

Programme to establish a University in Peterborough

Phase 3: Second Teaching Building and Living Lab

FULL BUSINESS CASE

05/12/22



Full Business Case

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Executive summary

Strategic Case

Peterborough has been recognised for many years as a cold spot for Higher Education. Project partners Cambridgeshire and Peterborough Combined Authority (CPCA), Peterborough City Council (PCC) and Anglia Ruskin University (ARU) are committed to supporting the development of a new higher education provider for the City, on its journey to becoming the University of Peterborough, to:

- Increase the skills levels of local people
- Increase highly skilled employment opportunities.

These two objectives will support local people to gain access to long-term employment opportunities and support local businesses to grow by making it easier to hire skilled employees, invest in innovation and attract new high value firms to the city and surrounding area.

This Full Business Case (FBC) for Phase 3 of the Programme to Establish a University in Peterborough. Phase 3 is to deliver a **Second Teaching Building with a Living Lab** on the University campus on the Embankment site.

The Full Business Case updates the Outline Business Case for Phase 3 to account for the progress made on clarifying the scope of Phase 3 throughout 2022. This includes detail on the building's spatial coordination and build costs from the RIBA Work Stage 3 report, development of the University's operating model, curriculum and expectations for student numbers, lessons learned from successful delivery of Phase 1, a procurement strategy for Phase 3 delivery (including selection of the Main Contractor), refined economic case options, and developments on planning decisions about the Embankment site and wider Peterborough city centre regeneration.

The proposed Phase 3 building is a two-storey building of 2,516 sqm Gross Internal Area (GIA), sited on the current Regional Pool Car Park. It will contain a mixture of specialist and general teaching facilities, enabling the University to further expand its curriculum offerings, while exhibitions and facilities at the Living Lab will make the University's output more accessible and relevant to the local community, engaging them in Science, Technology, Engineering and Maths (STEM) fields, including health sciences.

The addition of the Phase 3 building will further help to create a 'visible university' linking to the city, with the Living Lab envisioned as a recognisable city landmark and the centrepiece to Peterborough's expanding University Quarter, complementing other phases of the University programme.

The vision for the University is that it will be a high-quality employment-focused University for the city and region. It will acquire an international reputation for innovative technological approaches to face-to-face learning and in applied technology and science. It will be characterised by outstanding student satisfaction and response to local needs. The curriculum will be led by student and employer demand as well as developing opportunities in the technological, scientific and business areas. Its buildings will be architecturally leading, flexible and environmentally friendly. The curriculum, academic community and buildings will reflect a desire to be the greenest university possible.

The Programme to establish a University in Peterborough is being delivered in phases. **This Full Business Case is specifically focused on Phase 3 of the University programme.**

The phases for development include:

- Phase 1: Establish the university campus (operational from September 2022)
- Phase 2: Peterborough Innovation and Research Centre (CAT A construction complete in December 2022)
- **Phase 3: Second Teaching Building with Living Lab**
- Phase 4: Inward Investing Research Institute and R&D Programme
- Phase 5: Third Teaching Building and Sports Science Facility

The case for change

In Peterborough, low skills levels have historically limited wages, progression and quality of life. Qualification levels in Peterborough are below national averages, which contributes to limiting wages, progression and quality of life for residents. Before the completion of Phase 1, Peterborough was one of the largest cities in the UK without a university.¹ This meant higher education felt inaccessible and irrelevant to many people, and low aspirations entrenched poor outcomes.

To take part in and continue to support Peterborough's knowledge intensive growth, residents need local education pathways to access high quality jobs. If those pathways are not available, then residents will miss out on the benefits of growth. Meeting this demand for skilled workers in Peterborough means establishing a university at a pace and scale which generates impact as quickly as possible, while recognising the substantial difficulties faced in doing so.

Phase 3 of the University project will deliver significant social value through the provision of a dedicated community cultural and learning space in a core area of the City Centre. It will help raise aspirations and awareness amongst local people of the new university offer and so will help attract local residents to study at the university. By enabling local higher education provision, it will ensure that more highly skilled young people in Peterborough remain in the city.

A new University will, therefore, offer much more to the people of Peterborough and the region. It will give Peterborough and surrounding areas an opportunity to reinvent its economy as the city continues to grow in population, creating a virtuous circle for continued growth of the economy and the new University, raising aspirations locally and supporting business needs for skills.

Objectives

The top-line objectives for the University programme are to:

- **Improve access to better quality jobs and improve access to better quality employment, helping to reverse decades of relative economic decline, and increasing opportunities, aspiration, wages and social mobility for residents.**
- **Make a nationally significant contribution to Government objectives for levelling up, increase regional innovation, and accelerate the UK's net zero transformation.**

¹ The University Centre Peterborough is active in Peterborough, which is a joint venture partnership between Peterborough Regional College and Anglia Ruskin University. UCP currently has around 700 students on more than 30 degree-level programmes. Courses are validated by The Open University.

- Accelerate the renaissance of Peterborough as a knowledge-intensive university city, **increasing civic pride** and satisfaction within Peterborough as a place offering a good quality of life with improved public facilities, and **providing a tangible example of levelling up**.
- Translate the resulting increase in individual opportunity, prosperity and social mobility into outcomes across wellbeing, health and healthy life expectancy from the programme, and on into **people living happier, healthier lives**.

Objectives specific to Phase 3, which relate to the top-line University programme objectives above, are to:

- Grow the University via a second teaching building supporting up to a potential additional 1,700 students from 2024/25 to 2027/28 studying a mixture of undergraduate, postgraduate, degree apprenticeship, work programme and short courses. (Undergraduate courses expected to make up large majority of student headcount).
- Provide specialised teaching space, enabling ARU Peterborough to broaden its curriculum, including into STEM fields linked into local economic strengths in Peterborough and The Fens. The portfolio of courses on offer is being co-created with employers to ensure students graduate with both the industry-specific and transferable skills in demand, regionally and nationally.
- Embed the University into the community via the Living Lab as a public-facing, high-quality interactive science centre for Peterborough with spaces for participatory research, exhibitions and events.
- Regenerate the site area to create an attractive University of Peterborough campus with a high-quality landscape, helping to create a 'visible university' linking to the city and expanding Peterborough's University Quarter, completing other Phases of development.

Scope

Phase 3 is to develop a second teaching building for occupation by ARU Peterborough with a Living Lab at its heart. This Phase enables the university's growth up to a potential overall timetabled capacity of 4,700 students by 2027 and sets the university up for significant growth in future.

Full spatial design and coordination of the building has been developed to RIBA Work Stage 3.

The principal requirements of the Phase 3 building are summarised below.

- Accommodation for specialist learning, teaching, public engagement and support space
- High quality public realm and landscape
- Associated cycle storage and limited parking
- Good environmental and sustainability credentials (BREEAM excellent)
- A Gross Internal Area of approximately 2,500m².

The accommodation within the proposed building will support the academic course design being developed by ARU Peterborough and to support the current specialisms of:

- Business and Innovation
- Creative Digital Art and Science
- Health Sciences, Education and Social Care

- Engineering and the Environment.

Benefits

The main Benefits of the project stem from establishing Phase 3 of the University Campus in Peterborough with a curriculum and delivery model that is designed to meet the skills needs that growth in the Greater Peterborough business base will generate.

As wider benefits, Phase 3 will also deliver:

- A substantial positive economic impact on Peterborough City and the surrounding region such that investment in the new University will generate direct, indirect and induced impacts across a wide range of industries, supply chains and the wider consumer economy;
- A positive regenerative effect to support the transformation of Peterborough itself into a regional centre improving the experience of all citizens and visitors to the area;
- A transformational effect on the life-chances and well-being of its students and raise aspiration more broadly within Peterborough and the surrounding region;
- In addition, the second teaching building will see a rise in the number of beneficiaries using the university's existing and expanded teaching provision. The building will both release the pressure on University House, enabling enhanced provision in the health area which is currently restricted by space, including into new areas such as MSc Biomedical Science and further expansion of the undergraduate life sciences provision.

Economic Case

The Economic Case builds on the results from a robust and iterative development process carried out by the University delivery partners and project stakeholders at OBC stage. This work concluded that delivery of the Living Lab, University Quarter Cultural Hub and expanded University in Peterborough was the preferred way forward (PWF) on the grounds of both affordability and economic impact to address the objectives and challenges set out in the Strategic case of this document.

Recognising that a year has passed since this process was carried out for the OBC, the Economic Case in this FBC tests whether the PWF continues to offer good public value, and better public value than other available options, both in terms of scale of intervention, and best utilisation of the proposed new building.

Critical success factors (CSFs) for the project can be grouped into three broad headings:

- Factors relating to the physical regeneration and cultural development of the City.
- Factors relating to the design and delivery of the physical infrastructure.
- Factors relating to the continued development of the University.

Based on a SWOT analysis carried out within this Full Business Case **the preferred way forward identified during the OBC stage continues to be the preferred option - Option 2 – Intermediate 1.**

This option has been taken forward for economic appraisal. The summary appraisal is set out below showing economic benefits over the 15 year appraisal period, in Net Present Value.

Figure 1. Summary appraisal table

Benefit	Net Monetised Benefits (£) Preferred Option
Direct jobs created	£18,918,100
Indirect & induced jobs (supply chain & wider economic activity)	£3,783,620
Graduate wage uplift	£122,685,159
Additional visitor spend in the local economy	£5,320,875
Amenity Benefit	£521,266
Training benefit (short courses completed)	£1,835,872
Total benefits	£157,771,429
Total net benefits (Present Value)	£99,412,635

The table below sets out the BCR for the Preferred Option.

Figure 2. BCR for Preferred Option

	Preferred Option - Net Present Value
Total Net Present Value Benefits	£99.4m
Total Net Present Value (Costs)	£29.9m
Benefit Cost Ratio (BCR)	3.32

The preferred option delivers a Benefit Cost Ratio of 3.32 based on current costings and optimal student numbers and is an exceptional return according to government guidance. To account for the uncertainties inherent in forecasting student numbers, an additional scenario has been modelled which assumes student numbers at 50% of the optimal level. This scenario returns a BCR of 2.02, demonstrating the continued viability of the project even if the optimal case is not achieved.

Non-monetised benefits, on top of those accounted for in the BCR above, include:

- Improvements to health and wellbeing for residents in Peterborough and The Fens
- Regeneration of open green space through creation of a new visitor location for the city
- Community benefits
- New event space
- Increased productivity
- Reduced deprivation in a left-behind area with a persistent skills gap.
- Provide businesses access to academic expertise and research.

Commercial Case

The approach to procurement and contracts for Phase 3 builds on the successful approach adopted for Phase 1, incorporating lessons learned which apply to Phase 3. The procurement strategy has been driven in part by the need to meet timescales for the use of LUF funding, which is for all monies from the Fund to be spent by 31 March 2024, and for the Phase 3 building to be operational for teaching at the start of academic year 2024/25.

The capital costs for Phase 3 set out in this Commercial Case are up to date and market-tested, including through a benchmarking exercise undertaken comparing the Phase 3 building to other Higher Education facilities. Costs have been developed through RIBA Work Stages 1 – 3 and are current to November 2022. RIBA Work Stage 4 presents an additional opportunity to refine cost estimates and fix costs in place with suppliers to mitigate inflation risks.

Construction will be delivered via a Design & Build procurement route using a two-stage tendering process and an industry standard form of contract. A design and build procurement route provides project partners with a fixed price for the construction works, which will reduce exposure to potential overspend. By adopting a two-stage tendering process, the client team will work with the Main Contractor on an open-book basis to ensure competition is maintained throughout the second stage, and that risks are appropriately allocated and managed.

Procurement of the infrastructure is split into four categories:

1. **Main Contractor:** the main contractor is required to deliver the physical capital works, which broadly includes:
 - a. Off plot Utilities, highways work associated with Phase 3.
 - b. On plot infrastructure works, utilities, road, car parks, landscape and ancillary buildings.
 - c. Building and internal fit out (not including IT and AV).

The first stage of the Main Contractor procurement was concluded in September 2022 with the appointment of Morgan Sindall Construction & Infrastructure Ltd (MS) who entered into a Pre-Construction Services Agreement (PCSA) with PropCo1 in November 2022.

2. IT/AV specialist equipment

The IT/AV for Phase 3 will be delivered as a standalone package, separate to the Main Construction Contract. The IT/AV package will be managed by ARU's IT Services department and delivered by their preferred suppliers.

3. Land

The proposed development plot 'The Embankment, off Bishops Road Peterborough' forms part of the agreement between the Combined Authority and PCC where PCC have committed to providing land in phases for use in the development of the new University campus. The valuation of the land has been agreed at £1.87m through a valuation process undertaken by PCC. To maintain the project's current critical path, the land title for the Regional Pool car park will need to be transferred from PCC to PropCo1 by 12th February 2023.

4. Professional team procurement

As part of a plan for early mobilisation, the Combined Authority procured the multidisciplinary team delivering Phase 3 using the Crown Commercial Services Framework. A team is now in place to deliver Phase 3.

Deliverability

The original LUF bid application for Phase 3 proposed a Phase 3 building of 3,000m² Gross Internal Area, of which 1,000m² would be dedicated community and cultural space for the Living Lab and associated community learning space derived from a fixed budget of £27.9m. The overall £27.9m includes a construction budget sum of £26m (inclusive of funding for specialist IT/AV equipment to fitout the building), with a £1.87m allowance for land purchase.

Following a RIBA 1 site appraisal and optioneering process, it became apparent that a smaller building would have to be delivered to meet the £27.9m budget, while still supporting up to 1,700 students by 2027/28. The RIBA Work Stage 3 report proposed a revised design for a Phase 3 building based on a 2,516m² Gross Internal Area; a multi-use educational facility suitable for a mixed use of working, learning, teaching, collaborating inclusive of the Living Lab. In this sense the 'Living Lab' expands from being a single area within the building to an integrated approach which incorporates the whole facility while maintaining the 'Living Lab' physical space as a centrepiece.

The building will include all associated external landscaping and Infrastructure, all delivered within the available cost envelope. The revised building is an appropriate size for a building of this nature and allows more flexible use of the building as an adaptable asset for the future. This revised scope meets the critical success factors for the project and is deliverable within budget.

Budget estimate

An Order of Cost Estimate of how the budget is derived is shown below which amounts to £26m. This figure excludes the £1.87m land valuation for the Phase 3 site. The total budget for the project is £27.87m. The construction works costs have been benchmarked against known industry data for similar size and quality educational buildings and are aligned with the median cost parameters. The Cost Plan represents the anticipated construction costs at current prices (Q4 2022) via a competitive method of procurement under a Contractor design contract.

Figure 3. Project budget to deliver capital works for Phase 3²

Element	Classification	Totals (£)	%	Cost/m ²	Cost/ft ²
0	FACILITATING WORKS	105,000	0.40	42	4
1	SUBSTRUCTURE	688,824	2.65	276	26
2	SUPERSTRUCTURE	4,456,352	17.93	1,863	173
3	INTERNAL FINISHES	944,004	3.64	378	35
4	FITTINGS, FURNISHINGS & EQUIPMENT	650,000	2.50	260	24
5	SERVICES	3,421,776	13.18	1,369	127
8	EXTERNAL WORKS	1,242,004	4.78	497	46
Sub Total Building Works		11,707,960	45.08	4,685	435
9	MAIN CONTRACTORS PRELIMINARIES as MS	1,298,345	5.00	519	48
10	DETAILED DESIGN (RIBA Stage 5-7) as MS	298,053	1.14	119	11
11	MAIN CONTRACTORS RISK @ 3%	399,131	1.54	160	15
12	PRE-CONSTRUCTION FEE	472,361	1.82	189	18

² Please note that item 18 'other development / project costs' includes inflation assumptions for the project contingency budget.

13	MAIN CONTRACTORS OVERHEADS AND PROFIT as MS (2.5%)	342,587	1.32	137	13
14	DESIGN DEVELOPMENT RISK @ 4%	580,737	2.24	232	22
15	PAGABO Fees @ 0.3% (<i>procurement framework</i>)	43,880	0.16	18	2
16	INFLATION up to Q1 2024 @ 8.5%	1,111,315	4.28	445	41
	Sub Total Contract Sum	16,254,370	62.58	6,504	604
17	PROJECT / DESIGN TEAM FEES	1,316,835	5.08	527	49
18	OTHER DEVELOPMENT / PROJECT COSTS	4,070,108	15.67	1,626	151
19	VAT	4,328,263	16.67	1,731	161
	TOTAL	25,969,575	100.00	10,390	966

The budget estimate incorporates the detailed information available following completion of RIBA Work Stage 3 by the professional team procured to deliver Phase 3. A portion of the costs are based on estimates and therefore the overall cost should be treated as having a +/- 5% level of accuracy due to the level of design available and remaining design and procurement to be completed during RIBA Work Stage 4, with additional fine-tuning occurring ahead of RIBA Work Stage 4 throughout November and December 2022.

Financial Case

Funding to deliver Phase 3

The Phase 3 capital build is to be funded through contributions from the Levelling Up Fund (LUF) via a 2021 submission made by PCC to the fund, Local Growth Funds provided by the Combined Authority, direct capital investment from ARU and a land transfer contribution from PCC. All funding sources are secured.

Figure 4. Project funding sources

Partner	Funding source	Amount (£)
PCC (contribution as the lead authority for the LUF)	Levelling Up Funds	20,000,000
CPCA	Approved recycled Local Growth Funds	2,000,000
ARU	Private investment	4,000,000
Phase 3 Capital Investment Sub-total		26,000,000
PCC	Contribution of land value	1,870,000
Total Funding (Phase 3 only)		27,870,000

The underlying basis of the funding model is that partners receive shares in PropCo1 in proportion to their financial contribution to the University programme across Phases. This includes the £20m investment secured by PCC, with extensive support from the partners, from the Levelling Up Fund (LUF) for capital investment into PropCo1.

For the Phase 3 project it is essential to complete expenditure of LUF monies by March 2024. A significant financial milestone is PropCo1 entering into a binding contract with Morgan Sindall as the Main Contractor for construction of the Phase 3 building, which was reached in Q4 2022.

Securing a sustainable operating model for the university

A key project objective is to create a sustainable operating model for the new university such that, after initial start-up costs, it will operate on a self-sufficient basis. The fundamental principles of a sustainable operating model include:

- Effective control of costs in relation to tuition fee income (this is at the core of the operating model).
- Recognition that estates/asset maintenance must be prioritised to avoid backlog maintenance liabilities that add to corporate risk profiles and undermine the core of the operating model.
- ARU will take steps to ensure costs are covered by generated incomes and other sources of income available to HEIs. This will be monitored by the ARU Peterborough Board of Governors and through the appropriate governance arrangements with ARU.

