likelihood of a failure to recruit up to the student cap to be high, since there is very high demand for medical school places, and low supply. However, there is a risk that numbers could be capped at the initial limit (as per Scenario 1 in the Economic Case), which would impact on KMMS' viability.

- **Lack of capital funding.** In particular, failure to secure LGF funding will reduce revenue income by driving down the universities' ability to expand the School, at least at the pace envisaged. Under Risk 1b, it should be noted that failure to secure the anticipated two tranches of LGF funding (£4m and £4m), which forms a key part of the overall capital funding package, significantly increases the financial risk of the project

6. Management Case

The management case determines whether the scheme is achievable and capable of being delivered successfully in accordance with recognised best practice. It demonstrates that the spending proposal is being implemented in accordance with a recognised Programme and Project Management methodology, and provides evidence of governance structure, stakeholder management, risk management, project planning and benefits realisation and assurance. It also specifies the arrangements for monitoring and evaluation in terms of inputs, outputs, outcomes and impacts.

Key changes to the Management Case since the SOBC

This section has been updated to provide further information on governance and management arrangements and to set out information on contract management, approvals and escalation procedures and monitoring and evaluation not required at the SOBC stage

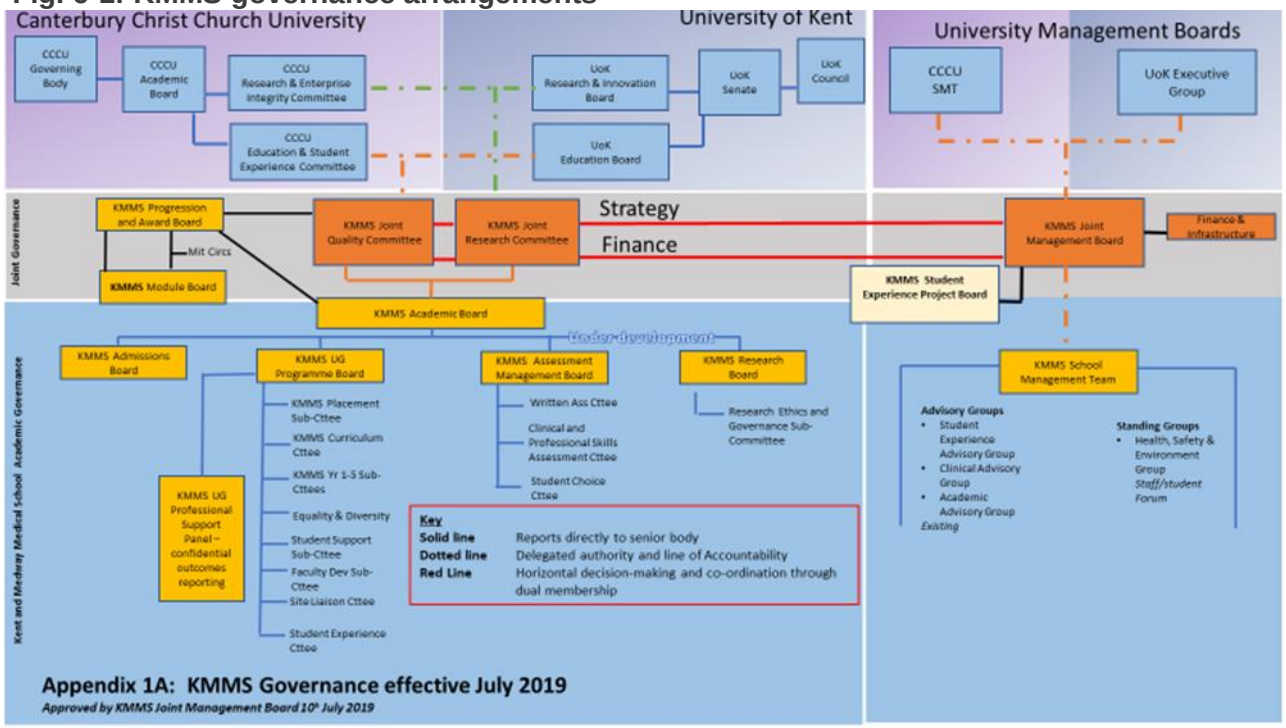
6.1. Governance:

[Nominate the project sponsor and Senior Responsible Officer, explain the project governance structure (ideally as a diagram with accompanying text) and describe responsibilities, project accountability, meeting schedules etc.; max. 1 page.]

The SRO for this project is Professor Rama Thirunamachandran, Vice Chancellor of CCCU, acting on behalf of the two universities.

The Project Governance structure is summarised in the diagram below. Firstly, there is project oversight through the Governing Bodies and Senior Management Teams of each institution, who are accountable for the work of three key KMMS oversight boards: 1) the KMMS Joint Management Board (and its associated Finance and Infrastructure Committee), 2) the KMMS Joint Research Committee, and 3) the KMMS Joint Quality Committee.

Fig. 6-1: KMMS governance arrangements



The KMMS School Management Team, along with a number of Advisory Groups and Standing Groups, is accountable to the KMMS Joint Management Board. The KMMS Academic Board is accountable to the KMMS Joint Quality Committee and Joint Research Committee and oversees all academic activities, including admissions, undergraduate courses, assessment management and research.

Each institution also has in place robust Governance arrangements for their respective capital projects:

- CCCU has established a Project Board for Building 2 (where CCCU's KMMS facility will be based along with engineering and science facilities), chaired by Prof Callum Firth, Dean of Social and Applied Sciences. The Project Board's Terms of Reference (available on request) specify that it is responsible for a range of matters relating to the new facility, including ensuring that the project is delivered as specified in a timely manner, approving design specifications, overseeing the logistical and operational planning and delivery of the project, and monitoring physical and financial progress of the project ensuring value for money and budgetary control. In addition, oversight is exercised at corporate level by the Senior Management Team and the Change Assurance Board.

- The University of Kent is applying its Gateway Reviews Process (available on request) that is used in the governance of major capital projects. The process has three phases: 1) Business justification: project proposal to allow the release of initial funding to commit the project to the next stage (feasibility, design and initial planning), 2) Delivery Strategy: Full Business Case to validate the proposed procurement /delivery strategy and approval to fund the project cost before any commitments are made to prospective suppliers or delivery partners about the construction process (this stage includes a high-level project risk assessment), and 3) Investment Decision: confirms that the recommended investment decision is appropriate, ie: designs are robust, contracts are appropriate, risks have been identified and either mitigated

or costed before the contract is placed with a contractor and the major commitment made by the University. A dedicated Project Board then oversees implementation.

6.2. Approvals and escalation procedures:

[Specify the reporting and approval process; max. 0.5 pages.]
This is not required at SOBC stage.

For the operation of KMMS as a whole, approvals and escalation procedures reflect the Terms of Reference of the different elements of the Governance structure. Operational decision making is delegated to the relevant SMT member. Key strategic decisions require the approval of the KMMS Joint Management Board, the KMMS Joint Research Committee or the KMMS Joint Quality Committee.

As regards the two capital programmes for KMMS, approvals and escalation procedures reflect the structures and processes described in 6.1 above:

- At **CCCU**, operational management of the Building 2 programme is by the Director of Estates and Facilities, with the Board overseeing the following key decisions:

  - Determining user requirements and ensure that these are fully considered at the appropriate stages of the project
  - Ensuring that appropriate consideration is given to the following in determining the project specification and delivery: opening hours, access/security, staff and student requirements, future alternative use/flexibility, Energy management & running costs, annual revenue costs (staff, equipment, premises, energy), Health, Safety, Environment & Security, Staff and Student and Visitor Wellbeing, Legislation, life cycle costs
  - Agreeing specifications and design proposals and “sign them off” at the appropriate stages
  - Overseeing the logistical and operational planning and delivery of the project to ensure expectations and targets agreed with external funders are met (e.g. SELEP, HEFCE)
  - Establishing and maintaining a risk register for the project
  - Monitoring physical and financial progress of the project ensuring value for money and budgetary control
  - Overseeing internal project communication to ensure (i) views of all staff and students are fully considered (ii) the effective dissemination of information regarding project progress and delivery and (iii) effective consultation, as required, with staff and students on all matters relating to project development, progress & delivery.
  - Overseeing the necessary change management processes to support the project
  - Evaluating the project during execution and beyond for the purposes of continuous quality enhancement.