The operating model shows sufficient revenues are generated throughout to cover operational costs, on a broadly breakeven basis from 2022/23 and revenues generated appropriately thereafter to fund the ongoing operational expenditures, with a marginal profit delivered year on year which reaches no greater than 1%.

The operating expenditures run very close to the revenues generated and there is a linear relationship between revenue and expenditure, which indicates that economies of scale and operational efficiencies are not anticipated.

Continued growth in revenue is predicted but is dependent on subsequent project phases to maintain growth in student numbers and income generated via tuition fees.

Affordability

Project affordability is critically dependent on:

1. Securing the transfer of LUF funding into PropCo1 as well as all other investment capital funding within the company held account or an agreement reached through the PropCo1 members on releasing sufficient funding to cover costs to date and up to contract award in December 2022.
2. Risks associated with income (student numbers) and expenditure being able to be mitigated through cost control, increased income and/or use of the contingency provision.
3. Risks associated with enabling works, Land Acquisition, planning approval and agreement of contract sum being able to be mitigated through management of each workstream within the required timeline and budget while continuing to meet the outcomes of the LUF.
4. Risks associated with inflation and the increasing cost of building materials being mitigated through ongoing risk management and procurement protocols which will fix prices in place at the point of contracts being awarded to suppliers.

Subject to these considerations, at this stage of project development and implementation, it is anticipated that funds will be available to meet both the project budget, requirements of ARU Peterborough's operating model and the LUF.

With respect to the infrastructure works, no cash-flow implications are anticipated for the PropCo1 as the Funding source in place by each party will be transferred into PropCo1 before the construction phase goes ahead.

Management Case

PCC, ARU and Combined Authority have already formed a special purpose vehicle – the Peterborough HE Property Company Ltd ('PropCo1') – to deliver Phase 1 of the new university campus in Peterborough. The Phase 3 project is intended to be delivered by PropCo1 which will continue to be the entity through which funding is deployed, and delivery of both Phases 1 and 3 will be PropCo1's responsibility.

Project governance will be established to reflect the arrangements within each organisation and specific terms of reference for the project will be mandated by each organisation.

The three parties (PCC, the Combined Authority and ARU) are governed by the PropCo1 Shareholders Agreement which defines parties' contractual obligations in relation to their shareholdings in PropCo1.

The Combined Authority will, under the Development Management Agreement be granted authority by PropCo1 to manage the design, procurement and delivery of Phase 3, with the Board of PropCo1 acting as the programme management board. In this arrangement, responsibility for the delivery of Phase 3 remains with PropCo1; this will remain in place up to completion of the Phase 3 building.

ARU-P will feed into PropCo1 via the contract administrator (Mace) in the development of the design and interface with the capital works. They will also update the Board in respect of curriculum design and development as the project progresses.

The main building contractor Morgan Sindall will report to PropCo1 via the contract administrator in respect of the agreement of the contract sum, enabling works and delivery of Phase 3.

Day to day management and progress meetings will be managed by the contract administrator and will include ARU-P/ARU and the Main Contractor for delivery of the Phase 3 building.

Project plan

The project plan for delivery of Phase 3 is set out in Annex 6.1: Phase 3 Project plan. The project plan has been developed around the following key dates:

1. Spade in the ground (commencement of Phase 3) Q1 2023.
2. Structure, complete construction of the building structure by March 2024.
3. Fitout fit out the living lab and teaching facilities to be complete in autumn 2024.
4. Completion of Phase 3 (for occupation) in autumn 2024.

To achieve these milestones there are 5 key work streams:

1. Procurement of the consultant team by February 2022 (complete).
2. Determination of full planning application by January 2023 (planning application submitted).
3. Develop, design and procure a Main Contractor to deliver Phase 3 infrastructure by Q4 2022 (complete).
4. Approval of this Full Business Case with delegated authority to develop the design.

5. PropCo1 to formalise legal agreements for land by Q4 2022 to align with award of the main contract and planning approval to allow commencement on site Q1 2023.

The programme timeline has been developed based on ensuring the determination of full planning by January 2023 in tandem with an agreed contract sum, shareholders agreement and land transfer to allow contract award and mobilisation to commence in line with the LUF programme in March 2023.

Risk management and project assurance

A detailed risk register is maintained, as set out in Annex 6.3: Project risk register. The risk register also sets out mitigation strategies, the expected monetary value of risks, and risk owners.

Project risk registers are updated by partners on a monthly basis. In accordance with the project governance arrangements these reports are issued to the PropCo1 Board and are scrutinised at the monthly PropCo1 Board meetings. The top 5 project risks, and all programme risks, are reported to the Combined Authority Business Board via a Highlight Report and a Business & Skills Risk Register.

Post-project evaluation

The project will adopt the BSRIA Soft Landings framework and follow the five Stages of the Soft Landings process. Stage 1: Inception and Briefing, Stage 2: Design Development is predicated on Stage one; while Stage 3: Pre-handover requires follow-through with Stage 4: Initial Aftercare.

The benefit of this approach is that it will help solve any performance gap between design intentions and operational outcomes by appointing soft landing champions who will agree the roles and responsibility of the client, contractor and professional team.

This process will commence from Royal Institute of British Architect (RIBA) stage 2 and run through to completion of the construction of Phase 3 and into the occupation and aftercare stages.

Partners will develop a range of progress measures to monitor the ongoing wider impact of the University, with these measures tied into broader strategic objectives for Peterborough and the CPCA region. It is anticipated that there will need to be an ongoing review of these measures and agreement on how and where they are reported.

1 Strategic Case

1.1 Introduction

About this Phase 3 Full Business Case

This document is the Full Business Case (FBC) for Phase 3 of the Programme to Establish a University in Peterborough. Phase 3 is to deliver a **Second Teaching Building and Living Lab** on the University campus on the Embankment site.

The Full Business Case supports project partners to make a final investment decision for Phase 3. It builds on and incorporates information from other documents relevant to Phase 3, including:

- A submission for funding for Phase 3 made to the Levelling Up Fund in June 2021 and approved by the Department for Levelling Up, Housing and Communities (DLUHC) in October 2021.
- The Outline Business Case for Phase 3, published in December 2021.
- A Royal Institute of British Architects (RIBA) Work Stage 1 report completed in April 2022, RIBA Work Stage 2 completed in July 2022 and RIBA Work Stage 3, including a detailed Cost Plan, completed in November 2022.
- A Planning Application for the Phase 3 building, which is currently in consultation and is expected to be determined in early 2023.
- An Outline Planning Application (OPA) for the University campus which is being developed, although Phase 3 will be determined as a standalone application ahead of a decision on the OPA.
- The PCC Embankment Masterplan Framework published in March 2022, which provides a framework to guide the location and scale of any future built development as well as key investments at the Embankment.

The Full Business Case updates the Outline Business Case for Phase 3 to account for the progress made on clarifying the scope of Phase 3 throughout 2022. This includes detail on the building's spatial coordination and build costs from the RIBA Work Stage 3 report, development of the University's operating model, curriculum and expectations for student numbers, lessons learned from successful delivery of Phase 1, a procurement strategy for Phase 3 delivery, refined economic case options, and developments on planning decisions about the Embankment site and wider Peterborough city centre regeneration.

The proposed Phase 3 building is a two-storey building of 2,516 sqm Gross Internal Area (GIA), sited on the current Regional Pool Car Park. It will contain a mixture of specialist and general teaching facilities, enabling the University to further expand its curriculum offerings, while exhibitions and facilities at the Living Lab will make the University's output more accessible and relevant to the local community, engaging them in Science, Technology, Engineering and Maths (STEM) fields.

The addition of the Phase 3 building will further help to create a 'visible university' linking to the city, with the Living Lab envisioned as a recognisable city landmark and the centrepiece to Peterborough's expanding University Quarter, complementing other phases of the University programme.

The University Programme and the role of Phase 3

Peterborough has been recognised for many years as a cold spot for Higher Education. Project partners Cambridgeshire and Peterborough Combined Authority (CPCA), Peterborough City Council (PCC) and Anglia Ruskin University (ARU) are committed to supporting the development of a new higher education provider for the City, on its journey to becoming the University of Peterborough, to:

- Increase the skills levels of local people; and
- Increase highly skilled employment opportunities.

These two objectives will support local people to gain access to long-term employment opportunities and support local businesses to grow by making it easier to hire skilled employees, invest in innovation and attract new high value firms to the city and surrounding area.

The vision for the University is that it will be a high-quality employment-focused University for the city and region. It will acquire an international reputation for innovative technological approaches to face-to-face learning and in applied technology and science. It will be characterised by outstanding student satisfaction and response to local needs. The curriculum will be led by student and employer demand as well as developing opportunities in the technological, scientific and business areas. Its buildings will be architecturally leading, flexible and environmentally friendly. The curriculum, academic community and buildings will reflect a desire to be the greenest university possible.

The Programme to establish a University in Peterborough is being delivered in phases. **This Full Business Case is specifically focused on Phase 3 of the University programme.** The principal phases of development are:

- **Phase 1: Establish the University campus** – Procure an Academic Delivery Partner and establish the University campus in the city via the first teaching building, providing teaching space for up to a potential 3,000 learners by 2025, studying Health, Social Care, Education, Management, Finance and Law. Phase 1 is operational, with the first teaching building (University House) receiving its first cohort in September 2022 of 950 learners from 1,600 applications, with an additional intake to occur in January 2023. Learners study a range of undergraduate courses, degree apprenticeships, postgraduate provision and short courses which are targeted at business owners. Phase 1 was delivered on time and to budget in challenging economic conditions, and its success demonstrates the strong viability of the University programme.
- **Phase 2: Peterborough Innovation and Research Centre (PIRC)** – The aim of PIRC is to build a base of innovative research and development in Peterborough. The Phase 2 building is arranged over three floors, providing good quality, efficient and flexible space for research and development and will create a new high-quality space for the city, completing the transformation of the under-utilised Wirrina car park into a green, well-landscaped campus, fully accessible to the public. Construction on Phase 2 is due for CAT A completion in December 2022.
- **Phase 3 (the focus of this FBC): Second Teaching Building and Living Lab** – Grow the University via a second teaching building supporting potentially up to 1,700 more students by 2027/28, expanding its curriculum further into STEM fields and embedding the University in Peterborough through the Living Lab. The Living Lab will be a public-facing, high-quality

interactive science centre for Peterborough with public space for participatory research, exhibitions and events, designed to stimulate and inspire more young people into STEM sectors.

Future phases of the programme, which are still to be determined, will focus on growing an innovation ecosystem around the university and further expanding its teaching capacity.

- **Phase 4: Inward Investing Research Institute & R&D Programme** – Establish an innovation ecosystem by attracting a major Research Institute onto the university campus in Peterborough, and develop an R&D Programme which facilitates the dissemination of research from the Research Institute into local businesses, enabling collaboration in the ecosystem and creating opportunities for local businesses to link into the Research Institute's global network, ultimately stimulating local business growth and demand for higher-level skills.
- **Phase 5: Third Teaching Building & Sports Science Facility** – Expand further the teaching capacity with space for potentially an additional 2,250 students on the embankment campus and enabling significant growth in student numbers in future, including through potential sports science facilities that, like the Living Lab, would be a public-facing asset for Peterborough's residents.

The intention is for the new University to be fast-growing between 2022 and 2032 with a review to be undertaken by ARU and the Combined Authority expected to take place in 2028 to evaluate the benefits and feasibility of the University becoming independent from ARU with its own degree awarding powers and ultimately University Title.

1.2 Principal partners

The Cambridgeshire and Peterborough Combined Authority (CPCA) has overall responsibility for the delivery of the programme. Project partners CPCA, Peterborough City Council (PCC) and Anglia Ruskin University (ARU) have formed a special purpose vehicle – the Peterborough HE Property Company LTD ('PropCo1') - to deliver the new university campus in Peterborough. This approach was successful for Phase 1 and will be repeated for Phase 3.

1.2.1 Public sector partners

Cambridgeshire and Peterborough Combined Authority was established in 2017 under a Devolution Deal with central Government. Its purpose, defined by the Devolution Deal, is to ensure Cambridgeshire and Peterborough is a leading place in the world to live, learn and work. The Combined Authority's Devolution Deal, which runs for 30 years, also sets out a list of specific projects which the Combined Authority and its member councils will support over that period. A university for Peterborough is one of the major commitments in that list, and the Combined Authority has already invested £43.5m through its devolved Gainshare, Delegated Local Growth Fund and the Getting Building Fund, for which it was Local Lead Authority.

Peterborough City Council was formed as a unitary authority in 1998, having previously been part of Cambridgeshire County Council. The council's corporate priorities, set out in a new Sustainable Future City Council Strategy 2022-25, are: the economy and inclusive growth, maximising economic growth and prosperity for Peterborough as a city of opportunity; our places and communities, creating healthy and safe environments where people want to live, work, visit and play; prevention, independence and resilience, helping and supporting our residents early on in their lives and prevent

them from slipping into crisis; all supported by a sustainable future city council, adjusting how we work, serve and enable. As well as a central role in the University Programme, PCC is leading the regeneration of Peterborough via a range of programmes, including through its Towns Fund Programme, Levelling Up Fund programme, and attracting inward investment – combined, a near £1billion-regeneration opportunity made up of projects encompassing business and skills, regeneration and infrastructure and visitor attractions. During the creation of the Combined Authority, PCC was instrumental in ensuring that the inclusion of a university for Peterborough was specified in the Devolution Deal. As Local Lead Authority for the Levelling Up Fund (LUF), PCC secured the £20m of LUF that forms the majority of the financing for this Phase 3 Project.

1.2.2 Academic Delivery Partner

Anglia Ruskin University Peterborough (ARU) is the Academic Delivery Partner (ADP) for the University Project. ARU will work to develop a curriculum for ARU Peterborough with flexible modes of delivery to address the characteristics of the region, its communities and the Higher Education cold spot. Locally based, ARU is one of the fastest growing universities in the UK with strong performing Science and Technology and Business Faculties, several research institutions classified by the Research Excellence Framework as world-leading and has a wide range of established international partnerships. On the basis that ARU would be given the right to occupy both the first and second, majority public funded, teaching buildings rent free, to conduct the business of offering higher education in Peterborough, they were required to compete for the role of ADP through a procurement that took place in 2019.

1.3 Strategic context

1.3.1 Policy alignment

National Policy

Government HE policy is concerned with increasing the supply of higher-level technical skills, ensuring genuine inclusiveness in higher education provision and participation and supporting the expansion of agile modes of learning including distance and virtual learning approaches to enable increased participation. All of these are strong drivers for the approach to be adopted for the development of a new University for Peterborough.

Relevant national policy is outlined below and has been updated for the Full Business Case.

The **Skills and Post 16 Education Act** (2022) is the legislation enacting the reforms set out in the DfE Skills For Jobs White Paper (2021). It aims to streamline qualifications for students through the Post-16 Review of qualifications at level 3 and below in England to create a coherent system with clear, high quality progression routes for students of all ages, including the National Retraining Scheme. These need to support the recommendations of the Augar Review into Post-18 Education funding and the review of Higher Technical Education. The Government's Level 4 and 5 reforms present an opportunity to ensure that technical/vocational learning is available in Peterborough. Focusing on skills gaps at higher technical levels that risk the UK falling behind its global competitors, reform aims to transform the skills system to put employers at the heart of the system and to make training a lifelong and flexible option for all.

The **Levelling Up White Paper**, published in February 2022, positions education and skills at the forefront of the Levelling Up agenda, with a focus on ensuring opportunities are accessible to all and placing employers at the heart of local skills systems. The Levelling Up White Paper contains several

relevant missions, including education and skills – and reaffirms pledges such as the introduction of a Lifelong Loan Entitlement, Skills Bootcamps and the creation of Education Investment Areas – and the deepening of devolution which are aligned to the region’s priority for life-wide and lifelong learning. The **Levelling Up and Regeneration Bill** is currently passing through parliament (November 2022). Its aims include making provision for the setting of levelling-up missions and reporting on progress in delivering them and increasing local democracy through devolution. The Council has secured £20m of funding from the Levelling Up Fund to invest in Phase 3 of the University for Peterborough project via a June 2021 funding application.

HMT’s Plan for Growth (March 2021) sets out the vision for ‘building back better’ through pillars of infrastructure, skills and innovation as key to the UK’s recovery from Covid-19. The Government wishes to improve productivity and level-up the UK whilst increasing high-quality skills provision and training, and transforming FE. This will in part catalyse the development of creative ideas and technologies that will shape the UK’s future high-growth.

The connected Innovation Strategy (2021) and Net Zero Strategy (2021), aims to make the UK a Scientific Superpower and includes policies to boost renewable energy production and heating, power and transport innovation. As part of this, Government has committed to increasing UK investment in R&D to 2.4% of GDP by 2027. The Prime Minister’s 10 Point Plan for a Green Industrial Revolution through investment in innovative technologies estimates that 250,000 green jobs will be created across the UK during the transition to reduce emissions by 68% by 2030. The curriculum for the Phase 3 building is particularly focused on the STEM fields which will be key to meeting the UK’s net zero objectives.

Oxford-Cambridge Arc – The Oxford-Cambridge Arc is already home to a booming and varied economy that contributes significantly to the success of Global Britain. Over the last 20 years, it has grown faster than any region outside London, and employment and wages are above the national average. It is home to some strong and innovative sectors, world-leading companies, internationally recognised research and development centres and research universities. Peterborough, the largest city in the Arc’s north, is important to unlocking future growth across the Arc, driven by the region’s strong sector clusters of advanced manufacturing and future energy technologies.

A new University will make a substantial positive economic impact not only in the City but in the wider sub-region supporting these national policy frameworks, enabling the region and the UK to compete in an ever more dynamic global economy through innovation and creating knowledge-intensive businesses. At the same time, it will deliver significant cultural and social benefits that are inherent in the aims of these national policies.

Regional strategies

The 2018 **Cambridgeshire and Peterborough Independent Economic Review (CPIER)** made a clear recommendation for the development of a university for Peterborough and The Fens. The project is seen as crucial to addressing “uneven access to higher education” and lower educational attainment figures for areas geographically close to - but economically isolated from - existing centres of education, by creating more pathways to higher education for local communities. The CPIER stated that the university should be strongly rooted in the local and sub-regional economy by drawing on established strengths in manufacturing and engineering - citing the fact that the local economic benefits of university research are magnified when local firms are “technologically close” to a university. The CPIER also recommended high levels of investment to ensure a clearly defined

educational offer centred around subjects that integrate with the local economy and embrace new technologies.

Since the CPIER was published the Combined Authority has set out a framework for pursuing the objectives of its Devolution Deal's overall aim of achieving sustainable growth, based on a '**Six Capitals**' approach:

1. **Health and Skills:** building human capital to raise both productivity and the quality of life.
2. **Climate and Nature:** restoring the area's depleted natural capital and addressing the impact of climate change on our low-lying area's special vulnerabilities.
3. **Infrastructure:** from digital and public transport connectivity, to water and energy, building out the networks needed to support a successful future.
4. **Innovation:** ensuring this area can continue to support the most dynamic and dense knowledge economy in Europe.
5. **Reducing inequalities:** investing in the community and social capital which complement skills and connectivity as part of the effort to narrow the gaps in life expectancy and income between places.
6. **Financial and systems:** improving the institutional capital which supports decision-making and delivery.

Strategies which embed the Combined Authority's Six Capitals and which are relevant to Phase 3 are outlined below.

The Cambridgeshire and Peterborough Economic Growth Strategy (2022) sets out a vision for Cambridgeshire and Peterborough as *"the place where unique business, natural and research assets tackle world problems whilst creating good jobs and healthy lives for all our residents in all our places, being globally leading and competitive and also more equal and sustainable."* The Strategy has six objectives:

1. Grow the economy while reducing inequality
2. Good quality jobs in high-performing businesses
3. Better quality skills via a world-class skills system
4. Accelerate local placemaking and renewal
5. Accelerate business growth
6. Ensure transition to green, low-carbon economy.

A new university in Peterborough is a key action within the strategy, with strong links to all objectives.

The Cambridgeshire and Peterborough Employment and Skills Strategy (2022) sets out a vision for Cambridgeshire and Peterborough to be a *"successful, globally competitive economy offering high-skilled, well-paid, good quality jobs, delivering increased productivity and prosperity to support strong, sustainable and healthy communities and enabled by an inclusive, world-class local skills system that matches the needs of our employers, learners and communities."*

The Strategy explicitly references the priority for a new University in Peterborough which raises regional higher education participation, and delivers technical courses aligned to local employers' needs and jobs of the future. Implementation of the Employment and Skills Strategy is underway, with the new University in Peterborough an important part of achieving the vision.

Cambridgeshire County Council and Peterborough City Council have developed a **NEET (Not in Education, Employment or Training) Reduction Strategy** which articulates the importance of reducing the number of NEET young people in the region. It calls on partners to take a collaborative approach to focus on early intervention and prioritising opportunities to sustain NEET reduction, including via pathways into Higher Education. To support this, CPCA has commissioned a new Youth Offer for 19 to 24-year-olds, to ensure that 'older' NEETS have the right support to re-engage in training and employment. This commenced in September 2022.

Local strategies

PCC's vision is to *"create together a Peterborough residents are proud to live, work and grow up in and where services deliver what local people need and give value for money."*

PCC's Corporate Strategy 2021-2025 strategic priorities are:

1. Drive growth, regeneration and economic development
1. Improve educational attainment and skills
2. Safeguard vulnerable children and adults
3. Implement the Environment Capital agenda
4. Support Peterborough's culture and leisure trust Vivacity
5. Keep all our communities safe, cohesive and healthy
6. Achieve the best health and wellbeing for the city

Phase 3 particularly supports priorities one and two.

There is also alignment with Peterborough City Council's long-term regeneration and investment priorities as identified in the Peterborough Local Plan, which is the Statutory Development Plan guiding development in Peterborough.

The Peterborough Embankment Masterplan Framework (2022) sets out the overarching vision and strategy for the Embankment site that the University campus is situated on, helping to target investment decisions and shape new development opportunities. The aim of the Masterplan is to ensure that the Embankment once more plays a full and pivotal role in the lives of Peterborough residents contributing directly to the character, vitality, prosperity and sustainability of the City.

The Masterplan Framework adopts a flexible approach which allows for alternative development scenarios on the Embankment site, including the potential development of an Arena on the site. This would alter future plans for the University campus but would not affect the location of the Phase 3 building based on current planning applications.

The Masterplan has been brought forward through the Towns Fund, which is a scheme of funding launched by the UK Government for towns such as Peterborough to boost economic productivity and support sustainable growth. To secure this funding, PCC produced a Town Investment Plan (TIP) in July 2020 which set out the importance of the Embankment to the future prosperity of the city.

ARU's vision is transforming lives through innovative, inclusive and entrepreneurial education and research. ARU's 2017 strategy sets out a 10-year vision, priorities and ambitions and is built around three central themes.

- **Creating a leading learning and innovation ecosystem** to deliver an outstanding educational experience, combining the best of face-to-face and digital learning; increase work-based opportunities; and activities that enhance academic success and employability.
- **Building and nurturing vibrant university communities** that are inclusive and welcoming of all and with a particular focus on continuing to attract and retain international students and growing postgraduate student communities.
- **Strengthening the underpinning operations of the University**, building on its reputation for enterprise, to be known for use of innovative, user-focused approaches to problem-solving and putting the needs of those who study and work with ARU at the forefront of the way it designs its activities.

ARU Peterborough will develop a 5-year strategic plan in academic year 2022/23. This process will be led by the University Principal and the final strategy will be approved by the ARUP Board of Governors.

1.4 Current position

The Cambridgeshire and Peterborough region plays an important role in the UK economy. The region comprises three distinct economies with differing sector specialisms and differing social and economic skills needs:

- Peterborough and surroundings (including north Huntingdonshire).
- The Fens (including Fenland, some of East Cambridgeshire and part of Huntingdonshire).
- Greater Cambridge (Cambridge and South Cambridgeshire, including southern parts of Huntingdonshire and East Cambridgeshire).

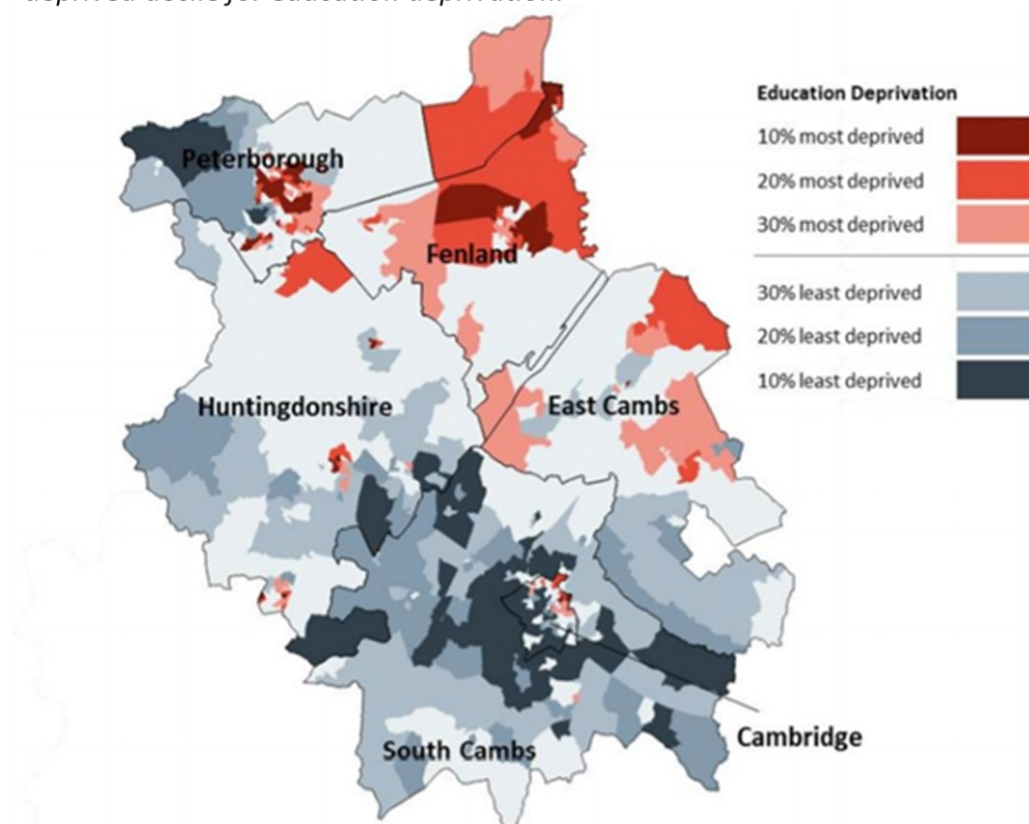
The 2022 Employment and Skills Strategy finds that current participation in higher education varies across Cambridgeshire and Peterborough, including being just 6.7% in Peterborough and 3.2% in Fenland.³ It also notes that the region's education providers play an important role as anchor institutions in their community, providing civic leadership, collaborating, driving investment to renew localities and raise aspirations. However, patchy engagement with post-16/18 education has been exacerbated by education estate and access cold-spots – including in Peterborough – and physical and digital access challenges for rural and deprived communities. The 'Education Cold Spot' has long been recognised as a major challenge holding back prosperity in the Combined Authority's more deprived areas, particularly in the north around Peterborough.

³ Metro Dynamics analysis on ONS Annual Population Survey (APS) data (2020).

Figure 5. Education, skills and training deprivation (IMD decile), 2019, for CPCA

Education, Skills and Training deprivation, IMD, 2019, for CPCA.

One in four LSOAs (neighbourhoods) in Peterborough are ranked in the most deprived decile for education deprivation.



Current HE provision in Peterborough consists of:

1. The initial trimester 1 intake of learners supported through **Phase 1 of the University programme** in the University House building. ARU Peterborough received 1,600 applications for learners studying across Science, Engineering, Computing, Health, Social Care, Education, Management, Finance and Law across a range of provision types, including undergraduate courses, degree apprenticeships, postgraduate provision and short courses targeted at business owners. There will be an additional intake in January 2023, which will include international students.
2. **Peterborough College: primarily a provider of further education** across a broad course offering with HE teaching through the **University Centre Peterborough (UCP) facility**, a 100% owned subsidiary of Peterborough College. The Inspire Education Group is seeking to develop a Green Technology Skills Centre with support from the Towns Fund. UCP does not have degree awarding powers and currently degrees are validated by Anglia Ruskin University and the Open University.

There is no HE provision in Fenland or North Huntingdonshire. In Fenland in particular the rural area and poor transport networks make it challenging to establish HE operations. The sparsity of

population and travel to learn times (rather than distances) have tended to inhibit the creation of viable provision, in the absence of flexible modes of delivery to compensate for these characteristics of the region. The result is that low skills levels have historically limited wages, progression and quality of life.

1.4.1 Case for change

In Peterborough, low skills levels have historically limited wages, progression and quality of life.

Qualification levels in Peterborough are below national averages, which contributes to limiting wages, progression and quality of life for residents. The vision set out in the CPIER notes that skills development is vital for growth in jobs and earning power.

Figure 6. Key Labour Market Indicators⁴

Indicator	Peterborough	East of England	GB
Proportion of 16-64s with no qualifications	7.6%	5.7%	6.4%
Proportion of 16-64s with NVQ 4+ ⁵	32.1%	39.2%	43.1%
Average Attainment 8 ⁶ score at KS4	46.3	-	50.2
Proportion of employees with jobs in managerial, professional & technical occupations (SOC group 1-3) ⁷	42.3%	48.9%	50.2%

In addition to the indicators above, in Peterborough:

- Wages are 9% lower than the England average.⁸
- Productivity per worker is 11% below the national average.⁹
- 41% of neighbourhoods (LSOAs) within Peterborough rank within the 20% most deprived in the UK.¹⁰
- Social mobility is low, with Peterborough ranked 191st and Fenland ranked 319th out of 324 local authority districts.¹¹
- Healthy life expectancy is below retirement age in many neighbourhoods, and is declining in the most deprived areas.¹²

Peterborough ranks 34th lowest out of 650 constituencies for the highest levels of child poverty, with one in three children living in relative poverty, despite most families containing at least one working adult. Improving access to skills and raising educational attainment has the potential to reduce deprivation as well as provide residents with better employment prospects.

Encouraging more residents into higher value jobs will help to raise social mobility in Peterborough, which has been faltering in recent years, a trend exacerbated by Covid-19. The Peterborough Town Investment Plan notes that more deprived residents tend to experience poorer health and educational outcomes and fail to progress to higher paid jobs and better housing, in part because

⁴ Metro Dynamics analysis of ONS data

⁵ NVQ4+ is a measurement of qualification level which is broadly equivalent to an undergraduate degree.

⁶ 'Attainment 8' is a measurement which captures the progress a pupil makes from the end of primary school to the end of secondary school.

⁷ Standard Occupation Classification (SOC) groups 1 – 3 are workers in managerial, professional and technical occupations.

⁸ ONS (2021) Annual Survey of Hours and Incomes

⁹ ONS (2020) Subregional productivity: labour productivity indices by UK NUTS2 and NUTS3 subregions

¹⁰ Indices of Multiple Deprivation (2019).

¹¹ Social Mobility Index, 2016

¹² ONS Health and Life Expectancies, 2016-2018

there is no local higher education institution to enable social mobility. There is a danger of these residents becoming trapped in low skill, low pay employment and failing to reach their potential.

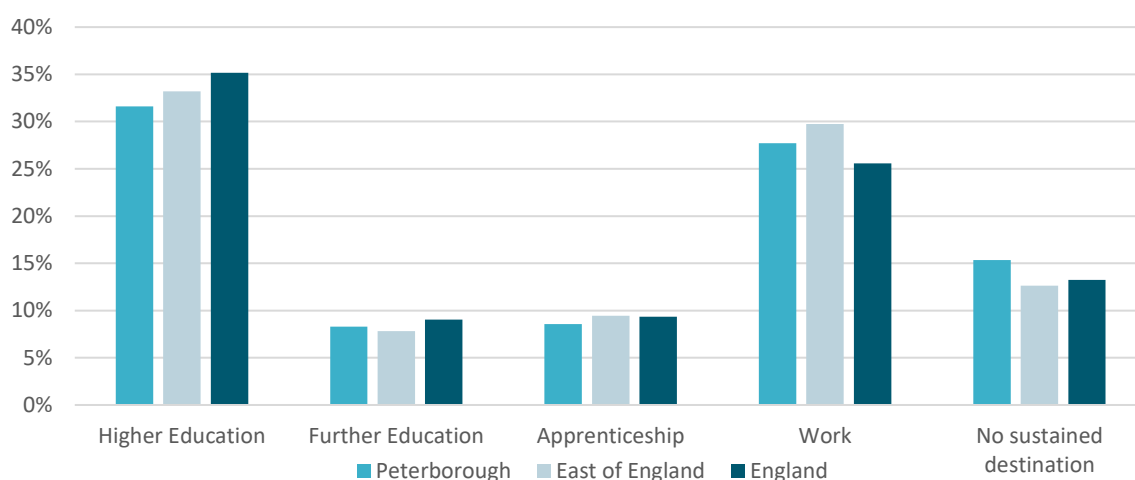
The lack of a higher education institution in the region is a major contributor to poor economic, social and health outcomes.

Before the completion of Phase 1, Peterborough was one of the largest cities in the UK without a university.¹³ This meant higher education felt inaccessible and irrelevant to many people, and low aspirations entrenched poor outcomes.

If Peterborough matched skills levels across the East of England an additional 12,000 people (in a working population of just over 100,000) aged 16-64 would have an NVQ Level 4 qualification or above. If skill levels matched the national average an extra 17,000 people would have NVQ4+ level qualifications.¹⁴

The lack of higher education provision in the northern parts of Cambridgeshire and Peterborough means fewer school leavers (at 18 years old) progress onwards to higher education than would otherwise. In Peterborough, 31% of school leavers progress onto higher education compared to 35% nationally, with more school leavers progressing directly into lower-skilled employment. Crucially, 15% of 18 year olds in Peterborough record ‘no sustained destination’ six months after leaving school, compared to 13% nationally, indicating that more school leavers in Peterborough choose either not to enter education or work, or are dropping out within six months.

Figure 7. Destinations and progression rates for 18 year olds, 2019¹⁵



The lack of a local Higher Education institution has meant Peterborough school-leavers who progressed onto higher education have had to travel elsewhere, and are subsequently less likely to seek employment in Peterborough. ARU Peterborough is designed to fill the gap identified through the “cold spot” and will, therefore, enable more students in the region to study locally should they wish to do so.

ARU’s analysis of demand for higher education in the Cambridgeshire and Peterborough region predicts an increase in the number of 18 year olds over the next 5 years leading to a 13% increase in

¹³ The University Centre Peterborough is active in Peterborough, which is a joint venture partnership between Peterborough Regional College and Anglia Ruskin University. UCP currently has around 700 students on more than 30 degree-level programmes. Courses are validated by The Open University.

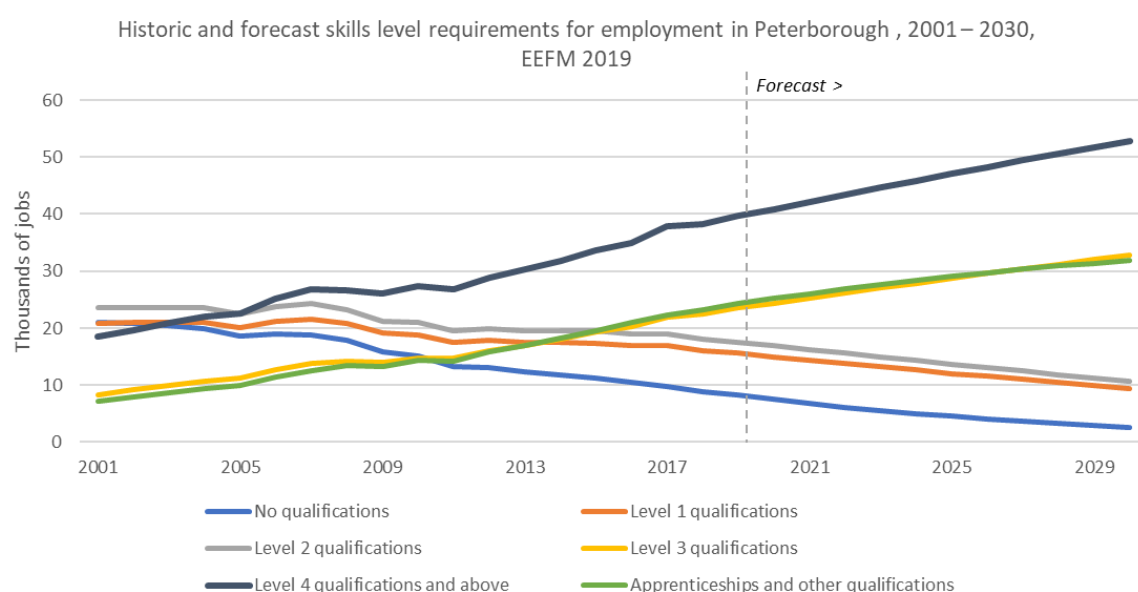
¹⁴ East of England Forecast Model (EEFM), 2019

¹⁵ Metro Dynamics analysis of DfE School Leaver Destinations data (2019)

students entering HE by 2025 (up to 6,105) with a static participation rate of 44%, and a 20% increase (up to 6,521) if the participation rate grows to the England average of 47%. Demographic analysis suggests also that this new demand is likely to be from groups who are more likely to stay in the region to study and then subsequently to work.¹⁶

The chart below, from the East of England Forecasting Model, shows forecast skills level requirements for employment in Peterborough to 2030. It shows demand for an extra 12,000 degree-qualified residents by 2030 in the city.