At the **University of Kent**, the operational management of the capital project is the responsibility of the Director of Estates, with oversight and key decisions being made by a Project Board, chaired by the Director of Estates, but also including representatives from the end users; the project manager from the Estates department; the external project management and cost consultant and the Kent Finance Department.

The responsibilities of the Project Board include:

- Consulting with end users and other departments within the University to determine user requirements and ensuring that these are fully considered at appropriate stages in the progression of the design and construction

- Approving the procurement route for the project and ongoing monitoring of the performance of the main contractor against the contract
- Providing formal sign-off for the building design at key stages in the design development;
- Establishing and reviewing a risk register for the project
- Monitoring progress against the project timelines and monitoring total costs against the agreed budgeted cost plan to ensure value for money and budgetary control.

In addition to this, a quarterly report on progress and budget is provided for all major projects to the Finance and Resources Committee, a sub-committee of the University Council.

6.3. Contract management:

[Explain your approach to ensuring that outputs are delivered in line with contract scope, timescale and quality; max. 0.5 pages.]
This is not required at SOBC stage.

The two universities have agreed that CCCU will act as the conduit for LGF monies. Both CCCU and University of Kent will sign the contract with KCC, and provide it with project monitoring and details of expenditure, backed up by documentary evidence of expenditure that will be stored in a secure shared folder accessible to KCC, following procedures already established for the LGF contract relating to the EDGE Hub project.

This approach will build on the existing contract and contract management processes that have been successfully embedded for the EDGE Hub LGF project. The contract used has already been through the University's legal review process and key issues identified and addressed. For example, the Force Majeure clause in the KCC contract increases the burden of risk on the funding recipient and existing insurance, taken out for the EDGE Hub, will also be taken out for the KMMS funding. The contract monitoring and reporting processes required by KCC are well understood by the universities and it will be possible to meet these requirements efficiently by dovetailing review of the KMMS LGF project with the EDGE Hub, by, for example, scheduling review meetings on the same day and replicating monthly and quarterly reporting processes.

CCCU will make payments to the University of Kent for its LGF-funded KMMS activities in accordance with the Memorandum of Agreement that was signed by the two universities when the commitment was made to jointly develop the Medical School. Payments will be subject to provision of appropriate documentary evidence of expenditure and achievement of key project milestones in the build process itself and, subsequently, in the implementation of the programme.

CCCU and University of Kent understand their obligation to report on ongoing progress in the years following completion of the capital projects and key outputs, such as student enrolments, are achieved (see 6.9 below).

6.4. Key stakeholders:

[Describe key stakeholders, including any past or planned public engagement activities. The stakeholder management and engagement plan should be provided alongside the Business Case; max. 0.5 pages.]

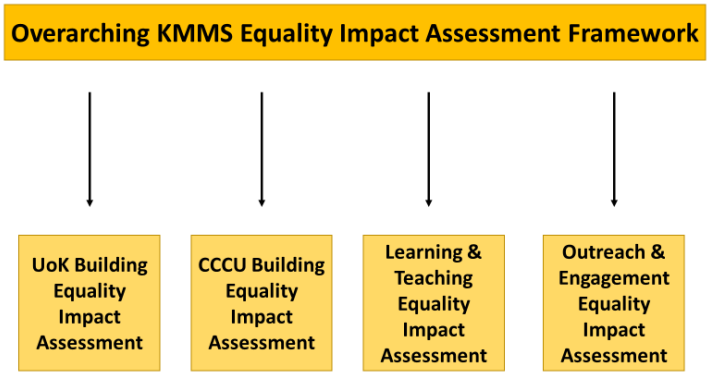
There has been extensive engagement with stakeholders in the development of the project. This has included (in particular) the NHS Trusts and CCGs in Kent and Medway, all of which are fully supportive of the project. Discussions have also taken place with Kent and Medway Economic Partnership and (during the course of the preparation of its recent report) the Thames Estuary 2050 Growth Commission. Internally. The project has a high profile within both universities: for example, the co-location of the CCCU site with the new EDGE Hub will reinforce the inter-

disciplinary connections. A Stakeholder Management and Engagement Plan is attached at Appendix H

6.5. Equality Impact:

[Provide a summary of the findings of the Equality Impact Assessment (EqIA) and attach as an Appendix to the Business Case submission. If an EqIA has not yet been undertaken, please state when this will be undertaken and how the findings of this assessment will be considered as part of the project's development and implementation. The EqIA should be part of the final submission of the Business Case, in advance of final approval from the accountability board; max. 0.5 pages.]

The approach to the Equality Impact Assessment (EqIA)will operate on two levels (summarised in the diagram below):



An overarching KMMS EqIA Framework will be developed for the project as a whole, setting out how Equality Impact will be assessed and managed overall for the lifetime of the project. The Framework will ensure that Equality Impact Assessment is seen as an ongoing process to inform the development and delivery of KMMS over time.

Four separate thematic EqIAs will then be developed, starting with those for each of the two new buildings, and then followed by others for learning and teaching, and outreach and engagement. The thematic EqIAs will follow the standard template provided by KCC for all LGF projects or those already used by each institution.

The KMMS Project Board will be responsible for oversight of Equality Impact for all aspects of the project, reviewing progress at its quarterly meetings. It will receive advice and support in discharging its responsibilities from CCCU's Equality, Diversity and Inclusion Manager and external consultants (if required), who will also support the creation of consultation and engagement methods, such as the establishment of user forums, so that appropriate people are consulted on key issues relating to different aspects of the work. An operating principle of KMMS is that a diverse range of people will be consulted in the project development and implementation process, such that key decisions can be challenged, and challenges responded to or addressed by the universities.

The Equalities Impact Assessment will be submitted to Kent County Council (on behalf of SELEP) by November 2019, prior to consideration of the Full Business Case by the SELEP Accountability Board.

6.6. Risk management strategy:

[Define the Risk Management Strategy referring to the example provided in Appendix B (expand as appropriate), ensuring this aligns with the relevant sections in the Financial and Commercial Case. Please provide supporting commentary here; max. 0.5 pages.]

A risk management strategy is set out in Appendix B. From the perspective of the Management Case, the key risks are in relation to:

- The capital build itself (and the risks of time delay and cost overrun, which are mitigated through the procurement routes that both universities have taken and by the project management of the capital build by experienced Estates teams within each university)

- Delivery risks associated with a failure to recruit adequate student numbers (as highlighted elsewhere, we consider this to be a low risk given high demand for student places and low supply), or a decision by the Government not to raise the cap on student numbers in future years.

6.7. Work programme:

[Provide a high-level work programme in the form of a Gantt Chart which is realistic and achievable, by completing the table in Appendix C (expand as appropriate). Please describe the critical path and provide details regarding resource availability and suitability here; max. 0.5 pages.]

The work programme is set out in Appendix C. Critical dates are the start of construction on the CCCU site (October 2018), and at University of Kent in July 2019 – both now achieved; and completion by summer 2020.

6.8. Previous project experience:

[Describe previous project experience and the track record of the project delivery team (as specified above) in delivering projects of similar scale and scope, including whether they were completed to time and budget and if they were successful in achieving objectives and in securing the expected benefits; max. 0.5 pages.]