Figure 8. Historic and forecast skills level requirements for employment in Peterborough, 2001 - 2030¹⁷



To take part in and continue to support Peterborough’s knowledge intensive growth, residents need local education pathways to access high quality jobs. If those pathways are not available, then residents will miss out on the benefits of growth. Meeting this demand for skilled workers in Peterborough means establishing a university at a pace and scale which generates impact as quickly as possible, while recognising the substantial difficulties faced in doing so.

Establishing a viable University in Peterborough that serves surrounding areas

Recognising the resource and timescale constraints and the very high risks that would accompany any attempt to found a new University of Peterborough on a model similar to those founded in the 1960s (the so-called Robbins Institutions), the core strategy for developing the University is based on directly tackling the characteristics of the addressable component of the current market failures (the “cold spot” identified in the CPIER and Employment and Skills Strategy) without unnecessary direct competition with existing providers. The hallmarks of this strategy, based on a clear understanding of the market needs in and around Peterborough and by balancing resource constraints, include:

- A clear focus on under-represented groups and those “left behind” i.e. those who cannot or will not travel to existing providers.
- A solution based on a limited physical experience i.e. the capital available will support only a modest campus development (at least) initially.

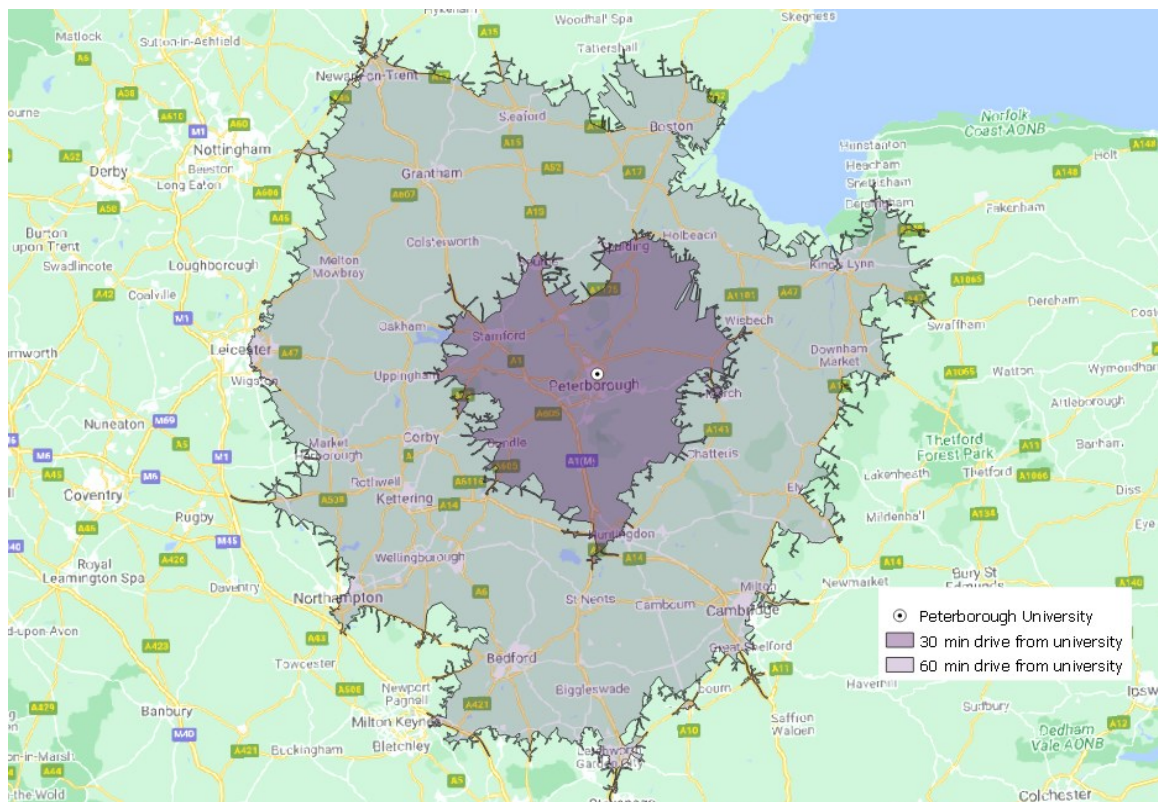
¹⁶ ARU analysis conducted for Phase One Full Business Case

¹⁷ East of England Forecasting Model (EEFM), 2019

- A phased approach which evolves with the needs of the region and is facilitated by successive successful phases of development i.e. a model in which viable provision is established early and becomes the foundation for reinvesting in later phases.
- The development of highly effective, collaborative and cooperative relationships between education providers to build a clear pipeline of opportunities, to raise aspiration, to identify and promote role models and to create a source of competitive advantage.

The University will provide access to higher education for rural areas around Peterborough, including Fenland, where in many cases drive times to the nearest University currently exceed 60 minutes. Establishing a new higher education institution in Peterborough will help to raise aspirations and skills levels in surrounding areas also.

Figure 9. 30 minute and 60 minute drive times from ARU Peterborough



Wider impacts

Phase 3 of the University project will deliver significant social value through the provision of a dedicated community cultural and learning space in a core area of the City Centre. It will help raise aspirations and awareness amongst local people of the new university offer and so will help attract local residents to study at the university. By enabling local higher education provision, it will ensure that more highly skilled young people in Peterborough remain in the city.

A higher education experience is one of the most powerful and transformational investments which can be made both by individual students and by civil society more broadly. Moreover, universities in cities help build community cohesion and drive-up educational standards and attainment e.g. with lecturers/professors becoming governors at local schools.

The Partners are determined to make these investments, to encourage others to make such investments and to bring the positive benefits of higher education to the people of Peterborough and the surrounding region.

A new University will, therefore, offer much more to the people of Peterborough and the region. It will give Peterborough and surrounding areas an opportunity to reinvent its economy as the city continues to grow in population, creating a virtuous circle for continued growth of the economy and the new University, raising aspirations locally and supporting business needs for skills.

1.5 Objectives

The ambition is to create a new University for Peterborough that will deliver a step-change in life-chances for young people in Peterborough and beyond. Key to the success of the new University will be its ability to grow and retain local talent alongside attracting and retaining new talent to the area. Through this project, the Partners are committed to raising personal and community aspirations along with improving social-mobility and contributing to inclusive social and economic growth. Partners will continue to promote and support skills provision that meets employer demand and motivates learners and their families to aspire to building prosperous futures for themselves and their communities, harnessing lifelong learning.

The top-line objectives for the University programme are to:

- **Improve access to better quality jobs and improve access to better quality employment**, helping to reverse decades of relative economic decline, and **increasing aspiration, wages and social mobility** for residents.
- Make a nationally significant contribution to Government objectives for **levelling up, increase regional innovation, and accelerate the UK's net zero transformation**.
- Accelerate the renaissance of Peterborough as a knowledge-intensive university city, **increasing civic pride** and satisfaction within Peterborough as a place offering a good quality of life with improved public facilities, and **providing a tangible example of levelling up**.
- Translate the resulting increase in individual opportunity, prosperity and social mobility into outcomes across wellbeing, health and healthy life expectancy from the programme, and on into **people living happier, healthier lives**.

Objectives specific to Phase 3, which relate to the top-line University programme objectives above, are to:

- Grow the University via a second teaching building supporting up to a potential 1,700 additional students from 2024/25 to 2027/28 studying a mixture of undergraduate, postgraduate, degree apprenticeship, work programme, short courses and outreach.
- Provide specialised teaching space, enabling ARU Peterborough to broaden its curriculum, including into STEM fields linked into local economic strengths in Peterborough and The Fens. The portfolio of courses on offer will be co-created with employers to ensure students graduate with both the industry-specific and transferable skills in demand, regionally and nationally.

- Embed the University into the community via the Living Lab as a public-facing, high-quality interactive science centre for Peterborough with participatory research, public space for exhibitions and events.
- Regenerate the site area to create an attractive University of Peterborough campus with a high-quality landscape, helping to create a 'visible university' linking to the city and expanding Peterborough's University Quarter, completing other Phases of development.

1.6 About the project

1.6.1 Scope

Phase 3 is to develop a second teaching building for occupation by ARU Peterborough with a Living Lab at its heart. This Phase enables the university's growth up to a potential 4,700 students in 2027 and sets the university up for significant growth in future.

This catalytic investment to create the University Living Lab and additional teaching space, builds on and integrates £45m of prior and current investments made through the Local Growth Fund (towards earlier phases of the new university) and Towns Fund (towards the wider masterplan and infrastructure for the City). It will have a visible, tangible impact on people and places, and support economic recovery.

The principal requirements of the Phase 3 building were set out in the RIBA Work Stage 1 Report and are summarised below.

- Accommodation for specialist learning, teaching, public engagement and support space
- High quality public realm and landscape
- Associated cycle storage and limited parking
- Good environmental and sustainability credentials (BREEAM excellent)
- A Gross Internal Area of approximately 2,500m².

The accommodation within the proposed building will support the academic course design being developed by ARU Peterborough and to support the current specialisms of:

- Business and Innovation
- Creative Digital Art and Science
- Health Sciences, Education and Social Care
- Engineering, and the Environment.

Engagement on the scope

Design and use cases for the building have been developed via extensive engagement with key stakeholders throughout RIBA Work Stage 3 to evolve a spatially coordinated design that meets aesthetic, operational and sustainability aspirations and responds appropriately to the site's setting, constraints and planning context. A series of detailed stakeholder design workshops have allowed for extensive input from the project's end user at ARU Peterborough, ensuring that the design proposal fully aligns with the University's future accommodation plans. In addition, consultation has been ongoing with The Local Planning Authority, Historic England and the Civic Society, who all continue to view the project positively.

Building spatial and design requirements

The RIBA Work Stage 3 report has set out the detailed spatial coordination and design requirements for the building, which are summarised below.

The design intent is to create a highly contemporary, welcoming and transparent building, providing a strong identity for the new University and creating views of learning within. The design should feature environmental and sustainability aspects to an 'excellent' BREEAM standard.

A timber structure is proposed for the Phase 3 building and forms an important part of the building's look and feel. The building is proposed to be clad in efficient, cost effective and low maintenance aluminium skin. The Living Lab is proposed to be clad in textured stainless-steel shingles, which create changes in texture, light/shadow and transparency from different aspects, both during daytime and evening, helping to create an attractive and appealing building which complements Phase 1 and Phase 2 buildings.

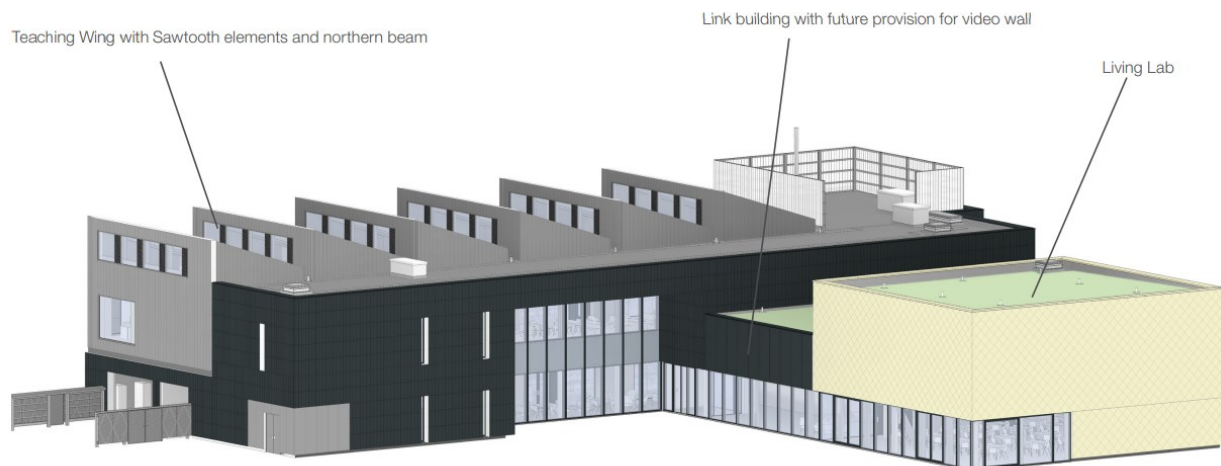
Investment will deliver a 2516 sqm GIA second teaching building and Living Lab, 326 sqm of which will be available for use as a University Living Lab and public teaching space with space for 652 occupants in the building. The building is arranged over two floors and is 9.65m high to the top of the main roof parapet. The building form has been developed to express the primary elements of the project – the Living Lab as a central focus to the campus and the Teaching Wing (including the Sawtooth and the Beam) facing Bishop's Road.

The Living Lab is a two-storey high, simple, abstract building form, expressing the flexibility of its functional requirement, and creating a landmark building at the end of the view looking from the landscaped space between Phase 1 and 2. Whilst the room requires at times to operate as a 'black box', extensive glazing is provided at lower levels (to East, West and South) to offer views in and aspect out to the wider campus. Large sliding doors to the west and south open up onto the wider campus, directly linking inside and outside, to support public events and teaching alike.

In the Teaching Wing of the building, a series of 'sawtooth' elements (following a 7.5m structural grid) with west-facing high-level glazing provide daylight and natural ventilation to the teaching rooms and the office space. This 'sawtooth' form increases the scale of the building to Bishop's Road to better respond to the scale of Phase 1 and provides a more sculpted form giving interest to the building's profile. Full height glazing to the north is provided to offer views out from the teaching spaces, as well as views in from the street.

The southern elevation of the Teaching Wing has significant glazing and offers views into the building and offers aspect to a well landscaped, publicly open campus space from the social learning spaces. A setback provides shade to the facade and signifies the main entrance to the building.

Figure 10. Overview of building spatial design



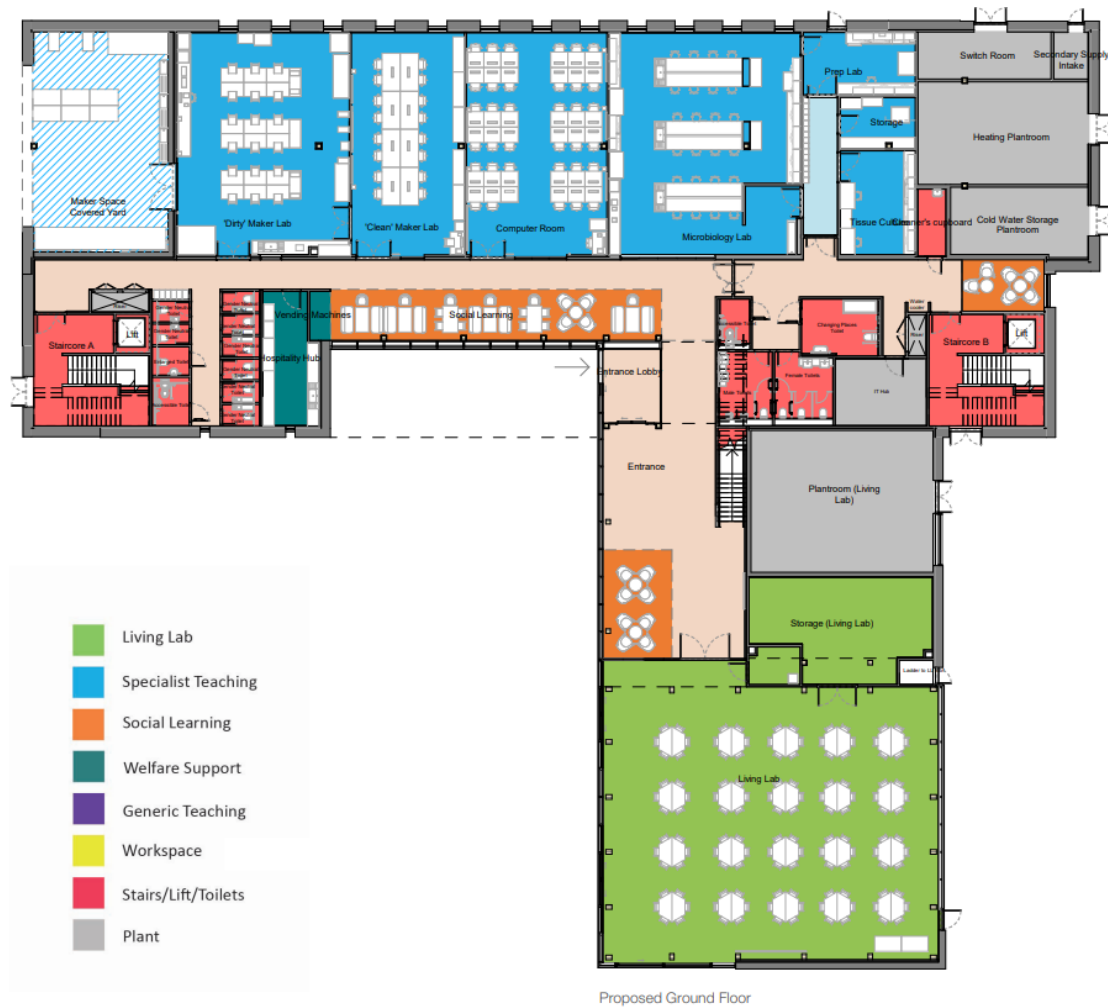
The building accommodates a range of different spaces, including:

- The Living Lab – A double height ground floor space where:
 - Active learning takes place using state of the art equipment and installations
 - Students engage the community in their research
 - Activities inform, educate, involve, and entertain the community
- Specialist Teaching Spaces which will enable ARU Peterborough to expand its STEM-focused curriculum, including:
 - 'Dirty' maker lab
 - 'Clean' maker lab
 - Flexible teaching lab
 - Microbiology lab
 - Prep lab
 - Tissue Culture lab
 - Lab storage
- General teaching spaces
- Social Learning Spaces
- Office Space
- Operational and other Support Space.

The Living Lab is the 'heart' of the building. It is a fully accessible, double height space visible to the public and designed to offer a flexible space for the variety of events and activities proposed, with space for 201 occupants for events and 120 students when set up for teaching.

The Northern Teaching Wing accommodates specialist teaching space, including the Microbiology Suite (containment level 2), Maker Spaces and Computer Room, facing Bishop's Road. These specialist teaching spaces have been arranged around a central space for social learning that looks south over the campus. Total occupancy of the ground floor is 362, including 111 in specialist teaching spaces, 48 occupants in social learning/study spaces, and 2 in welfare support spaces, as well as the Living Lab.

Figure 11. Proposed ground floor layout



The first floor accommodates the generic teaching rooms and office accommodation, arranged to face north overlooking Bishop's Road and offering views towards the cathedral. The 4 teaching rooms can each house 40 students, or could be combined into 2 larger rooms of 80 students by opening the semiautomatic moveable walls, which stack nicely in the CLT recesses. Total occupancy on the first floor is 290, which includes 164 in generic teaching spaces, 54 in workspace, 44 in social/learning study space, and 28 in welfare support spaces.

Figure 12. Proposed first floor layout



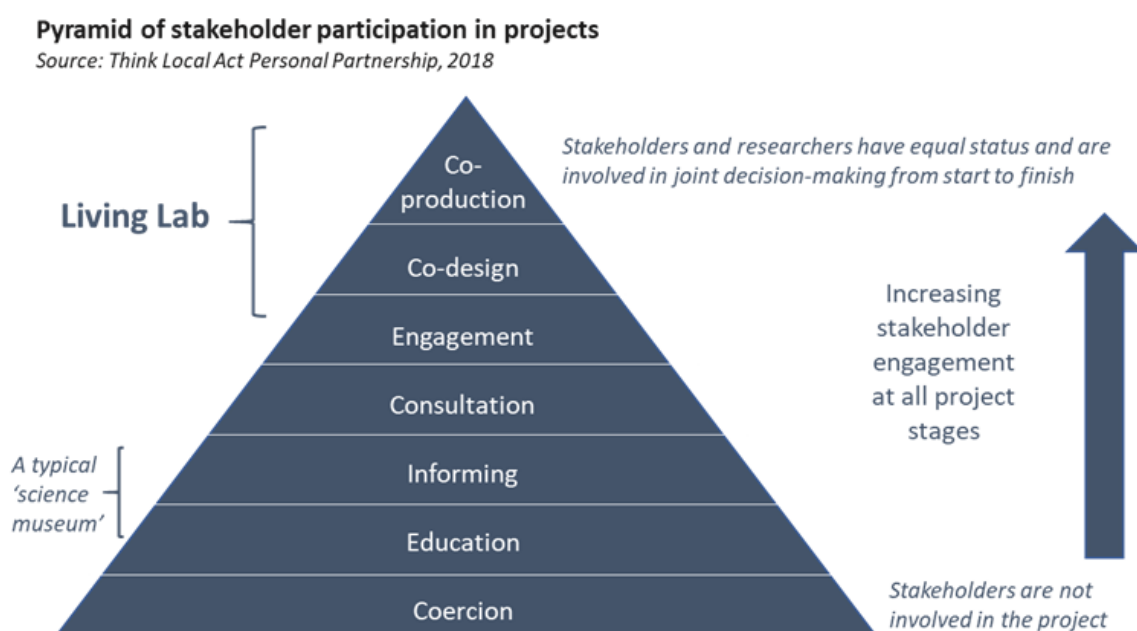
Activities to be carried out within the Living Lab

All activities and events supported by the Living Lab will support the mission of increasing opportunities for STEM engagement and participatory research across the region, bringing together schools and businesses from different sectors alongside students and academics from ARU Peterborough using the Living Lab as a catalyst for conversation and exploration of science and its impact on the world.

Similar in style to an interactive science centre but more ambitious in terms of community impact, Living Labs:

- Are integrated into the community through the co-creation, exploration and evaluation of ideas;
- Address complex problems through collective actions and community interactions;
- Facilitate the co-creation and appropriation of innovations by users in community settings.

Figure 13. How Living Labs support stakeholder participation



The Living Lab concept is beyond just utilising a single space within a building. The programming will benefit from the entire university ecosystem and campus. A representative example of an activity supported by the Living Lab is set out below, with further examples listed in the Annex.

Figure 14. Example of activity to be supported by the Living Lab

Activity	School competition events such as Primary Engineer “if I was an Engineer”. Pupils from across Peterborough and the Fens are invited to take place in a national competition supported by the Primary Engineer organisation in partnership with ARU Peterborough. Academics and engineers from local businesses work with children from age 4 to 16 to think about inventing/designing engineering solutions to solve real world problems. School groups are brought into the living lab for hands on meet an engineer events to guide and inspire their designs. The pupils' designs are judged by panels of industry experts and winners are selected across age categories (school group) who are then invited to an award ceremony and an exhibition of their designs. The exhibition is then opened on subsequent days to all schools and parents and the local community to view the children’s work. A small number of students have their designs turned into a prototype built at the university by undergraduate students and winners' schools are invited in to see the development in process culminating in a prototype unveiling ceremony.
Outcomes	This series of events engages pupils across all ages in activities that raise aspiration and build confidence in STEM with multiple touch points to reinforce learning. Academics and industry engineers are engaged and work with the pupils throughout the process. Involving the parents through the award ceremonies and exhibitions provides family learning opportunities and further strengthens the positive experience of STEM for the pupils.
Reach	• 500 to 600 pupils take part in the competition • 50 academics and engineers from local companies involved in the judging and selection of winners for prototype development • 30 winners selected and invited to award ceremony along with parents/cares/siblings and school representatives (150 in total) • 200 visitors at opening of exhibition

- 20 Students engaged in prototype development which gives a real experience of interpreting a design (some of which can be abstract) and creating a functional prototype, supporting employability skills development.
- 150 visitors invited to prototype unveiling.

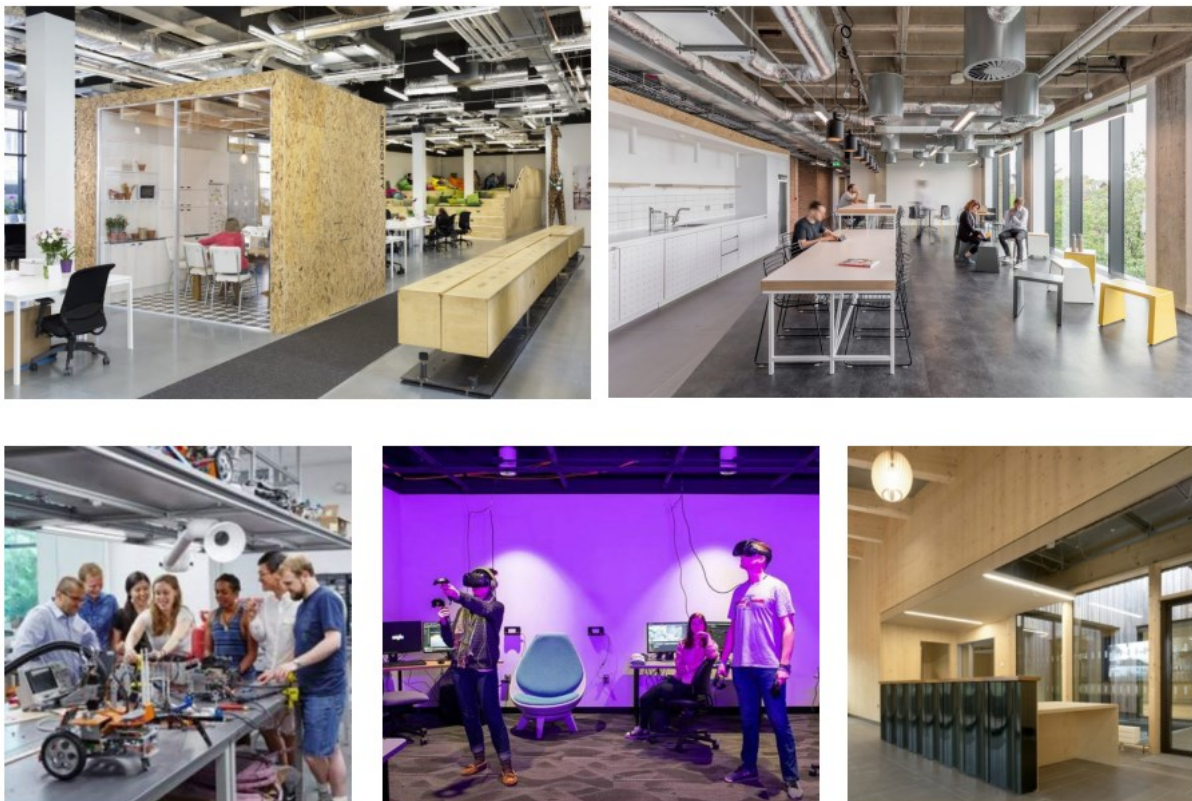
The day-to-day operation and ongoing delivery strategy for the Living Lab is the sole responsibility of ARU Peterborough/ARU. The university will be responsible for all aspects of programming and revenue management for the Living Lab. It is expected that the programme will be cost-neutral. This will be supported by intelligent programming to maximise utilisation of all spaces within the Phase 3 building. This is achieved by modelling a timetable with 'community' usage and maximising public engagement activities outside of core teaching periods. This has been successfully implemented in other facilities, for example the Hive in Worcester.

ARU have an established public engagement strategy and a range of processes to support the effective delivery of large-scale public events and activities, which will be applied to the Living Lab. This includes an approach to ticketing/online booking, health and safety, marketing and event programming.

The university will seek to appoint a manager for the public engagement activity. In addition, ARU Peterborough is also considering appointing a high profile Patron/Ambassadors for the Living Lab, such as a well-known scientist or engineer with connections in the Peterborough region.

ARU Peterborough will develop operational management plans for the space and how external events will be hosted. The Living Lab needs to be supported by a dedicated store to enable flexibility to curate events.

Figure 15. Internal design proposals and example use cases for space



Site location requirements

The site layout should be arranged to:

- Integrate with Phase 1 and 2, extending the landscape of the campus
- Provide a strong frontage to Bishop's Road extending the frontage created in Phase 1
- Locate the publicly accessible Living Lab at the centre of the campus giving enclosure to the open east / west space created between Phase 1 and 2
- Create a south and west facing well landscaped 'pedestrian first' space that provides facilities for socialising and holding external events
- Integrate on-campus accessible parking
- Maximise views into and from the building
- Locate Specialist Teaching on the ground floor and more General Teaching on first floor.

Figure 16. Proposed site layout for University campus



Proposed Site Layout (LUC)

1.6.2 Benefits

The main Benefits of the project stem from establishing Phase 3 of the University Campus in Peterborough, for up to a potential 1,700 more students from 2024/25, bringing the total number of students up to a potential maximum of 4,050 by 2027/28, with a curriculum and delivery model that is designed to meet the skills needs that growth in the Greater Peterborough business base will

generate. The plan for the courses to be provided, space required, and staffing levels has been developed by ARU to support Greater Peterborough and the Fen's key sectors.

The potential key benefits include:

- Up to 2,800 graduates entering the local workforce during the 15 year appraisal period, with a wage premium for undergraduates of £4,500 above non-graduate roles, rising to a premium of £9,000 for postgraduates. (Note: undergraduate level courses expected to make up a large majority of student cohort headcount and thus graduations).
- Up to 600 new supported degree apprenticeships supported p.a.
- Up to 89 new academic and professional staff jobs by 2027/28 (Academic staff numbers based on ratio of 26 students per academic staff member)
- Up to 8 net additional indirect and induced jobs in the university supply chain and local economy due to increased employment in education due to university operations.
- £380,063 spending in the local economy p.a. as a result of 25,000 p.a. visitors to the campus and associated events in the Living Lab and university building.
- Amenity benefit associated with the regeneration of mixed brownfield site with cycle paths and pedestrian footpaths lined into broader Peterborough networks.

As wider benefits, Phase 3 has also the potential to deliver:

- A substantial positive economic impact on Peterborough City and the surrounding region such that investment in the new University will generate direct, indirect and induced impacts across a wide range of industries, supply chains and the wider consumer economy;
- A positive regenerative effect to support the transformation of Peterborough itself into a regional centre improving the experience of all citizens and visitors to the area, including generating new opportunities for graduate-level employment and encouraging both local participation in HE and the local retention of graduates to benefit the wider economy;
- A transformational effect on the life-chances and well-being of its students and raise aspiration more broadly within Peterborough and the surrounding region. We anticipate that this will include:
 - Improving life-chances, health and well-being outcomes of students and, over time, the wider community;
 - building confidence and capability among the graduates of the new university and potentially encouraging innovation and entrepreneurship;
 - enhancing the capabilities of those graduates who continue to live and work in and around Peterborough to improve their productivity and earning potential; and
 - attracting and retaining investment locally to create more opportunities for the people of Peterborough and the surrounding region to benefit from higher education and contribute to the on-going success of the region.
- The regeneration of the river embankment will open up a key leisure area for the city centre. Opening up the embankment, clearing the scrub areas, illuminating it and populating it with hundreds of students moving between the university quarter and the city centre will improve public security and transform a poorly used city-centre site into a vibrant cultural, commercial and community hub that local people can be proud of.

In addition, the second teaching building will see a rise in the number of beneficiaries using the university's existing and expanded teaching provision. The building will both release the pressure on University House, enabling enhanced provision in the health area which is currently restricted by space, including into new areas such as MSc Biomedical Science and further expansion of undergraduate bioscience provision.

Postgraduate provision will increase across the next 5 years, and be positively impacted by the second teaching building, in particular within the international student market. Short course provision will also continue to grow and be enhanced by the facilities within the second teaching building.

1.6.3 Risks and constraints

The main risks associated with achieving the project outcomes are set out in the risk register at Annex 6.3 together with measures to mitigate and manage them.

Monte Carlo analysis carried out as part of preparing the RIBA Work Stage 3 report has identified the top six risks to delivery of the project, which are summarised in the table below. Risk management strategies are set out further in the Management Case and appended Risk Register.

Risks	
Material supply shortages	Due to the effects of ongoing geopolitical and economic shocks, certain materials are in short supply and the market continues to experience significant price volatility as a result. Consequently, it is difficult to achieve cost certainty against a fixed budget as the design stage is concluded.
Site logistics	The build site is particularly challenging with little space for the necessary logistics - heavy plant, craneage and lorry delivery etc. Additional work/ resource - beyond what the main contractor has proposed in their tender - may be required, resulting in additional cost and potential programme delays
Risk of inflation	The risk of inflation increasing beyond current forecasted levels when construction begins in Q2 2023, resulting in cost overruns.
Delay in planning determination	All float has been removed from the programme in the planning workstream because of the delay to Temporary Car Park planning determination. Any further delay to the planning approval of Phase 3 is likely to result in the main contractor being unable to sign the main building contract, due to not knowing the planning conditions. The likely consequence would be Programme delay and associated cost.
Planning conditions	On determination of the Planning submission, Planning conditions are imposed that are currently outside of the Cost Plan and programme, with resultant increased cost and Programme delay.
Regional Pool car park: closure and land transfer	Regional pool car park closure and land transfer has not been formalised between PropCo1 and PCC. Site is required by mid-Feb 2023 to allow for archaeological and additional enabling works prior to main contractor mobilisation. Any delay beyond this date is likely to result in Programme delay and associated cost.