Both universities have successful track records of delivery. These include (for example) the development of Augustine House and Christ Church Sports Centre at Canterbury Christ Church University, the construction of the Sibson Building and the Templeman Library Extension at University of Kent and both universities have extensive experience in managing major capital programmes.

The universities have sufficient resources available to deliver the project. Project leadership has been consistent since the original KMMS proposal was developed for HEFCE and HEE, and there has been stability of personnel in both institutions. There is also a range of skills available, in relation to academic leadership and management, contract management and ongoing delivery. It is not envisaged that there will be any resource constraints, and both universities have (as set out in the Strategic Case) prioritised the delivery of KMMS over other investments.

6.9. Monitoring and evaluation:

[SELEP are required to submit detailed quarterly project monitoring reports to the Department for Business, Energy and Industrial Strategy for schemes that have been funded through the LGF to enable ongoing monitoring and evaluation of individual projects. Monitoring and evaluation metrics should be aligned to these reporting requirements (South East Local Enterprise

Partnership Assurance Framework 2017, Section 5.8 – see SELEP Business Case Resources document). A proportionate approach to Monitoring and Evaluation should be followed ensuring evaluation objectives relate back to the business case and build on assumptions used in the appraisal process.

Specify the following:

Inputs
- *Describe what is being invested in terms of resources, equipment, skills and activities undertaken to deliver the scheme*

Outputs (delivering the scheme/project)
- *Identify what will be delivered and how it will be used*

Outcomes (monitoring)
- *Identify and describe how the relevant performance indicators (KPIs) will be used to monitor the outcomes, including high-level outcomes, transport (outputs), land, property and flood protection (outputs) and business, support, innovation and broadband (outputs) (as per the table in Appendix D)*

Impacts (evaluation)
- *Describe how the impacts will be evaluated 2 and/or 5 years post implementation depending on the size of the project. Consider the impact of the intervention on the following Growth Deal outcomes (if relevant):*
    - *Housing unit completion*
    - *Jobs created or safeguarded*
    - *Commercial/employment floor space completed*
    - *Number of new learners assisted*
    - *Area of new or improved learning/training floor space*
    - *Apprenticeships*

Promoters should also include a statement which identifies other schemes which may have potentially contributed to the same benefits/impacts.
Max. 1 page excluding table.
Smaller schemes (less than £2 million) are required to complete Monitoring and Evaluation which is proportionate to the size of the scheme; max. 0.5 page.]

Inputs

- Capital funds of £24,840,000 will be used to deliver the Kent and Medway Medical School (of which £8 million will be sourced from the Local Growth Fund[20]). Total costs of the School over 30 years (including running costs, ongoing maintenance and repair and the costs of educational and research services) amount to an estimated £373 million.

- Other inputs include start-up costs (including initial recruitment costs) incurred by University of Kent and Canterbury Christ Church University in 2018/19 and before, and project management, curriculum development and strategic leadership resources provided by the Universities. There have also been advisory inputs from KMMS' 'parent' institution, Brighton and Sussex Medical School.

[20] Or a lower amount, depending on SELEP's decision.

Outputs (delivering the scheme)

The capital phase of the project will deliver:

- 2,476 sq m of additional lecture theatre, classroom, anatomy and clinical skills simulation laboratory space at CCCU's Science, Technology, Engineering and Medicine (STEM) facility
- 2,320 sq m of lecture theatre, IT suites, seminar rooms, meeting rooms and office space at the University of Kent campus
- Fully equipped facilities capable of providing a new, high-quality Medical School to undergraduates from September 2020, with capacity for future expansion

Outcomes (monitoring)

In addition to the delivery of the physical facilities described above, the project will enable:

- An initial annual cohort of 107 undergraduate students, rising to a maximum cohort of 214 by 2029/30 (or maximum undergraduate numbers of 1,018 by 2033/34)
    - This will be monitored through successful enrolments and the success in making a case to Government to increase cohort numbers
- Delivery of a new curriculum and delivery model developed in partnership with the local NHS, designed to encourage greater local recruitment (including from those who would not have previously considered medical careers) and greater opportunities to experience a wider range of clinical settings (particularly in primary care)
    - Recruitment and diversity will be monitored through applicant numbers and demographic/ equal opportunities monitoring at application and enrolment stage, and in numbers of school engagements, outreach programmes, etc.
    - Curriculum will be monitored through delivery against planned actions and placements within different NHS services and specialisms.
- Additional medical research activity
    - This will be monitored through research income, anticipated to reach around £1 million per year by 2032/33
- Additional postgraduate students (the scale of this has not yet been identified, although postgraduate activity is expected)
- Increased collaboration between University of Kent and Canterbury Christ Church University (reflecting complementary strengths) and between the universities, the NHS and the wider health economy.

Impacts (evaluation)

These outcomes will lead to:

- Reduced vacancies and increased professional employment in the Kent and Medway health economy, leading to improved patient care and health outcomes

- A more resilient and flexible workforce working across the health system, supporting greater productivity and integration

- Business and employment growth in the wider health and life sciences sector, driven by links between research at KMMS and commercial life science activity and the development of a pool of relevant talent in East Kent. This will help to support the development of the 'Health Supercentre' identified in the Thames Estuary 2050 Growth Commission and reinforce the strengths of the commercial base at (for example) Discovery Park

- The development of Canterbury as a significant centre of medical research and training, adding value to the universities' existing specialisms, and driving long-term growth in the knowledge economy.

Impacts on Growth Deal outcomes

We anticipate that the project will have impacts on the Growth Deal outcomes, as follows:

Table 6-1: Impact of KMMS on Growth Deal outcomes

Growth Deal outcome	KMMS impact
Housing unit completion	None
Jobs created/ safeguarded	Direct jobs created: • 121.7 FTE gross • 30.4 FTE net of deadweight, displacement and leakage Indirect jobs created: • 14 FTE gross • 5 FTE net of deadweight, displacement and leakage
Commercial employment floorspace completed	None
Number of new learners assisted	2020/21 – 2024/25: 107 per year 2025/26 – 2026/27: 161 per year 2027/28 – 2028/29: 187 per year Beyond 2029/30: 214 per year Total over 30-year appraisal period: 5,297
Learning/ training floorspace completed	4,796 sq m
Apprenticeships	None quantified. However, both CCCU and the University of Kent employ Apprentices, and it is anticipated that the additional activity facilitated by KMMS will lead to the creation of additional Apprenticeship opportunities.

Evaluation methodology

Within the financial plan, £30,000 has been allocated for evaluation, which we consider to be appropriate given the size of the proposed LGF allocation. The evaluation will be carried out

independently and will be competitively procured, within the procurement regulations of Canterbury Christ Church University.

Within the evaluation specification, we will invite prospective evaluators to propose a detailed methodology. However, we anticipate that the evaluation will involve:

- In 2020/21, a review of the delivery of the capital scheme (the element of the project funded by LGF), which will be complete by September 2020. This will draw on financial and monitoring data provided by the Universities and their contractors, as well as interviews with project managers. It will seek to establish whether the capital scheme was delivered to time and to budget, and will identify any lessons that could be learnt for future LGF capital schemes.

- Also in 2020/21, alongside the capital scheme review, a baseline assessment of the anticipated project benefits, setting out current medical professional vacancy rates, challenges in recruitment and training, initial enrolments in September 2020, etc., and an analysis of key stakeholders' estimate of scheme benefits

- In 2022/23, a review of progress against the baseline report, based on interviews and data review, highlighting any lessons or issues for the future delivery of the project

- In 2024/25, five years into the project, a final review of outcomes achieved.

In relation to SELEP's specific monitoring requirements, a Baseline Monitoring Report will be completed in September 2019. A one-year post scheme monitoring report will be submitted in 2021/22, with a five-year post-scheme report submitted in 2025/26.