The table below summarises the **key constraints** that have been placed on the project and within which it must be delivered:

Constraints																														
Timescales	Project delivery must meet the terms of the Levelling Up Fund (LUF) funding offer from the Department for Levelling Up, Housing & Communities. The memorandum for agreement between Department for levelling up Housing and Communities and the local authority states in clause 4.10 that the Council must spend all grant funding by the end of the funding period, 31 March 2024. The project plan appended to this Full Business Case sets out timescales, milestones and the critical path for the project required in order to meet LUF funding requirements.																													
Capital funding	Phase 3 (£27.9m: for the Living Lab, university quarter and second teaching building, including a £20m investment from the Levelling Up Fund): Construction complete in 2024 for the Living Lab and second teaching building supporting up to a potential additional 1,700 students to 2027/28, with potential for significant growth in student numbers in future. The £20m of Levelling Up Funds will be leveraged with £7.9m of local investment from the City Council, Combined Authority and ARU. <table><tr><th colspan="6">Investment into Living Lab, University Quarter and second teaching building</th></tr><tr><th>Contributor</th><th>LUF (PCC)</th><th>PCC</th><th>CPCA</th><th>ARU</th><th>Total</th></tr><tr><td>Value (£m)</td><td>20</td><td>1.87</td><td>2</td><td>4</td><td>27.87</td></tr><tr><td>% of total</td><td>71.8%</td><td>6.7%</td><td>7.2%</td><td>14.4%</td><td>100%</td></tr></table>						Investment into Living Lab, University Quarter and second teaching building						Contributor	LUF (PCC)	PCC	CPCA	ARU	Total	Value (£m)	20	1.87	2	4	27.87	% of total	71.8%	6.7%	7.2%	14.4%	100%
Investment into Living Lab, University Quarter and second teaching building																														
Contributor	LUF (PCC)	PCC	CPCA	ARU	Total																									
Value (£m)	20	1.87	2	4	27.87																									
% of total	71.8%	6.7%	7.2%	14.4%	100%																									
Design	The design must deliver on objectives for the university and its use (for specialist teaching spaces and the Living Lab) within the overall funding envelope, in consideration of the enabling works costs and infrastructure costs.																													
Land	Clean title for land required from PCC in order to construct Phase 3 on the Embankment site.																													
Planning	Meeting LUF funding time constraints requires the Planning Application for phase 3 to be developed at the same time as the Outline Planning Application for the wider University campus, with a decision on the Planning Application for Phase 3 being made ahead of the Outline Planning Application being submitted. The Outline Planning Application will take the location of Phase 3 into account in developing a campus masterplan. A Planning Application for Phase 3 was submitted to the Local Planning Authority (PCC) in October 2022 with a determination expected in January 2023. PCC has produced an Embankment Masterplan which incorporates the University campus, published in March 2022. This Masterplan has informed the Phase 3 Planning Application and will also be taken into account in the Outline Planning Application for the University campus.																													
Budget	The budget for Phase 3 was initially proposed in the initial Levelling Up Fund application, and has been refined throughout RIBA work stages, including the development of a detailed Cost Plan as part of RIBA Work Stage 3. Any changes in the assumptions underpinning the budget will need to be managed by the consultant team in conjunction with PropCo1 within the agreed budget without deterrents to the outcomes required under the LUF. Further details of the risks and mitigation around these assumptions are stated in the Risk Register in Annex 6.3																													

The table below summarises the **key Operational Risks**

Operational risks

Ability to Recruit Students:	The uncertainty around the Higher Education sector in terms of student numbers is an ongoing macroeconomic risk – for example in 2022 the whole sector is down 4% on student applications year on year. Economic uncertainty, such as the UK entering recession in 2023, the high cost of living and current high employment all result in a more difficult student recruitment market. However, ARU Peterborough has already launched 27 courses as part of the Phase 1 portfolio and received over 1,600 initial applications for places, many from the local area, demonstrating viability of the ability to recruit students. ARU provides recruitment and marketing support to ARU Peterborough as a shared service and has recruited an experienced Student Recruitment Manager who is based in University House with a team of marketing, outreach and recruitment specialists, supported by the wider ARU Marketing and Communications Directorate. They are engaging with the community, adopting a marketing approach of ‘think local, act local’. The ARU Director of Marketing, Communications and Recruitment and his team are leading the marketing and recruitment strategy for Peterborough to support future growth. This work is also guided and supported by the experienced ARU Peterborough Executive team.
Development of an Arena on the embankment	The Peterborough Embankment Masterplan Framework sets out an overarching vision and strategy for the Embankment site that the University campus is situated on. The aim of the Masterplan is to ensure that the Embankment plays a full and pivotal role in the lives of Peterborough residents contributing directly to the character, vitality, prosperity and sustainability of the City. The masterplan does not have planning status. The Masterplan Framework adopts a flexible approach which allows for alternative development scenarios on the Embankment site. Any developments proposed for the area need to be carefully considered in conjunction with the future development of the University campus to ensure it is able to grow.
Ability to attract visitors onto site and host public events	ARU have an established public engagement strategy and a range of processes to support the effective delivery of large-scale public events and activities, which will be applied to the Living Lab. This includes an approach to ticketing/online booking, health and safety, marketing and event programming. The university will seek to appoint a manager for the public engagement activity. In addition, ARU is also considering appointing a high profile Patron/Ambassadors for the Living Lab, such as a well-known scientist or engineer with connections in the Peterborough region.

2 Economic Case

The Economic Case of this FBC builds on the results from a robust and iterative development process carried out by the University delivery partners and project stakeholders at OBC stage. This work concluded that delivery of the Living Lab, University Quarter Cultural Hub and expanded University in Peterborough was the preferred way forward (PWF) on the grounds of both affordability and economic impact to address the objectives and challenges set out in the Strategic case of this document.

Recognising that a year has passed since this process was carried out for the OBC, the Economic Case in this FBC tests whether the PWF continues to offer good public value, and better public value than other available options, both in terms of scale of intervention, and best utilisation of the proposed new building.

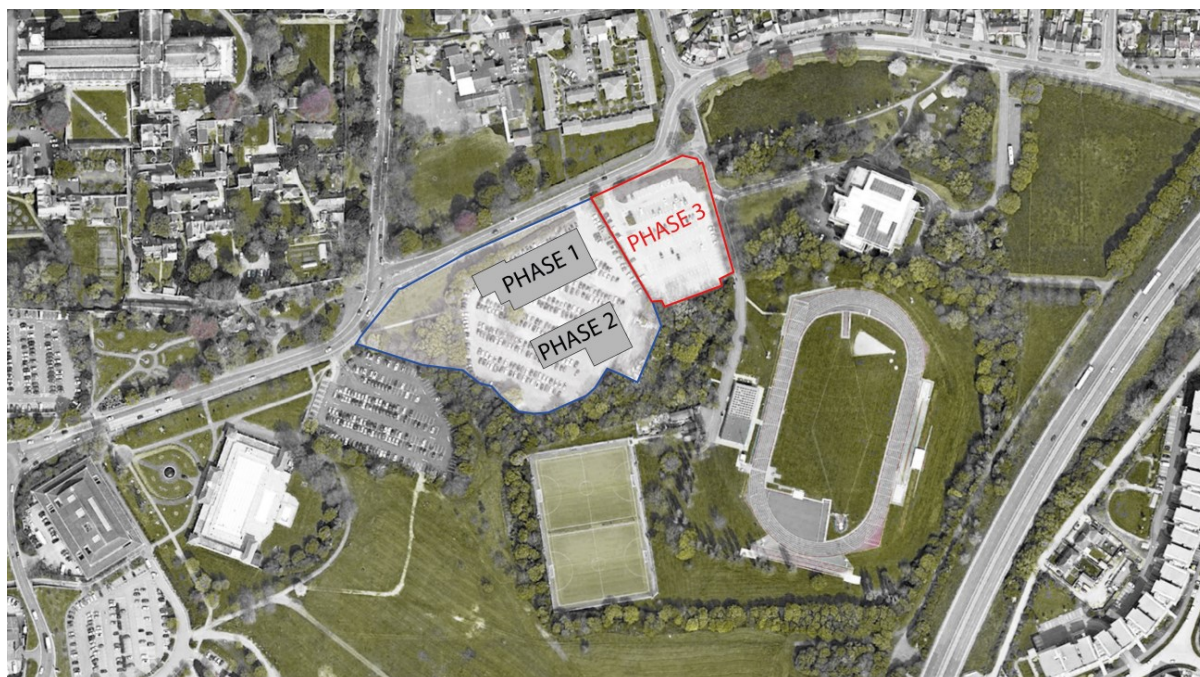
Throughout 2022 as part of RIBA Work Stages 1 and 2, and carried into planning submissions for Phase 3, the decision was taken to situate the Phase 3 building on the Regional Pool car park site. Other sites were proposed, as was set out in the OBC for Phase 3, with the Regional Pool car park emerging as the preferred option. The Economic Case and assessment of the PWF focuses only on the selected site for the Phase 3 building and does not consider these other site options.

2.1 Option identification

The scope and approach of the project, as set out in this document, is built on the result of three years of development by delivery partners, and is part of a wider programme of development for the University as discussed in the Strategic Case of this document.

The economic analysis contained in this Economic Case deals with the preferred way forward for **Phase 3: Second Teaching Building and Living Lab**. This project, as set out in the Strategic Case, will involve development of a second teaching building for occupation by ARU Peterborough with a Living Lab at its heart, located on the site of what is currently the Regional Pool car park to the East of the Phase 1 and Phase 2 buildings. Site option appraisal at OBC stage considered 4 possible locations for the building, with the Regional Pool car park being taken forward based on overall scoring, deliverability, and assessment of risk.

Figure 17. Chosen site location for Phase 3 (Regional Pool car park)



As discussed in the strategic case, the need for a University in Peterborough has been long identified in key policy documents as a priority, including the 2018 **Cambridgeshire and Peterborough Independent Economic Review (CPIER)** which identifies a University for Peterborough as crucial to addressing “uneven access to higher education”. Since publication of the CPIER, a series of conversations have occurred between longstanding education partners in the region to discuss the possibility of development of an ARU campus in Peterborough. This process eventually led to the development of a successful LUF funding bid, with the PropCo1 board in place to manage the process going forward.

During development of the LUF bid, it became apparent that there was opportunity to not only target the education mission of the University but also to catalyse the wider mission to support local people and communities through plans for the public facing Living Lab aspect of the Phase 3 building. The Living Lab will offer state of the art space for participatory research, science and technology events and exhibits throughout the year, boosting local engagement both with the sciences and wider university activities by offering the opportunity for students to showcase research being undertaken throughout the building. Co-location of the Living Lab within the expanded university campus means both the community based and education missions of the University can be developed hand in hand. Its integration into connected libraries, theatres, and museums, creates a Cultural Hub will play an important role in bringing local people of all ages into the University Quarter, as well as working within space and funding limitations.

Revisiting the Preferred Way Forward for Phase 3 after OBC stage, in the context of inflationary pressures and rising construction costs, it is appropriate to continue with the current scope rather than expanding scope at this stage.

The following section outlines the Critical Success Factors against which options for Phase 3 were considered.

2.1.1 Critical success factors

Critical success factors (CSFs) for the project can be grouped into three broad headings:

- Factors relating to the physical regeneration and cultural development of the City.
- Factors relating to the design and delivery of the physical infrastructure.
- Factors relating to the continued development of the University.

Factors relating to the physical regeneration and cultural development of the City.

1. **Meet cultural, regeneration and economic levelling up priorities in Peterborough** by:

- a. Creating a new landmark cultural asset, The Living Lab.
- b. Regenerating a dilapidated mixed brownfield site adjacent to the city centre to create a new destination space for Peterborough, the University Quarter Cultural Hub, with the Living Lab at its centre.
- c. Providing facilities within the Living Lab building to: support up to a potential 1,700 local students studying in STEM fields; supporting a critical stage in the expansion of the University of Peterborough; and addressing the persistent local skills deficits.

Factors relating to the design and delivery of the physical infrastructure

2. **Meeting the Budget:** The Phase 3 building including the external landscape and supporting infrastructure must be delivered within the budget of £27.87m based on £20m of Levelling Up Funds, leveraged with £7.87m of local investment from Peterborough City Council, the Combined Authority and ARU.
3. **Meeting the Programme:** The Phase 3 building must be open for business to students in autumn 2024. This will need to be achieved through a detailed programme management that will correlate all key interdependencies, such as achieving planning consent, design freeze, tendering and procurement etc, in addition to delivering an efficient building form and utilising readily available components that will minimise the risk of construction over-runs.
4. **Delivering the Spatial Brief:** The spatial brief for the Living Lab is at RIBA stage 3 with the curriculum, course structure, and timetabling in development but remaining to be agreed by ARU. The building will accommodate a spectrum of spaces including specialist teaching, general teaching, study, public engagement, and ancillary operational spaces to support the current specialisms of:
 - a. Business and Innovation.
 - b. Creative Digital Art and Science.
 - c. Health Sciences, Education and Social Care.
 - d. Engineering and the Environment.
5. **Obtaining Planning Consent:** The Phase 3 building must achieve planning consent by January 2023 to meet the inter-related requirements of the project programme and be open for business in autumn 2024. This will need to be achieved through a close and collaborative working partnership with the local planning authority and the project team via a Planning Performance Agreement, including a pre applications service, identifying issues early to inform the design process and minimise the risk of a refusal and pre-commencement conditions.
6. **Be Relevant, Adaptable and Flexible:** The Phase 3 building, including its environmental systems, must be designed to be adaptable to respond to the changing needs in the future. The Living Lab

will provide a window into the city's innovative future through participatory research, events, exhibitions, and flexible learning, including festivals of ideas, immersive displays, hackathons, forums, and evening classes. Exhibitions and facilities at the Living Lab will explore a range of technologies, such as emerging technologies, vertical farming, renewable energy, and green vehicles, making the University's STEM curriculum more accessible and relevant to local people.

Factors relating to the development and success of the University

7. **Creation of the Academic Infrastructure:** To meet the expectations of the twenty-first century, requires not just excellence in teaching, but also in all the facilities and services that make up the expanded University. Student and academic services need to provide a full range of social, welfare and other student-facing services alongside that of academic assessment, examinations, graduation etc. This involves **ability to recruit staff** as the first challenge. Development of the Living Lab, University Quarter Cultural Hub will support this by creating more teaching and research opportunities. Furthermore, **ability to Recruit Students** is another challenge in the current market in which universities compete for students, staff and research funding.
8. **Ability to engage with local businesses and industry:** Large corporate businesses represent a significant group of stakeholders and will present an opportunity for both course development, industrial collaboration/placement opportunities and future employment destinations for graduates. However, students are expected to foot most, if not all, of the costs of this vocational training. The success of STEM and apprenticeship programmes will be key to levelling up aspirations. To address the persistent local skills deficits which hold back Peterborough's growth aspirations will require businesses not only to engage but to support some of the costs of educating their future work force.

2.2 Options

The following section outlines options which were considered in order to address the challenges and opportunities outlined in the strategic case, as well as meeting the spending objectives for Phase 3 of the University programme. In accordance with HMT Green Book guidance, the Preferred Option was assessed along with a 'Do Nothing', 'Do Minimum', 'Intermediate', and 'Do Maximum' option. The preferred way forward for Phase 3 is shown to exhibit excellent value for public money, above and beyond all other options.

Option 0 – Do Nothing

This option assumed that no interventions are made and serves as the reference case, against which the additional outputs and outcomes from "Do Something" options are assessed.

This option refers to a scenario in which no investment is made beyond that already included in delivery of Phase 1 and Phase 2.

Without intervention, no outputs or outcomes are achieved towards the partners' objectives, access to higher education remains uneven and insufficient in the area, educational attainment figures remain low, and education pathways are not linked to employment opportunities, business needs or local sector growth policies. With only a single teaching building, the university is unable to reach critical mass. The spending objectives of the partners and the strategies this project helps implement, including the 2022 Employment and Skills Strategy, are not fully met.

SWOT score: 1

Option 1 – Do Minimum

This option would serve as the 'do minimum' approach in which low levels of additional student numbers are achieved through routes such as increased online learning capacity or pop up teaching space extension to current Phase 1 building, and no Living Lab or community focused space is delivered.

Under this option the full range of challenges identified in the strategic case are not met and nor are the spending objectives for Phase 3.

SWOT score: 5

Option 2 – Intermediate 1 (Preferred Way Forward)

The preferred way forward for Phase 3 is a new building to include teaching space and a Living Lab as described in the Strategic Case.

Phase 3 – Second teaching building and Living Lab: The expansion of the University via a second teaching building and the Living Lab will increase residents' access to higher education and expand the educational offer into STEM fields.

SWOT score: 13

Option 3 – Intermediate 2

Under this option the level of proposed public investment is the same as that of the preferred way forward, based on the available funding secured under LUF, but the scope of the Phase 3 building is shifted to focus more on the Living Lab / Community space, with reduced student capacity, teaching space, and research facilities.

Under this option, it is possible that savings could be made in aspects of building fit out and ongoing staffing requirements when compared against the preferred option. However, for the economic appraisal included below, given the funding amount from LUF is fixed, costs are assumed to be the same for this option.

Under this option it is assumed that student capacity would be greatly reduced from that of the preferred way forward, whilst visitor numbers would be increased from the level assumed under the preferred way forward.

This option, although offering increased benefits in relation to the supporting local communities and cultural development success factor, does not support the development and success of the University in as positive a way as the PWF since the potential for new students and teaching space is reduced, reducing the deliverability and long term operating stability of the University.

SWOT score: 11

Option 4 – Do Maximum

A do maximum option was considered, in which delivery of a new teaching space to increase student capacity at the university as well as a Living Lab contributing to the development of the university cultural quarter are delivered separately in two buildings. Although this option would deliver against the critical success factors and spending objectives, and deliver the range of desired benefits for the project, affordability of this option is low, and would be heavily reliant on successful access to further external government funding beyond that already secured.

SWOT Score: 11

2.2.1 SWOT analysis of options

A summary of the SWOT analysis against the Critical Success Factors is provided in the table below with options rated from 0 to 5, where 0 is very poor alignment/contribution and 5 is excellent alignment/contribution.

Figure 18. SWOT analysis summary

	CSF bucket 1 - Physical regeneration and cultural development of the City	CSF bucket 2 - Design and delivery of the physical infrastructure	CSF bucket 3 - Development and success of the University	Total
Option 0 – Reference case	0	0	1	1
Option 1- Do minimum	0	3	2	5
Option 2 – Intermediate 1 (Preferred way forward)	4	4	5	13
Option 3 – Intermediate 2	5	4	2	11
Option 4 - Do maximum	5	2	4	11

2.2.2 Preferred Way Forward

Based on the SWOT analysis **the preferred way forward identified during the OBC stage continues to be the preferred option - Option 2 – Intermediate 1.**

This option has been taken forward for economic appraisal.

2.3 Cost Benefits Appraisal of the preferred way forward

The assessment of costs, income and impact has been undertaken in line with the best practice principles set out in HM Treasury Green Book and MHCLG Appraisal Guidance. All quantified impacts have been adjusted to reflect current prices based on the discount rate of 3.5%. Where relevant, historic monetary values have been converted into current prices to adjust for inflation using HM Treasury GDP deflators. An appraisal timeframe of 15 years has been used.

2.3.1 Costs – Preferred Option

The costs of the preferred option (and underpinning assumptions) are set out below. The table below shows the capital costs (which include design, professional fees and construction costs) and opportunity cost (PCC land contribution) included in the BCR calculations.

Figure 19. Cost overview – preferred option

Phase	Cost Category	Cost Description	Predicted Costs (£m)	Who bears the cost	Funding Source	Funding Category	OB*	Total costs (£m)
Phase 3	Capital	Land Contribution (opportunity cost)	1.87	PCC	Internal	Public	15%	£2.15
Phase 3	Capital	Construction, Design, Professional fees	20.0	PCC	LUF	Public	15%	£23.0

Phase 3	Capital	Construction, Design, Professional fees	2.0	CPCA	Internal	Public	15%	£2.3
Phase 3	Capital	Construction, Design, Professional fees	4.0	ARU	Internal	Private	15%	£4.6

*Optimism Bias (OB) has been applied to the costs as described below.

For BCR calculations, costs are split 30% into FY22/23 and 70% into FY23/24 with spending of all LUF monies occurring before 31st March 24.

2.3.2 Optimism bias and contingency cost

The costs of project delivery include optimism bias and contingency to quantify the impact of risk on these costs. Both optimism bias and risk are reflections of the level of uncertainty around the project and attempt to account for the potential cost implications of unknown factors or identified risks being realised. Optimism bias and contingency are conventionally higher the earlier into the project lifecycle a scheme is. As more appraisal and investigation work is undertaken on a scheme, the level of uncertainty and risk is reduced, which is reflected in reduction in both contingency and optimism bias.

Significant allowance for project development costs as well as inflation is included in the overall costing for Phase 3 capital works (please see project budget in the Commercial Case for further breakdown).

For the purpose of the economic evaluation, further optimism bias has been applied in line with the supplementary HM Treasury Green Book guidance for a Standard Building, the lower and upper bound for which range from 2-24%. As such optimism bias of 15% has been applied to Phase 3. These levels of optimism bias are considered extremely robust given the level of planning already undertaken on the design of Phase 3.

2.4 Benefits – Preferred Option

Analysis of benefits for the optimal case has been informed by the project logic model and underpinning Theory of Change (ToC), presented below.

2.4.1 Theory of Change¹⁸



¹⁸ Note: The value of land contribution is included as an opportunity cost in the economic assessment however is not included in the total value of this FBC (£26m) – further details in the Financial Case

2.4.2 Economic appraisal

The economic case at OBC stage considered the economic benefits of both Phase 1 and Phase 3. As part of this FBC process, given that Phase 1 is already operational, we have taken the opportunity to review the economic case by looking solely at Phase 3. This provides the opportunity to review and check that there is still a strong economic case for Phase 3 alone. Therefore, the economic benefits considered in this section only look at the benefits of investment in Phase 3.

Economic appraisal of Phase 3: Teaching space & Living Lab has been developed with the impacts and costs appraised over a 15-year period from 2022/23 inclusive of a 5 year construction and scale up period followed by 10 years of operation at full capacity. Clearly, the economic benefits of this capital investment will continue to be achieved past the 15-year period, and so the BCRs achieved should be considered conservative in this respect.

Student numbers

The main benefits of the Phase 3 project stem from expanding the University Campus in Peterborough, allowing for optimal growth of up to 1,700 students studying concurrently by 2027/28, with a curriculum and delivery model to meet the skills needs that growth in the Greater Peterborough business base will generate. The university will offer a range of programmes from graduate degrees to blended work programmes and short courses, with undergraduates and degree apprenticeships constituting a majority of the student base. Student outcomes have been modelled based on intake needed to align with these student numbers and based on the selection of courses on offer, and course lengths.

The economic analysis, and associated sensitivity testing, in this Economic Case highlight the strength and robustness of the economic outputs delivered by Phase 3. It is important to recognise, however, that there are a range of contextual challenges facing the HE sector which may result in lower student numbers or, more likely, that it will take longer to reach the optimal numbers than current trajectories. These challenges include:

1. General uncertainty around the HE sector in terms of student numbers – the sector as a whole is 4% down on student applications year on year.
2. In particular, there is uncertainty around future overseas student numbers given recent Government discussions about reducing overseas students to reduce net immigration. Whilst this is not a large component of the ARU-P operational model, it could impact student numbers.
3. Uncertainty around the economy – with the UK entering a recession and with further challenges created by cost of living increases, and high employment.
4. The ability of students to access the campus. This is relevant in terms of the wider transport plan for the region and in particular, the need for students to have access to parking in the city.

Each of these factors could potentially reduce the speed and level of student uptake. Therefore, this economic case looks at the full range of potential student numbers to test economic performance under different conditions.

Economic Appraisal Assumptions

Student / Staff numbers and course breakdown model

The indicative student model is based on the student numbers mentioned above, provided by ARU, which includes growth to an optimal peak of up to 1,700 students studying concurrently by 2027/28 in the new Phase 3 building. The student model and associated graduations were modelled over the period 2024/25 to 2030/31, for which data was provided, with the remainder of the evaluation period assumed to continue at the level achieved after reaching optimal peak in 2027/28. A baseline student intake of 50% of the optimal intake (i.e. 850 students) has also been tested for economic value to account for the potential impacts of the risks mentioned above (see sensitivity analysis later in this economic case).

Assumptions informing the appraisal are set out below:

- Degree completion rate of 78% has been applied in line with HESA data for ARU¹⁹
- Graduates assumed to enter the workforce after the final year of learning, based on length of course. Leakage and other additionality is described in the next section.
 - The benefit from these graduate roles accrues in the form of wage premiums above that of non-graduate roles. Government statistics show that for the graduate cohort aged 21-30, the median difference in salary vs non-graduate counterparts is £4,500. This is considered to be a robust value for use in this economic appraisal as it covers the early years of employment which is the focus of the appraisal period, and use of a median accounts for outliers within the cohort with extremely large salary gaps, likely making this a conservative estimate of the potential benefit. Another reason to consider this a robust statistic is that STEM graduates, which Phase 3 targets specifically, are amongst the highest earning of all graduates with the largest difference in median salary for graduate roles compared to non-graduate roles.
- Benefits have been calculated based on graduate cohorts joining the university during the 15 year appraisal period (student model shows that 91% of completions are undergraduate level, 7% short courses, 2% postgraduate).
- Short course outcomes assumed to occur after first year of learning (starting to accrue from year 3 of evaluation period. This is a deliberate simplification of the potential short course schedule as detailed timescales for the courses and at which time of year they will occur is as yet unknown, however, it is expected that this is a conservative estimate given the potential for multiple courses to be run throughout the year.
- Benefits of operations of the University from year 1 to 15 in direct job creation have been estimated based on a ratio of 26 Students per academic staff member and 3 academic staff per professional services staff member.
- The university would see a potential split of undergraduate intake between Greater Peterborough, wider region/UK and International of 50%, 30%, and 20% respectively. For Postgraduates this intake split is assumed to be Greater Peterborough (25%), wider

¹⁹ Based on ARU projected learner outcomes for degree starters. (Source: HESA: Table T5 – Projected learning outcomes)

region/UK (15%) and International (60%). These are estimations of proportions across the portfolio by 2027/8. We will be able to set evidence based social mobility targets once we have data to establish baselines (2023) This has been taken into account when considering leakage in the additionality calculations in the section below.

Other Assumptions

- The BCR has been calculated for the Combined Authority area to ensure for local partners that the project provides good economic value at a local level, given the high level of local commitment and investment. It is reasonable to assume that the BCR on a UK basis would likely be higher.
- Phase 3 delivers a range of events throughout the year in the Living Lab, attracting 25,000 visitors per year to the University and surrounding area.
- Fiscal costs are incurred as draw down of government grant in line with the capital expenditure profile for the project, for a total cost of £27.8m
- Discount rate of 3.5% per year in line with HMT Green Book.
- 10 year persistency of benefit applied to increased wage level outcomes for graduates and short course learners. Quantification of the benefit of education on wages above a baseline level is a lifetime benefit so this assumption is likely an underestimation of the true benefit value.
- 10 year persistency applied to new direct and indirect jobs created through Phase 3 operations.
- Local student expenditure is not modelled – it is assumed this would occur anyway if the individuals were instead not to go to university and chose to stay and work in Peterborough in non-graduate jobs.

2.5 Outputs

The table below presents a summary of the indicative outputs delivered by Phase 3:

Figure 20. Estimated outputs summary table

	Students supported per year when Phase 3 at full capacity*	Additional graduates (over 15 year appraisal period)**	Employment outputs	Physical space outputs (sqm)
Phase 3: Teaching space and Living Lab	850 to 1,700	1,400 to 2,800	89 teaching and professional staff (assuming optimal student numbers)	2,516 sqm GIA teaching building and Living Lab

** The ranges for education outputs presented are for the 50% of optimal student numbers scenario up to the optimal student numbers level.*

***The additional graduates presented here are a result of the modelling assumptions outlined above including a scale up period, assumptions about completion rates, and course lengths (i.e. graduates from students starting on 3+ year courses starting to accrue later into the evaluation period).*

2.5.1 Additionality & net outputs

Graduate level jobs

Additionality Assumptions:

Deadweight is assumed at 0%. This is based on the assumption that it is unlikely that students will gain employment in highly skilled roles without securing a graduate qualification.

Displacement is assumed at 5%. This refers to a student qualifying elsewhere but securing a job in Peterborough, thereby displacing the economic benefit generated by ARU new provision (increased jobs opportunities given by a more skilled workforce) from another locality (less job opportunities available for local graduates). We have estimated a low percentage as we assumed that employers will resort to recruiting from a wider catchment area only if there is a lack of highly skilled workers locally. Moreover synergies between the university and the newly established businesses of Phase 2 and Phase 4 will ensure that local recruitment is maximised.

Leakage of 50% has been applied to graduates, a moderate level in line with HESA data on regional student outcomes in which 53% of students that went to university in the East region remained for work post-graduation.²⁰

Conclusion: When factoring deadweight, displacement and leakage, the total number of net additional students entering the local workforce following graduation is 2,779 over the 15 year appraisal period.

Employment in education at the University

Number of direct jobs created - 89 new jobs created

Assumptions:

Deadweight is assumed at 0% as the requirement for new teachers and admin roles is dependent on the existence of a new university.

Displacement is assumed at 40% reflecting potential reduced demand for provision elsewhere as a result of the investment (current ARU staff working in other ARU campuses and relocated at ARU Peterborough).

Leakage is assumed at 15% as people from outside the area may benefit from the new jobs created.

Conclusion: When factoring deadweight, displacement and leakage, the total number of net additional direct jobs in education is 45 over duration of Phase 3.

Number of induced and indirect jobs created as a result of additional jobs in education - 8 indirect and induced additional jobs created. The calculation is based on Type 1 Education industry employment multiplier for indirect (1.1) and Type 2 Education industry employment multipliers (1.2) for induced jobs.²¹

²⁰ Higher Education Graduate Outcomes Statistics: UK, 2018/19 - Salary and location of graduates in work

²¹ 2020, Scottish Government. [Supply, Use and Input-Output Tables and Multipliers for Scotland 1998-2017](#).

Indirect jobs represent the additional jobs created in the University's supply chain activities as a result of the new facility, related to the delivery of goods and supplies for operation of the University. The indirect jobs are calculated by multiplying the direct new jobs by the "Education industry" Type I employment multiplier equating to $45 \times 1.1 = 49.5$ direct and indirect full-time equivalent jobs; less direct jobs (45) provides 4 additional indirect jobs supported throughout the supply chain.

Induced jobs represent the jobs created in the local economy as a result of the effect of increased employment. For instance, we would expect to see an increase in household expenditure amongst people who have gained employment, either directly or indirectly. Induced jobs are calculated by same method as above with the "Education industry" Type II employment multiplier: 1.2. We therefore estimate that further 4 jobs will be supported as a result of this induced demand.

Physical space

2,516 sqm GIA second teaching building and Living Lab, 326 sqm of which will be available for use as a Living Lab and public teaching space, with space for 652 occupants in the building, including 421 occupants in teaching spaces (excluding the Living Lab and welfare support areas). The building is arranged over two floors and is 9.65m high to the top of the main roof parapet. The building form has been developed to express the primary elements of the project – the Living Lab as a central focus to the campus and the Teaching Wing.

2.5.2 Monetised benefits

There are broadly five direct quantifiable benefits from the project:

1. **Direct employment** as a result of the creation of additional teaching space for the University as staff are recruited.
2. Indirect and induced employment created in the wider economy as a result of the creation of the new University.
3. Financial benefits accrued by students gaining qualifications and realising salary uplift:
 - Studying the additional HE courses available as a result of Phase 3 and gaining graduate level employment as new graduates enter the workforce and graduate level jobs are created, attracted or retained within the region.
 - Studying the additional short courses available as a result of Phase 3 and realising salary uplift.
4. **Visitor spending in the local economy** generated as a result of additional visitors to the Living Lab.
5. **Amenity benefits** from land transformation.

Benefit 1: Direct jobs created

Rationale:	DLUHC appraisal guidance recognises the GVA impact that creation of a job has on the local economy.
Method:	An average output per job was sourced from ONS regional labour market statistics for the East region. An average was taken for Education and Professional, Scientific, and Technical. In 2018 prices this gave 38,987, scaled to 2021 prices: £41,694.62

Persistence of benefit:	10 years
Value:	£18,918,100

Benefit 2: Indirect jobs

Rationale:	Green Book guidance recognises the wider impacts that an increase in employment has on the economy, in particular the creation of indirect jobs in the supply chain.
Method:	Using the Type 1 employment multipliers for education ²² : 1.1 as described above and monetising using the same method as for Benefit 1.
Persistence of benefit:	10 years
Value:	£1,891,810

Benefit 3: Induced jobs

Method:	Taking the same approach as in benefit 2 but applying the Type 2 employment multipliers, to understand the wider economic benefits of the direct jobs created: 1.2 These were then monetised in the same fashion as above.
Persistence of benefit:	10 years
Value:	£1,891,810

Benefit 4: Wage Uplift from graduates gaining employment in graduate roles vs Non-graduate role

Rationale:	Graduate labour market statistics ²³ show that completion of a degree has a positive lifelong impact on wage levels, with a significant Salary Premium for Graduates over Non-graduates.
Method:	As described in the section above, a £4,500 salary premium has been applied for Undergraduates (£9,000 for post graduates based on observed median values across UK institutions for 21-30 year olds (i.e. the immediate cohort of

²² Scottish Supply, Use, and Input-Output tables (2018):

²³ 2021 Graduate labour market statistics (gov.uk)

	graduates. ²⁴) This is considered to be conservative given that the ARU-P course offering skews towards STEM and other courses that are heavily employer-focussed and demand driven. This value has then been applied to the net number of undergraduates and postgraduates produced per year from the student model.
Persistency of benefit:	10 years
Value:	£122,685,159

Benefit 5: Training benefit (short courses completed)

Rationale:	The economic value participation in training represents the additional annual earnings gain per employee as a result of achieving the qualification; it is the lower estimate, and reflects an assumption that 50% of the employment benefit is attributed to the qualification, following the approach of McIntosh (2007)
Method:	The economic value of achieving a level 2 qualification was sourced from the Greater Manchester Unit Cost Database at £515 per person per year.
Persistency of benefit:	10 years
Value:	£1,835,872

Benefit 6: Increase in day time visitor spend

Rationale:	Based on the ambition to hold multiple events per year, with potential to generate thousands of visits per event, the Living Lab is estimated to generate 25,000 visits to the local area per year. Tourism brings with it additional spend in the local area, The average day time tourism visitor spend for the East of England (£38.07) was sourced from the Visit Britain (2019) Great Britain Day Visits Survey. Adjusted to 2022 prices gives £40.54 per day time visit.
Method:	Of the visitor numbers, ARU expect that 50% of visits will come from the local area, 35% from the region, and 15% from the wider UK. It has been assumed that only visits from the wider UK will accrue spending at the full level mentioned above (£40.54). Visits from the region assumed to generate 50% of the full spend benefit. Visits from the local area assumed to generate 10% of the spend benefit. Applying these ratios to the 25,000 visits per year gives total spend of £380,063 per year in the local economy.

²⁴ Graduate Labour Market Statistics 2021 (gov.uk)

Persistency of benefit:	1 year
Value:	£5,320,875

Benefit 7: Amenity Benefit

Rationale:	MHCLG guidance recognises the benefits to society that stem from improvements to brownfield, unused sites. Although there is no change in land use, redevelopment of the Regional Pool Car Park site will improve value perceptions in the area, increase footfall, and encourage engagement with culture and businesses.
Method:	MHCLG guidance values amenity benefits for urban sites at £109,138 per ha at 2016 prices. Adjusted to current prices gives a value of £126,720.25. Applied to the 0.4 ha site: £52,127
Persistency of benefit:	10 years
Value:	£521,266

2.5.3 Summary Appraisal Table

Based on the above analysis the summary appraisal is set out below showing economic benefits over the 15 year appraisal period, in Net Present Value.

Figure 21. Summary appraisal table

Benefit	Net Monetised Benefits (£) Preferred Option
Direct jobs created	£18,918,100
Indirect & induced jobs (supply chain & wider economic activity)	£3,783,620
Graduate wage uplift	£122,685,159
Additional visitor spend in the local economy	£5,320,875
Amenity Benefit	£521,266
Training benefit (short courses completed)	£1,835,872
Total benefits	£157,771,429
Total net benefits (Present Value)	£99,412,635

2.5.4 Benefit Cost Ratio (BCR)

The table below sets out the BCR for the Preferred Option. The table assumes optimal/aspirational student numbers are achieved (with the 'Sensitivity analysis' section below analysing an alternative scenario where 50% of optimal student numbers (baseline) are achieved).

Figure 22. BCR for Preferred Option

	Preferred Option - Net Present Value
Total Net Present Value Benefits	£99.4m
Total Net Present Value (Costs)	£29.9m
Benefit Cost Ratio (BCR)	3.32

The economic appraisal of the options presented above shows that the Benefit Cost Ratio (BCR) for the recommended option. This review confirms the Recommended option as delivering very high value for money (VfM).

The preferred option delivers a Benefit Cost Ratio of 3.32 based on current costings and student numbers and is considered High value for money (VfM) according to government guidance and benchmarks which defines the VfM category as:

- Poor VfM if the BCR is less than 1.0;
- Low VfM if the BCR is between 1.0 and 1.5;
- Medium VfM if the BCR is between 1.5 and 2.0;
- High VfM if the BCR is between 2.0 and 4.0; or
- Very high VfM if the BCR is greater than 4.0

2.5.5 Sensitivity analysis

The results of the economic analysis above must be tested to ensure it is robust to potential changes in outcomes due to the risks outlined below:

The key element affecting the economic appraisal is the level of achieved student numbers relative to the optimal student numbers up to 2030 as contained in the Operating Model for Phase 3, over and above those student numbers already identified and committed to under Phase 1. This is highlighted in the sensitivity analysis below.

The ability to recruit locally based staff may also be a factor that erodes the impact of the new University. A further concern could be the extent to which graduate level employment is available locally and whether the new University is able to generate the scale and quality of graduates required to meet local economic needs. These sensitivities have been tested and the net impacts reported below.

In light of the uncertainty outlined above, a sensitivity test have been carried out to ensure the robustness of the economic value for money analysis.

By taking an indicative baseline student intake of 50% of the optimal level outlined in the student model we can test the sensitivity of the economic value for money to a reduction in

student intake due to the uncertainty outlined above. The table below compares the monetised benefits and BCR for the optimal scenario (as discussed throughout this economic case) and a baseline scenario which assumes student intake at 50% of the optimal level.