Other schemes which may have contributed to the same impacts

There are no other LGF-funded schemes which will have contributed to the identified impacts. Elsewhere in the South East LEP area, the new Medical School at Anglia Ruskin University in Chelmsford will have positive impacts on the overall stock of medical professionals in the SELEP area, and is seeking to address some similar issues. However, the areas of benefit for KMMS and the ARU Medical School are separate and are unlikely to overlap.

6.10. Benefits realisation plan:

[A Benefits Realisation Plan provides details of the process that will be followed to ensure that benefits are sustained and that returns on investment are maximised where possible. The Benefits Realisation Plan identifies the potential benefits and how these will be tracked and measured, the risks that may prevent benefits being realised and the critical success factors that need to be in place to ensure that benefits are realised. In many cases, benefits realisation management should be carried out as a duty separate from day to day project management. Describe the proposal for developing a Benefits Realisation Plan which should involve continuous public engagement to ensure the anticipated benefits are realised. The Benefits realisation plan should be consistent with the Strategic and Economic Case; max. 0.5 page.]

A Benefits Realisation Plan has been prepared and is attached as a separate workbook (Appendix I). This sets out:

- The key benefits that the scheme is expected to deliver (as per Section 2.10)
- Milestones for when the benefits are expected to be delivered (recognising that most will be delivered long after the completion of the capital phase)

- Data collection methods and timetables
- Key reporting bodies and timescales

In addition to the Benefits Realisation Plan, ongoing consultation and engagement is underway with *(inter alia)* the Kent and Medway Sustainability and Transformation Partnership, relevant NHS bodies and other university departments. This is consistent with the governance arrangements set out above (and illustrated in Fig. 6-1).

7. Declarations

Has any director/partner ever been disqualified from being a company director under the Company Directors Disqualification Act (1986) or ever been the proprietor, partner or director of a business that has been subject to an investigation (completed, current or pending) undertaken under the Companies, Financial Services or Banking Acts?	*No*
Has any director/partner ever been bankrupt or subject to an arrangement with creditors or ever been the proprietor, partner or director of a business subject to any formal insolvency procedure such as receivership, liquidation, or administration, or subject to an arrangement with its creditors	*No*
Has any director/partner ever been the proprietor, partner or director of a business that has been requested to repay a grant under any government scheme?	*No*

**If the answer is "yes" to any of these questions please give details on a separate sheet of paper of the person(s) and business(es) and details of the circumstances. This does not necessarily affect your chances of being awarded SELEP funding.*

I am content for information supplied here to be stored electronically, shared with the South East Local Enterprise Partnerships Independent Technical Evaluator, Steer Davies Gleave, and other public sector bodies who may be involved in considering the business case.

I understand that a copy of the main Business Case document will be made available on the South East Local Enterprise Partnership website one month in advance of the funding decision by SELEP Accountability Board. The Business Case supporting appendices will not be uploaded onto the website. Redactions to the main Business Case document will only be acceptable where they fall within a category for exemption, as stated in Appendix E.

Where scheme promoters consider information to fall within the categories for exemption (stated in Appendix E) they should provide a separate version of the main Business Case document to SELEP 6 weeks in advance of the SELEP Accountability Board meeting at which the funding decision is being taken, which highlights the proposed Business Case redactions.

I understand that if I give information that is incorrect or incomplete, funding may be withheld or reclaimed and action taken against me. I declare that the information I have given on this form is correct and complete. Any expenditure defrayed in advance of project approval is at risk of not being reimbursed and all spend of Local Growth Fund must be compliant with the Grant Conditions.

I understand that any offer may be publicised by means of a press release giving brief details of the project and the grant amount.

Signature of applicant	
Print full name	
Designation	

8. APPENDIX A - Funding Commitment

Draft S151 Officer Letter to support Business Case submission

Dear Colleague
In submitting this project Business Case, I confirm on behalf of [Insert name of County or Unitary Authority] that:

- *The information presented in this Business Case is accurate and correct as at the time of writing.*
- *The funding has been identified to deliver the project and project benefits, as specified within the Business Case. Where sufficient funding has not been identified to deliver the project, this risk has been identified within the Business Case and brought to the attention of the SELEP Secretariat through the SELEP quarterly reporting process.*
- *The risk assessment included in the project Business Case identifies all substantial project risks known at the time of Business Case submission.*
- *The delivery body has considered the public-sector equality duty and has had regard to the requirements under s.149 of the Equality Act 2010 throughout their decision-making process. This should include the development of an Equality Impact Assessment which will remain as a live document through the projects development and delivery stages.*
- *The delivery body has access to the skills, expertise and resource to support the delivery of the project*
- *Adequate revenue budget has been or will be allocated to support the post scheme completion monitoring and benefit realisation reporting*
- *The project will be delivered under the conditions in the signed LGF Service Level Agreement with the SELEP Accountable Body.*

I note that the Business Case will be made available on the SELEP website one month in advance of the funding decision being taken, subject to the removal of those parts of the Business Case which are commercially sensitive and confidential as agreed with the SELEP Accountable Body.

Yours Sincerely,
SRO (Director Level) ……
S151 Officer ……

SOUTH EAST
LOCAL ENTERPRISE
PARTNERSHIP

9. APPENDIX B – Risk Management Strategy

Description of Risk	Impact of Risk	Risk Owner	Risk Manager	Likelihood of occurrence (Very Low/ Low/Med/ High/ Very High) (1/2/3/4/5) *	Impact (Very Low/ Low/ Med/ High/ Very High) (1/2/3/4/5) **	Risk Rating	Risk Mitigation	Residual Likelihood/Impact Scores
Financial Risks								
1. Failure to agree funding with Health Education Kent, Surrey and Sussex for placements in years 1 and 2	Learning and teaching cannot be delivered	Joint Management Board	Finance Directors	3	4	3 x 4 = 12	In the event of HEKSS not funding the placements, KMMS will refer the matter to HEE. If funding is less than required, the placement offer will be redesigned. KMMS is in formal discussions and waiting for the new Primary care Networks to be in place to sign SLAs.	2 x 4 = 8
1a. Failure to secure approval from Government for student numbers.	Reduced revenues & viability	Joint Management Board	Dean of School	3	5	2 x 5 =15	Forecast volumes are based on the universities' tried and tested budgeting methodology and backed up by market research and Senior Management Team scrutiny. Experience shows that both universities have been successful at expanding their provision into new areas. In addition, national evidence highlights that medical school places tend to be heavily over-subscribed, suggesting that the prospects for attracting students are good, if places are available.	2 x 5 = 10
1b. Failure to secure bank loan and other finance.	Project cannot be funded at the required scale	Joint Management Board	Directors of Finance, both universities	3	5	3 x 5 = 15	The universities are asset-rich institutions with an excellent financial standing, and so can expect to access the necessary finance, and on reasonable terms. Both institutions' financial planning to secure the remaining funds are already at an advanced stage.	2 x 5 = 10
2. Institutional failure that results in withdrawal from the KMMS partnership.	KMMS not being delivered *per se*, or not delivered as originally envisaged.	Joint Management Board	Finance Directors	1	3	1 x 3 = 3	In the event that one of the partner universities is unable to continue to contribute to the partnership, negotiations would commence regarding the potential of the remaining partner taking full ownership. If necessary, the Exit Agreement between the partners would be invoked. In the event of both universities being unable to continue, the contingency arrangements in the agreement between KMMS and BSMS would be invoked. Robust joint institutional governance. Effective leadership and management of the partnership based on shared understanding of the nature and benefits of the partnership. Effective financial management through Joint Management Board's Finance and Infrastructure Group. Strong links are nurtured between KMMS and BSMS.	1 x 3 = 3

Partnership Risks								
3. Risk of the loss of key personnel at either university, impacting on KMMS ability to deliver the programme.	Delay to programme delivery.	Joint Management Board	Dean	3	4	3 x 4 = 12	Joint Management Board will keep KMMS informed of any potential impact on the School resulting from staff changes and agree mitigating actions. KMMS staff report partnership relationship issues to KMMS Dean. Early warning would come through Joint Management Board.	3 x 3 = 9
4. Major outage of service support or infrastructure impacting on quality of service to KMMS staff and students	Reduced quality of service to staff and students	Joint Management Board	Dean and Executive Sponsors	2	4	2 x 4 = 8	This is covered by University and KMMS contingency plans. If a service can no longer be delivered at one university, the other partner university will endeavour to fulfil the need. Sudden and unforeseen incidents would be managed 1-1 with the Dean and the Executive Sponsors. Anticipated risks resulting from planned activity will be notified through the Joint Management Board. Ensure that regular Joint Management Board Meetings are being held (currently every two weeks).	1 x 3 = 3
5. Major incident or other institutional development occurring at BSMS which means it is unable to be our contingency school.	No contingency school	Joint Management Board	Dean	1	4	1 x 4 = 4	KMMS would consult both universities and the GMC to seek an alternative contingency school. Sudden and unforeseen incidents would be reported through joint governance arrangements. BSMS forms part of the KMMS joint governance arrangements. The contractual agreement between partners includes duties to address such an occurrence. We will continue existing controls and monitor the implementation of new governance structures carefully. BSMS will become involved in school level decision-making so that they are embedded in all levels of governance. BSMS colleagues are part of joint governance structures and there is effective inter-institutional relationship management by key stakeholders to manage sudden and unforeseen events.	1 x 3 = 3
Governance Risks								
6. Risk that partner relationships break down.	Failure of the joint delivery model, jeopardising the whole programme.	Joint Management Board	Dean	1	4	1 x 4 = 4	KMMS has clear governance structures to support inter-institutional relationships and all key risks will be managed through the joint governance arrangements. The Dean is on the senior leadership groups of both institutions. KMMS staff report partnership relationship issues to KMMS Dean. Early warning would come through Joint Management Board. Ensure that regular Joint Management Board Meetings are being held.	1 x 3 = 3

7. Failure to effectively manage relationships with LEPs impacting on student education and patient safety.	Reduction in student and patient safety	Joint Management Board	Dean	3	4	3 x 4 = 12	KMMS will have fully documented and formally contracted Service Level Agreements with all placement providers. SLAs will be managed by the experienced team at CCCU's Placement Learning Unit. Effective Low Level Concern reporting system. Rapid response approach proportionate to the concern raised. Our Quality Assurance processes, reporting systems and end of placement surveys will identify problems and these will be addressed immediately through the Joint Quality Committee. The Joint Quality Committee is the decision-making body ensuring policy implementation is effective, receiving incident reports based on KMMS response and evaluation of incidents. Clear escalation route for major concerns.	2 x 4 = 8
Staffing Risks								
8. Risk of KMMS Dean and other key personnel departing resulting in loss of knowledge and expertise.	Loss of essential knowledge and expertise to deliver a successful programme.	Joint Management Board	Dean	2	4	2 x 4 = 8	UG Programme Director has now started and will become the Dean's Deputy. The KMMS professional service team reporting to the School Administrative Manager are being recruited. The core staffing team to deliver year 1 will be in place by May 2020. Support and mentoring from BSMS is available for all staff The KMMS School Board will meet weekly to ensure effective management and oversight of operations. Staff recruitment and retention is a standing item of business for the Joint Management Board.	2 x 3 = 6
9. Failure to effectively induct and integrate new staff	Reduced staff performance and quality of service	Joint Management Board	Dean	3	4	12	University of Kent's HR department is developing a KMMS staff induction event for September, working in partnership with CCCU. The event will bring together KMMS arrivals with key colleagues from both institutions. The event will be adopted and delivered at other points in the year as need arises during 2019/2020 and reviewed thereafter. Each new KMMS staff arrival also has a tailored programme of induction relevant to their area of work. A detailed induction programme has been organised for each new starter so that they can meet the relevant people within days of arriving. A KMMS induction presentation and induction checklist provides consistency in induction process.	2 x 4 = 8
Curriculum & Assessment Risks								
10. Unsatisfactory outcomes from GMC visits in December 2019 and May 2020.	Risk of delayed GMC approval of KMMS as a medical school	Joint Quality Committee	Dean	2	4	2 x 4 = 8	GMC 6 visit elicited positive feedback on KMMS progress and has not raised any substantive concerns about programme content, assessment or approach to teaching and learning. Student Experience infrastructural framework agreed. The next steps are to design and test the experience ensuring services delivered to students by all partners are coherent and connected.	2 x 2 = 4

11. Failure to secure enough placements for students impacting on our ability to deliver the curriculum as validated	Reduced number of students.	Joint Quality Committee	Placement Learning Unit at CCCU	3	4	3 x 4 = 12	In the event that we have insufficient capacity through the SLAs with PCNs, we have already commenced negotiations with individual GP Practices in the region to assess additional capacity. Regular reporting to the Joint Management Board on progress. The SLA/ placements manual has been written from which a contract will be drawn up. There is commitment from a number of primary care providers to provide student placements for KMMS.	2 x 4 = 8
12. Risk of new buildings with specialist teaching facilities not opening on time for year 1 arrivals	Alternative interim facilities will be required.	Joint Management Board	University Directors of Estates	3	4	3 x 4 = 12	Each building project has rigorous project controls in place. Directors of Estates at each university report progress to the Joint Management Board. In the event of delay in opening, our first choice would be to reschedule the parts of the programme requiring specialist facilities to the spring term. Should the delay continue into the spring term, we would mitigate the impact by seeking alternative facilities. Clinical simulation suites are available at St Paul's (CCCU) and at CCCU Medway campus. Anatomy Learning Centres are available at KCL or St George's in London or at BSMS. Any major delays would be reported to the Joint Management Board and mitigation approved.	2 x 3 = 6
12a. Failure to secure planning permission.	Delays to opening of KMMS	Vice Chancellors	Directors of Estates, both universities	3	4	3 x 4 = 12	Planning approval has now been secured for both the CCCU and Kent sites.	2 x 4 = 8
13. Failure to appoint the appropriate specialist teaching staff in time to deliver year 1 KMMS curriculum and assessment.	Inability to support the approved curriculum	Joint Quality Committee	Dean	3	4	3 x 4 = 12	KMMS can call on support from teaching staff with appropriate content expertise at both universities to deliver teaching and upon the contract with BSMS for additional academic support. BSMS colleagues are invited to Joint Management Board and KMMS Academic Steering Committee. Developing relationships and effective ways of working.	2 x 3 = 6
14. Risk that curriculum changes at BSMS negatively affect KMMS and requiring substantive change the KMMS learning and teaching approach.	Might require substantive change in learning and teaching approach	Joint Quality Committee	Dean	3	3	3 x 3 = 9	The joint governance structure includes attendance of the BSMS Dean at the Joint Management Board and of BSMS academic staff at the KMMS Academic Steering committee. There is an effective academic and professional services staff network between KMMS and BSMS. BSMS forms part of the KMMS joint governance. The contractual agreement between KMMS and BSMS partners includes duties to address such an occurrence.	2 x 3 = 6

Patient Safety and Health & Safety Risks								
15. Failure to comply with appropriate health and safety processes and procedures which may lead to injury or accident.	Injury / accident of people associated with the school, and impacts relating to reputation & legal compliance	Joint Management Board	H&S Directors at Kent and CCCU	3	4	3 x 4 = 12	KMMS has a dedicated Health and Safety Policy and in the process of procuring a Human Tissue Authority licence. Additional expert support is available from both institutions and health and safety policies are aligned. Health and safety concerns will be raised through School-based governance and management arrangements and escalated as required to Joint Management Board. KMMS are reviewing the Health and Safety Policy to ensure new facilities operational requirements are appropriately addressed, risks assessed and training developed and delivered on an appropriate timescale. KMMS Heath and Safety risk reporting will form part of the procedures within both universities to ensure alignment and effective oversight.	2 x 4 = 8
16. Failure to appropriately train students resulting in upset or harmed patient	Injury / harm to patients, and impacts relating to reputation & compliance	Joint Management Board	Academic Steering Group	3	5	3 x 5 = 15	Professionalism and clinical skills are integrated into the curriculum, assessed and recorded as required by GMC standards. Student pre-placement training will be delivered by KMMS and the CCCU Placement Learning Unit. We have effective mechanisms in place for reporting of low level concerns for rapid response. KMMS will ensure it has effective oversight and operationalises the processes and procedures stated in placement SLAs through the CCCU Placement Practice Unit and through regular quality reviews of providers. There is a dedicated KMMS policy on fitness to practise and planned mechanisms for the reporting and response to low level concerns.	2 x 5 = 10
Student Experience								
17. Failure to deliver a coherent, connected student academic experience negatively impacting on student success and KMMS reputation.	Reduced student success and KMMS reputation	Student Experience Board	Dean	3	3	3 x 3 = 9	The BMMS curriculum is designed to be coherent with integrated vertical and horizontal themes to meet GMC standards. There are robust KMMS and Joint Governance arrangements in place to oversee the effective delivery of the undergraduate programme and mechanisms for ensuring the student and staff voice are heard and responded to. There is a dedicated package of work to design the KMMS Library and Learning Environment ensuring students and staff have effective physical and online access to teaching and learning resources and academic related services Internal quality assurance procedures will manage general issues as they arise, including actions in response to end of year course and module evaluation outcomes. Early warnings through student or staff voice will be reported the KMMs Senior Leadership Team to agree the course of action, including referral to others for resolution. Empowered staff will take immediate action where necessary. The Library and Learning Environment work package will include student voice to ensure a student-centre approach to develop insight to surface unmet or unarticulated student academic needs.	2 x 2 = 4
18. Failure to deliver coherent, connected student support and well-being services throughout the	Poorer student experience and reduced KMMS reputation	Student Experience Board	Dean	3	4	3 x 4 = 12	Dedicated KMMS Student Support and Welbeing Manager to be recruted by December 2019. University teams and KMMS have completed work on alignment of policies and procedures and identified additional KMMS requirements. Work Package to design the interface and online service experience to enable access anywhere, anytime, any device for information,	2 x 2 = 4

	student journey impacting negatively on the KMMS student experience and KMMS reputation.							advice guidance and emergency access. This work will commence in October 2019 for completion by March 2020 as part of a wider project dedicated to designing the KMMS Student Experience.	
19.	Failure to create a strong KMMS student identity impacting negatively on the student experience, KMMS internal and external reputation and standing as a 1st class beacon of medical education with potential detriment to the quality of applicants (students and staff) recruitment and impacting on the School's ability to fund raise.	Lower quality and volume of applicants	Student Experience Board	Dean	3	3	3 x 3 = 9	Strong KMMS market brand developed. Package of work to design a distinctive and coherent plan that enables and secures KMMS student engagement in community and university life co-created with Kent and CCCU student representatives is planned to commence work on October 2019.	1 x 2 = 2

* Likelihood of occurrence scale: Very Low (1) more than 1 chance in 1000; Low (2) more than 1 chance in 100; Medium (3) more than 1 chance in 50; High (4) more than 1 chance in 25; Very High (5) more than 1 chance in 10.
** Impact scale: Very Low (1) likely that impact could be resolved within 2 days; Low (2) potential for a few days' delay; Medium (3) potential for significant delay; High (4) potential for many weeks' delay; Very High (5) potential for many months' delay
Please note, not all sections of the table may require completion.

10. APPENDIX C – Gantt Chart

Tasks	Start date	Finish date	2019						2020								
			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
CCCU																	
CCCU planning consent		*Aug 18*															
CCCU construction start	Oct 18	May 20															
CCCU equipment & fit out	May 20	Aug 20															
University of Kent																	
Feasibility		Aug 18															
Planning consent granted	Jun 19	Jun 19															
Construction start	Jul 19	Sep 20															
Equipment and fit out completed	Jul 20	Sep 20															
			Operational planning and delivery														
GMC approval		Mar 19															

Staff recruitment	Sep 18	Sep 20															
Student recruitment	Sep 19	Sep 20															
Cohort 1 enrolled		Sep 20															
KMMS opened		Sep 20															

11. APPENDIX D – Monitoring and Evaluation Metrics

Please note, it is not necessary to report against all the Monitoring and Evaluation Metrics below unless they are relevant to the scheme. There is scope to add further Monitoring and Evaluation Metrics where necessary.

Category	Key Performance Indicators	Description
High-level outcomes	Jobs connected to intervention (permanent, paid FTE)	Direct jobs created by KMMS, including academic, management, support and technical staff.
	Commercial floorspace planned - please state sqm and class	The area of new floorspace created at the two sites.
	Commercial floorspace constructed to date - please state sqm and class	
	Housing unit starts (forecast over lifetime)	
	Housing unit starts (to date)	
	Housing units completed (forecast over lifetime)	
	Housing units completed (to date)	
Transport (outputs)	Total planned length of resurfaced roads (km)	
	Total completed length of resurfaced roads (km)	
	Total planned length of newly built roads (km)	
	Total completed length of newly built roads (km)	
	Total planned length of new cycle ways (km)	
	Total completed length of new cycle ways (km)	
	Type of service improvement	
Land, Property and Flood Protection (outputs)	Anticipated area of site reclaimed, (re)developed or assembled (ha)	Area of floorspace created in the new facilities.
	Actual area of site reclaimed, (re)developed or assembled (ha)	Area of floorspace created in the new facilities.
	Length of cabling/piping planned (km) - Please state if electricity, water, sewage, gas, telephone or fibre optic	
	Length of cabling/piping completed (km) - Please state if electricity, water, sewage, gas, telephone or fibre optic	
	Anticipated area of land experiencing a reduction in flooding likelihood (ha)	

Category	Key Performance Indicators	Description
	Actual area of land experiencing a reduction in flooding likelihood (ha)	
	Follow-on investment at site (£m) - Please state whether Local Authority, Other Public Sector, Private Sector or Third Sector	
	Anticipated commercial floorspace refurbished - please state sqm and class	
	Actual commercial floorspace refurbished - please state sqm and class	
	Anticipated commercial floorspace occupied - please state sqm and class	
	Actual commercial floorspace occupied - please state sqm and class	
	Commercial rental values (£/sqm per month, by class)	
	Anticipated number of enterprises receiving non-financial support (#, by type of support)	
	Actual number of enterprises receiving non-financial support (#, by type of support)	
	Anticipated number of new enterprises supported	
Business, Support, Innovation and Broadband (outputs)	Actual number of new enterprises supported	
	Anticipated number of potential entrepreneurs assisted to be enterprise ready	Individual innovators supported through KMMS research and innovation activities.
	Actual number of potential entrepreneurs assisted to be enterprise ready	Individual innovators supported through KMMS research and innovation activities.
	Anticipated number of enterprises receiving grant support	
	Actual number of enterprises receiving grant support	
	Anticipated number of enterprises receiving financial support other than grants	
	Actual number of enterprises receiving financial support other than grants	
	Anticipated no. of additional businesses with broadband access of at least 30mbps	
	Actual no. of additional businesses with broadband access of at least 30mbps	
	Financial return on access to finance schemes (%)	

12. APPENDIX E – Economic Appraisal assumptions

[The DCLG appraisal guide data book includes all of the appraisal and modelling values referred to in the appraisal guidance. Below is a summary table of assumptions that might be required. All applicants should clearly state all assumptions in a similar table.]

Appraisal Assumptions	**Details**
QRA and Risk allowance	5% for Construction costs; 10% for Equipment costs, explained in Financial case
Real Growth	All prices quoted at 2018/19 prices
Discounting	3.5%
Sensitivity Tests	Applied in relation to Scenarios 1,2 and 3 for Preferred Option 3
Additionality	Adjustments made for displacement, deadweight, substitution and leakage
Administrative costs of regulation	N/A
Appraisal period	30 years from 2018/19
Distributional weights	N/A
Employment	Explained within Economic Case
External impacts of development	N/A
GDP	N/A
House price index	N/A
Indirect taxation correction factor	N/A
Inflation	All prices quoted at 2018/19 prices. Inflation allowance 2.56% in 2018/19; 1.88% in 2019/20; 1.23% in 2020/21
Land value uplift	N/A – explained in Economic Case
Learning rates	N/A
Optimism bias	Included within analysis of economic costs and benefits
Planning applications	Secured
Present value year	2018/19
Private sector cost of capital	N/A
Rebound effects	N/A
Regulatory transition costs	N/A

13. APPENDIX F – Categories of exempt information

There is a clear public interest in publishing information and being open and transparent. But sometimes there is information which we can't publish because it would cause significant harm to the Council - for example by damaging a commercial deal or harming our position in a court case. Equally sometimes publishing information can harm someone who receives a service from us or one of our partners.

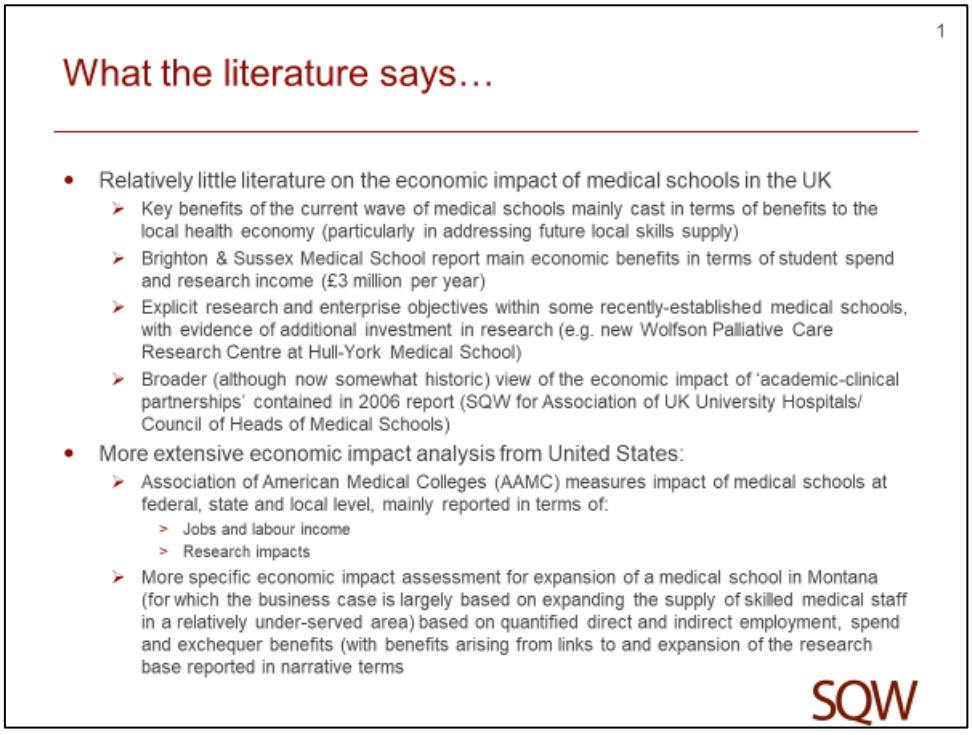
The law recognises this and allows us to place information in a confidential appendix if:

(a) it falls within any of paragraphs 1 to 7 below; and
(b) in all the circumstances of the case, the public interest in maintaining the exemption outweighs the public interest in disclosing the information.

1. *Information relating to any individual.*
2. *Information which is likely to reveal the identity of an individual.*
3. *Information relating to the financial or business affairs of any particular person (including the authority holding that information)*
4. *Information relating to any consultations or negotiations, or contemplated consultations or negotiations, in connection with any labour relations matter arising between the authority or a Minister of the Crown and employees of, or office holders under, the authority.*
5. *Information in respect of which a claim to legal professional privilege could be maintained in legal proceedings.*
6. *Information which reveals that the authority proposes— (a) to give under any enactment a notice under or by virtue of which requirements are imposed on a person; or (b) to make an order or direction under any enactment.*
7. *Information relating to any action taken or to be taken in connection with the prevention, investigation or prosecution of crime.*

14. APPENDIX G: 'Routes to Impact' model

At the early stages of business case development, a 'routes to impact' model was developed to identify the relationship between project inputs, outputs and outcomes:



2

Benefits identified in the Expression of Interest

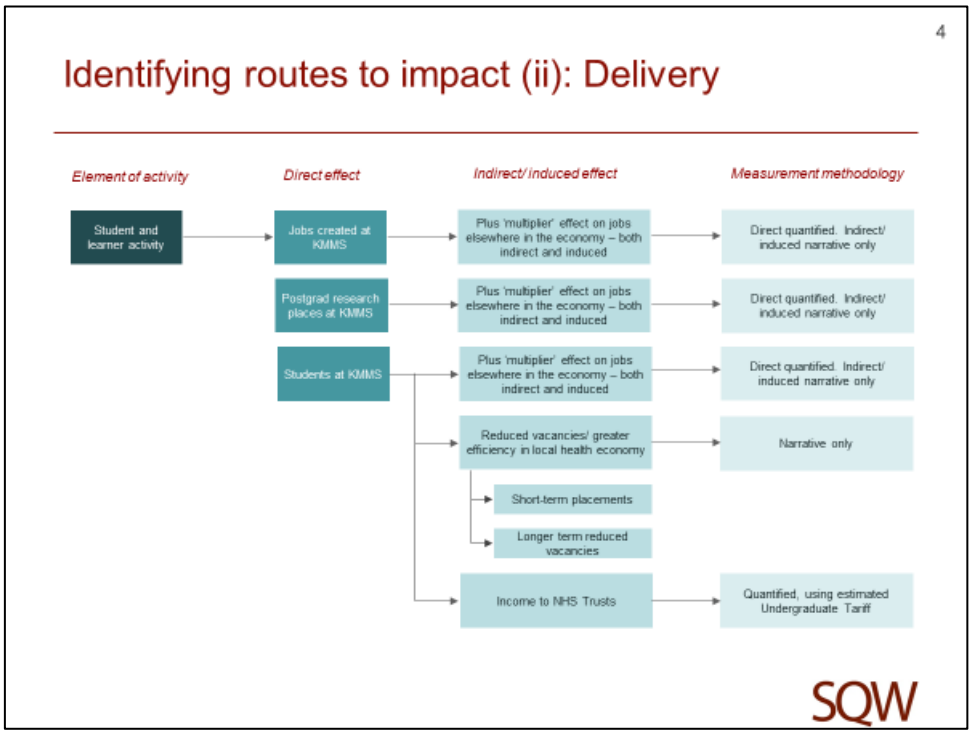
- Growing the healthcare workforce in the context of population growth and demographic change
  - fewer vacancies in the primary and secondary health sectors
  - Increased local recruitment and retention
  - Increased workforce diversity (via the outreach and widening participation activities promoted as part of the project)
- Delivering innovation and improved productivity in the health economy
  - Increased collaboration between providers in the health system
- Driving the growth of the life sciences/ medical technologies sector
  - Increased medical research output
  - Increased engagement

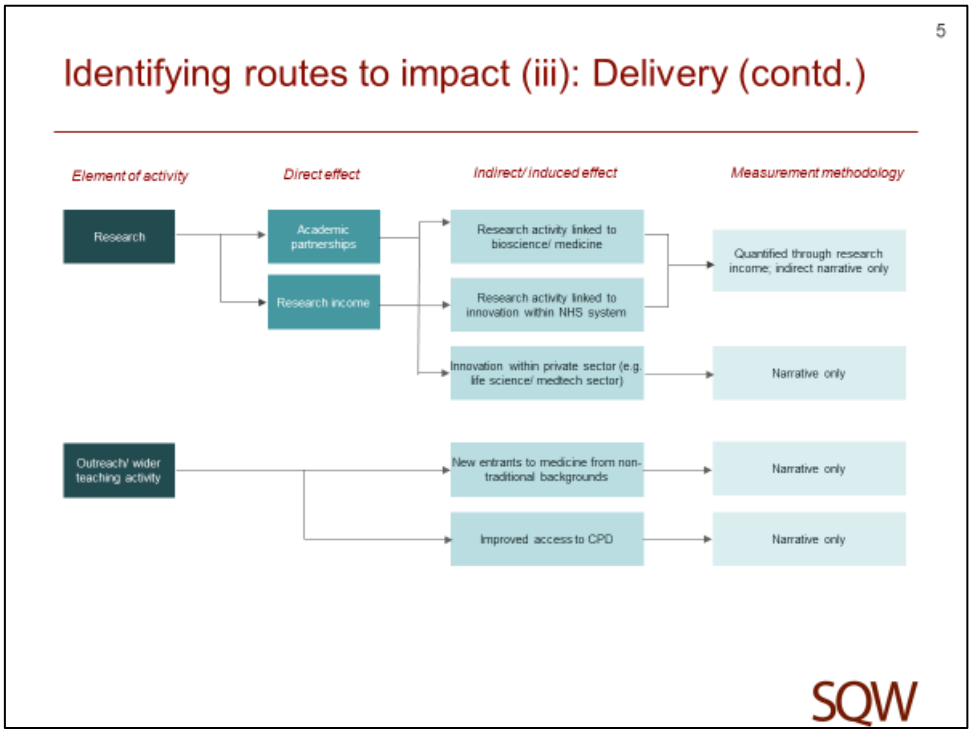
SQW

3

Identifying routes to impact (i): Construction

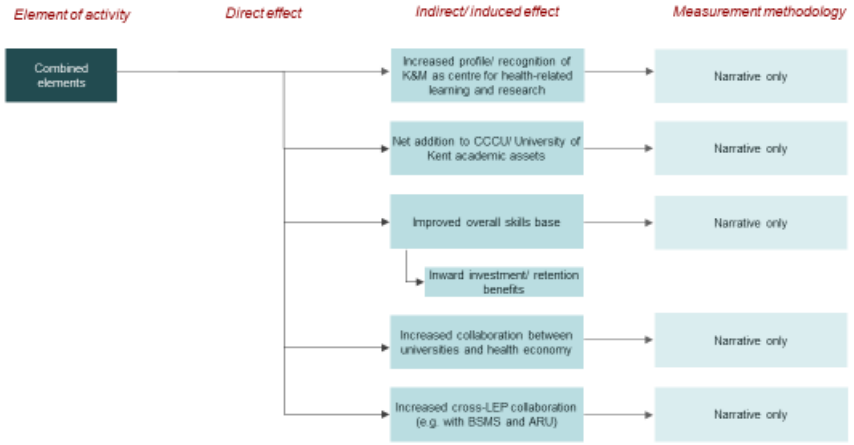
SQW


4
Identifying routes to impact (ii): Delivery
Element of activity
Direct effect
Indirect/ induced effect
Measurement methodology
Student and learner activity
Jobs created at KMMS
Plus 'multiplier' effect on jobs elsewhere in the economy – both indirect and induced
Direct quantified. Indirect/ induced narrative only
Postgrad research places at KMMS
Plus 'multiplier' effect on jobs elsewhere in the economy – both indirect and induced
Direct quantified. Indirect/ induced narrative only
Students at KMMS
Plus 'multiplier' effect on jobs elsewhere in the economy – both indirect and induced
Direct quantified. Indirect/ induced narrative only
Reduced vacancies/ greater efficiency in local health economy
Narrative only
Short-term placements
Longer term reduced vacancies
Income to NHS Trusts
Quantified, using estimated Undergraduate Tariff
SQW


5
Identifying routes to impact (iii): Delivery (contd.)
Element of activity
Direct effect
Indirect/ induced effect
Measurement methodology
Research
Academic partnerships
Research income
Research activity linked to bioscience/ medicine
Research activity linked to innovation within NHS system
Quantified through research income; indirect narrative only
Innovation within private sector (e.g. life science/ meditech sector)
Narrative only
Outreach/ wider teaching activity
New entrants to medicine from non-traditional backgrounds
Narrative only
Improved access to CPD
Narrative only
SQW

6

Identifying routes to impact (iv): Other benefits



SQW

7

Some questions to consider…

- Do the 'routes to impact' on the preceding slides capture all the benefits that we might anticipate arising from KMMS?
  - Is anything missing?
  - Are there any that shouldn't apply?
- Some benefits are identified as 'narrative only', as it is unlikely that we will have robust quantitative data. Do you agree – if not, do you have access to relevant data?

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15. APPENDIX H: Stakeholder Engagement Plan

KMMS Stakeholder Engagement Plan Overview 2019/20

Stakeholder Group	Stakeholder interests	Proposed engagement approach
HEI institutions	BSMS and the partner universities will want to ensure strong alignment between KMMS and BSMS in their role overseeing the curriculum.	Continue to maintain strong links, engagement and information exchange with partner universities
Health sector	Local providers face significant workforce challenges. The group will be an important partner to KMMS both in relation to student placements and also any clinical academics on their staff.	Keep providers up to date with progress. Build interest and commitment in partnering with KMMS to provide placements or academic teaching
Political groups	Key concern for local MPs and Councils is to increase the number of doctors in the region.	Engage with key local MPs and Council members to best utilise their influence and support for the medical school
Regulatory bodies	A key concern for regulatory bodies will be ensuring standards.	Continue to engage regulatory bodies and provide them with confidence that the implementation programme will meet required deadlines. Monitor any emerging policy changes and understand possible impact to the medical school
Professional groups	Professional groups have an interest in post graduate training and in supporting standards	Keep informed of progress
Placement funding bodies	A key concern for funding bodies will be ensuring that standards are met and that the medical school is operational in time for the first cohort.	Continuous engagement to ensure everything is in place to support meeting project deadlines
Media	Local media are interested in seeing a new medical school established in the area. They will want to know the outcome of the bid as soon as it is known and further details as implementation of the medical school takes place.	Proactively engage with local media to ensure strong support for the medical school. Media bodies will be a key means for communicating with local residents and potential students.
Local interest groups	Interest groups will be largely concerned over the impact KMMS will have on the local area.	Keep informed of progress
Future students	Future students will be keen to see prospectus information in relation to KMMS in order to support any decision on whether to apply to the school	Building awareness and raising interest in KMMS
Potential Donors	Local provider to change health care inequalities in Kent. Important group to reach our £30 million fund-raising target	Keep informed of progress

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KMMS Stakeholder Engagement Plan – Channels

Communication Channels	
Face to Face	• Routine and bespoke meetings for particular stakeholder groups • Speeches, Q&A and workshops at internal and external events • Benchmark events e.g. topping out/Opening • Fund-raising engagement events • Open days • Outreach activities in schools and colleges
Online	• Website (Kmms.ac.uk) • Twitter, Instagram and Facebook (@kmmsmedschool) • Adverts • Video clips/YouTube • Virtual Open days
Print	• Prospectus • Case for giving materials • Stakeholder leaflets • Adverts • Internal and external graphic messaging on buildings
Media engagement	• Local and national print, radio, tv and digital media • Articles in opinion-former and partner media