Figure 23. Comparing BCR and Net Present Benefits for a baseline student intake of 50% the level in student model

	Student intake Scenario 1: Optimal level	Student intake Scenario 2: 50% of optimal level
Total Net Present Value (Benefits)	£99.4m	£60.4m
Total Net Present Value (Costs)	£29.9m	£29.9m
Benefit Cost Ratio (BCR)	3.32	2.02

Therefore, even allowing for a baseline level of student intake at 50% of the optimal level, the preferred option delivers a Benefit Cost Ratio of 2.02 which is still High VfM according to the government benchmark VfM categories shown above and still represents a strong economic case for investing in the Preferred option to generate direct and indirect benefits for the region.

Although the economic benefits remain strong with a reduction to the estimated graduates entering the workforce, it is important that student intake numbers remain strong to support the operating model for Phase 3 outlined in the Financial Case.

2.6 Non-monetised benefits

Reducing this project to a simple BCR number belies the fact that the success or failure of this investment in Peterborough relies on many factors. Simply assuming that such a high BCR value assures its success can lead to a false sense of comfort. The Economic Analysis is only one part of a well-informed decision.

The following provides an overview of anticipated wider, non-monetary benefits, which also align and contribute to the Combined Authority Growth Ambitions themes.

Health and Wellbeing: residents living in deprived areas in Peterborough and Fenland will be able to benefit from new skills provision within growth sectors leading to improved economic outcomes and health and wellbeing benefits. Higher wages from graduate positions will also improve the wellbeing of residents and increase life expectancy.

Regeneration of open green space through creation of **new visitor location for the City**, utilising upcycled mixed brownfield site with cycle paths and pedestrian footpaths lined into broader Peterborough networks.

Community benefits: the regeneration of the university site will open up a key leisure area for the city centre, helping to establish a thriving University Quarter and Cultural Hub on the Embankment site and revitalising Peterborough's waterfront as a community asset and destination. Opening up the embankment, clearing the scrub areas, illuminating it and populating it with hundreds of students moving between the university quarter and the city

centre will improve public security and transform a poorly used city-centre site into a vibrant cultural, commercial and community hub that local people can be proud of.

New event space to raise the profile of local groups, community work, and encouraging higher aspirations amongst young people.

Increase in graduate numbers working in the city leading to **increased productivity** through a higher skilled population.

Reduced deprivation in a left-behind area with a persistent skills gap. Increase in civic pride, leading to increased wellbeing, health and life expectancy along with a reduction in anti-social behaviour.

3 Commercial Case

This section sets out the commercial arrangements for delivery of the Phase 3 building, including the procurement strategy and confirmed suppliers to date (including confirmation of the Main Contractor to design and build the facility), a review of the deliverability of the project, budget estimates, benchmarking and a review of subsidy control.

The approach to procurement and contracts for Phase 3 builds on the successful approach adopted for Phase 1, incorporating lessons learned which apply to Phase 3. The procurement strategy has been driven in part by the need to meet timescales for the use of LUF funding, which is for all monies from the Fund to be spent by 31 March 2024, and for the Phase 3 building to be operational in autumn 2024 for the 2024/25 academic year.

The capital costs for Phase 3 set out in this Commercial Case are up to date and market-tested, including through a benchmarking exercise undertaken comparing the Phase 3 building to other Higher Education facilities. Costs have been developed through RIBA Work Stages 1 – 3 and are current to November 2022. RIBA Work Stage 4 presents an additional opportunity to refine cost estimates and fix costs in place with suppliers to mitigate inflation risks.

3.1 Procurement route and contracts

3.1.1 Procurement strategy and route

Construction will be delivered via a Design & Build procurement route using a two-stage tendering process and an industry standard form of contract. A design and build procurement route provides project partners with a fixed price for the construction works, which will reduce exposure to potential overspend. By adopting a two-stage tendering process, the client team will work with the Main Contractor on an open-book basis to ensure competition is maintained throughout the second stage, and that risks are appropriately allocated and managed.

Long-lead items and works packages will be reviewed with the Main Contractor to verify competition throughout the supply chain, and to offer greater financial certainty to all parties. In addition, this procurement route will give PropCo1 the opportunity, where necessary, to place early orders for long lead items ahead of contract award for packages such as piling or structural frame to secure prices or minimise programme risk. This process will assist in ensuring the contractor's risk pricing is reduced and hence achieve value for money.

The JCT Design & Build form with client amendments will be used, in line with the approach adopted for delivery of Phases 1 and 2. This is an industry recognised and widely used contract form, which ensures all parties are familiar with the structure, risk apportionment, key provisions, and contractual procedures/mechanisms. It is typical for clients to amend this form to insert additional provisions around risk apportionment and payment. PropCo1 will procure professional legal advice as required for the necessary client amendments to this form of contract.

Procurement of the infrastructure is split into four categories:

1. **Main Contractor:** the main contractor is required to deliver the physical capital works, which broadly includes:
 - a. Off plot Utilities, highways work associated with Phase 3.
 - b. On plot infrastructure works, utilities, road, car parks, landscape and ancillary buildings.
 - c. Building and internal fit out (not including IT and AV).

The first stage of the Main Contractor procurement was concluded in September 2022 with the appointment of Morgan Sindall Construction & Infrastructure Ltd (MS) who entered into a PreConstruction Services Agreement (PCSA) with PropCo1 in November 2022. Throughout the later period of RIBA Work Stage 3, MS have collaborated with the client-side Design Team to better understand the design concept. Upon receipt of the Employer's Requirements, they will continue into the technical design and final costing in RIBA Work Stage 4. Under a novation agreement the existing Design Team will continue to provide their services with overall design responsibility switching from PropCo1 to MS when RIBA Work Stage 4 commences.

During the remainder of the PCSA period, the terms of the main construction contract (JCT Design and Build 2016) Schedule of Amendments will be agreed with the Main Contractor, who will also deliver a final contract sum as part of their Contractor's Proposal, scheduled for 9th February 2023.

The Main Contractor has requested approval to begin early procurement of the project's CLT package through a sub-contractor 'mini-competition'. This will require MS to begin engagement with their supply chain at the start of RIBA Work Stage 4 and for PropCo1 to instruct to proceed with the recommended CLT supplier at the end of January 2023.

2. **IT/AV specialist equipment:** The IT/AV for Phase 3 will be delivered as a standalone package, separate to the Main Construction Contract. The IT/AV package will be managed by ARU's IT Services department and delivered by their preferred suppliers. This decision has been made based on the recommendation of ARU's Chief Digital and Information Officer, noting that ITS have managed IT/AV for all ARU building contracts for the last five years, benefit from established relationships with the specialist preferred suppliers and are judged to be best placed to manage the technical challenges of the Phase 3 specification.
3. **Land:** the proposed development plot 'The Embankment, off Bishops Road Peterborough' forms part of the agreement between the Combined Authority and PCC where PCC have committed to providing land in phases for use in the development of the new University campus. The valuation of the land has been agreed at £1.87m through a valuation process undertaken by PCC. To maintain the project's current critical path, the land title for the Regional Pool car park will need to be transferred from PCC to PropCo1 by 12th February 2023. This is to allow sufficient time for the site to be secured, an archaeological investigation to be fully completed and any additional pre-commencement conditions and enabling works to be actioned, prior to the Main Contractor mobilising in April 2023. If the title transfer cannot be arranged by this date, then a licence to conduct these works on the site will need to be secured from PCC. PCC have convened a number of meetings

to address this issue and have offered assurances that the required date will be facilitated. However, until the land transfer is formalised, and noting ongoing uncertainty in relation to the associated temporary car park, this element remains as a risk to the successful delivery of the project (covered further in Annex 6.3: Project risk register).

4. **Professional team procurement:** as part of a plan for early mobilisation, the Combined Authority procured the multidisciplinary team delivering Phase 3 using the Crown Commercial Services Framework. A team is now in place to deliver Phase 3, including:

Discipline	Organisation
Project Management	Mace Consult
Cost Consultant	Mace Consult
Architecture	MCW Architects
Mechanical, Electrical and Public Health	Couch Perry Wilkes
Civil and Structural engineering	Smith and Wallwork
Landscape	Land Use Consultants
Acoustic consultant	Anderson Acoustics
Fire engineering	Affinity Fire Engineering
Transport	The Transportation Consultancy
Building Control	Quadrant
BREEAM	Couch Perry Wilkes
Planning	Pegasus
Principal Designer	Safescope

3.1.2 Payment mechanisms

PropCo1 will appoint the main contractor and make payment under the agreed form of contract via the company held bank account.

Following procurement of the consultant team, PropCo1 will appoint them and be responsible for paying for the design, procurement and delivery of the Phase 3 building under the agreed contract to the consultant team and the Main Contractor.

The payment mechanism for the construction works associated with the provision of the new buildings will be set out in the form of contract used, and subsequently in accordance with the payment terms dictated under the Housing Grants Construction and Regeneration Act 2011. It is typical for such payments to be based on interim monthly valuations of progress completed on site and applied for via the Main Contractor's Interim Applications for Payment. These applications will be verified by the Combined Authority's appointed Quantity Surveyor through valuation/inspections on site, validated through the necessary

payment notices and paid in accordance with the contract terms as part of the delegated authority from PropCo1.

Further payment amendments may be proposed on advice from PropCo1's legal advisers, to ensure that the contractor signs up to the fair payment charter and that prompt payment is made throughout the whole supply chain.

Accountancy Treatment

As no PFI or similar arrangements are proposed for construction of the Phase 3 building, no accounting treatment questions arise for presentation in this Business Case. PropCo1, a local authority controlled joint venture company, will own the asset once constructed and this will be incorporated into the financial statements of the local authorities accordingly.

3.1.3 Risk apportionment

All construction contracts seek to apportion the risk of various events occurring between the Employer and the Contractor to achieve a fair balance of risk between the parties. This apportionment of risk is usually delineated by which party is best placed to manage the occurrence of an event. As a rule, any event which is within the control of the Contractor will be a Contractor's risk while events which are outside the control of the Contractor will be an Employer's risk.

The procurement strategy chosen for Phase 3 determines that the infrastructure risks will be transferred to the Contractor upon final agreement and execution of the Main Construction Contract. During the contractor's pricing phase, the Employer's Agent and the Contractor have inputted to a joint contractor's risk register; identifying the key risks that are expected to be transferred (including three of the Project's highest risks). This register will then be used as the baseline for the contract negotiations and final agreement on risk apportionment, as reflected in the Main Construction Contract.

The risk register appended at Annex 6.3 identifies several key infrastructure risks for the delivery of the Phase 3 building, noting the risk likelihood, severity, and time and cost impact, and proposed mitigation strategy.

3.1.4 Implementation timescales

The timeline of events follows the approved project master programme (see project plan in Chapter 5, Management Case), to meet the key project milestones outlined in the successful LUF funding application to achieve spades in the ground in Q1 2023, completion of the building structure by March 2024 noting that the memorandum for agreement between Department for Levelling up Housing and Communities and PCC states in clause 4.10 that the Council must spend all grant funding by the end of the funding period, 31 March 2024.

This will be followed by completion of the fit-out of the Living Lab and teaching facilities in autumn 2024. The programme makes no allowance for delay in determination of the full planning application for Phase 3 and assumes the critical path is maintained in line with the project plan outlined in the Management Case.

3.2 Deliverability

3.2.1 Building and site

Building and external works

The original LUF bid application for Phase 3 proposed a Phase 3 building of 3,000m² Gross Internal Area, of which 1,000m² would be dedicated community and cultural space for the Living Lab and associated community learning space derived from a fixed budget of £27.9m. The overall £27.9m includes a construction budget sum of £26m (inclusive of funding for specialist IT/AV equipment to fitout the building), with a £1.87m allowance for land purchase.

Following a RIBA 1 site appraisal and optioneering process, it became apparent that a smaller building would have to be delivered to meet the £27.9m budget, while still supporting an up to a potential additional 1,700 students by 2027/28. The RIBA Work Stage 3 report proposed a revised design for a Phase 3 building based on a 2,516m² Gross Internal Area; a multi-use educational facility suitable for a mixed use of working, learning, teaching, collaborating inclusive of the Living Lab. In this sense the 'Living Lab' expands from being a single area within the building to an integrated facility strategy which incorporates the whole facility while maintaining the 'Living Lab' physical space as a centrepiece.

The building will include all associated external landscaping and Infrastructure, all delivered within the available cost envelope. The revised building is an appropriate size for a building of this nature and allows more flexible use of the building as an adaptable asset for the future. This revised scope meets the critical success factors for the project and is deliverable within budget.

Site and external works to connect Phase 3 to Phases 1 & 2

The land on which the Phase 3 building will be located is the current Regional Pool car park and is notionally defined based on logical physical boundaries within the wider University campus site (e.g. back of footpath) and logical extension of the current infrastructure strategy for Phase 1 & 2. The site map below sets out the 'red line' for the Phase 3 site boundary.

Figure 24. Proposed Site Layout, Architectural Stage 3 Report

The completed works to the Phase 1 access road and parking will require a level of adjustment outside of the Phase 3 title boundary to tie the projects into a single campus. A fully accessible maintenance road linking the main university entrance road on the west of the Phase 3 site to the Regional Pool Access Road on the east is included in the current design proposals to the north of the Phase 3 building. However, the omission of this northern access road is currently being explored.

Enabling works

It is anticipated that a scope of enabling works will be required following vacant possession of the Regional Pool car park site in February 2023. The exact requirements cannot be confirmed at this stage and are subject to the Planning determination. They are likely to include:

- Securing site perimeter (hoarding erected).
- UKPN cable removal
- Ground preparation for other services (arboricultural work)
- Any pre-commencement conditions from Planning determination.

Any enabling works must be sequenced and deconflicted with the archaeological investigation.

Once this scope of works is confirmed it will be proposed to the Main Contractor to complete under a variation to their PCSA. The scope of works will be limited to the priority

early works only to limit abortive works should it not be possible to agree a final contract sum.

3.2.2 Deliverability track record

Phase 1 was delivered on time and on budget, with the first students being taught on opening in September 2022. The legal and governance framework enabled the special purpose vehicle (PropCo1) to effectively manage the risks associated with the development of the new University. The development management services provided by the combined authority has meant that the overarching objectives of the University have been met to date, and that the necessary financial and legal compliance considerations for all parties are fulfilled. A Phase 1 post project review process is underway, where the outcomes will be fed into the delivery of Phase 3 and beyond. This model of delivery will continue to be used for Phase 3, however there is an acknowledgement by the partners that a if further projects are introduced then a programme management approach to governance and delivery will need to be taken.

ARU Peterborough

ARU is a large university operating at scale across several campuses (including Peterborough) with a shared cost model. ARU has a long history of successful financial management. Its financial model is not heavily geared, consistently returns a surplus, and the University has taken difficult decisions quickly when required. ARU's business model rests on quick decision taking and being a first mover in the market, for example:

- Moving at pace to establish Phase 1 of the ARU Peterborough university campus, with the university opening on time to students in September 2022.
- First new medical school for 12 years.
- First to invest heavily into Degree Apprenticeships (now largest UK provider of these and a thought leader in their development).
- Early mover into Policing degrees.

ARU delivers bespoke portfolios and delivery models for customers, for example:

- ARU London offers flexible courses (e.g. 2 days per week) and has grown from 3,800 to around 9,800 students in the last 4 years.
- Offering employer focused courses
- Degree Apprenticeships that are in tune with the market and able to respond very quickly to opportunities and requests

ARU has committed to managing the ARU Peterborough operating model to ensure it does not fail, managing risks in a variety of ways, including:

- Only recruiting staff as needed, including limiting senior staff costs.
- Flexible deployment of resources and management of costs within the operating model.
- Using market intelligence to decide which courses to continue to develop; those that are not likely to be viable will not be taken forward. Equally, where interest from stakeholders has suggested new courses, ARU are receptive to moving quickly to create and meet demand

- Careful planning of future building on the Peterborough campus (both timing and configuration) in the light of actual growth in student numbers.
- Sharing costs across ARU will create economies of scale from which ARU Peterborough will benefit.
- Prudent use of the contingency in the model.
- Monitoring and contingency planning around the journey to independence with clear milestones to check progress, monitor risk and provide accountability.

The Heads of Terms include flexibility (recognising the uncertain times), for example, if student numbers drop and income reduces, ARU will reduce the cost base accordingly. By operating a shared service model and only employing new staff when demand dictates, ARU is confident in its ability to manage a financially viable product.

3.3 Budget Estimate

An Order of Cost Estimate of how the budget is derived is shown below which amounts to £26m. This figure excludes the £1.87m land valuation for the Phase 3 site. The total budget for the project is £27.87m. The construction works costs have been benchmarked against known industry data for similar size and quality educational buildings and are aligned with the median cost parameters. The Cost Plan represents the anticipated construction costs at current prices (Q4 2022) via a competitive method of procurement under a Contractor design contract.

Figure 25. Project budget to deliver capital works for Phase 3²⁵

Element	Classification	Totals (£)	%	Cost/m ²	Cost/ft ²
0	FACILITATING WORKS	105,000	0.40	42	4
1	SUBSTRUCTURE	688,824	2.65	276	26
2	SUPERSTRUCTURE	4,456,352	17.93	1,863	173
3	INTERNAL FINISHES	944,004	3.64	378	35
4	FITTINGS, FURNISHINGS & EQUIPMENT	650,000	2.50	260	24
5	SERVICES	3,421,776	13.18	1,369	127
8	EXTERNAL WORKS	1,242,004	4.78	497	46
Sub Total Building Works		11,707,960	45.08	4,685	435
9	MAIN CONTRACTORS PRELIMINARIES as MS	1,298,345	5.00	519	48
10	DETAILED DESIGN (RIBA Stage 5-7) as MS	298,053	1.14	119	11
11	MAIN CONTRACTORS RISK @ 3%	399,131	1.54	160	15
12	PRE-CONSTRUCTION FEE	472,361	1.82	189	18
13	MAIN CONTRACTORS OVERHEADS AND PROFIT as MS (2.5%)	342,587	1.32	137	13
14	DESIGN DEVELOPMENT RISK @ 4%	580,737	2.24	232	22
15	PAGABO Fees @ 0.3% (<i>procurement framework</i>)	43,880	0.16	18	2
16	INFLATION up to Q1 2024 @ 8.5%	1,111,315	4.28	445	41
Sub Total Contract Sum		16,254,370	62.58	6,504	604
17	PROJECT / DESIGN TEAM FEES	1,316,835	5.08	527	49
18	OTHER DEVELOPMENT / PROJECT COSTS	4,070,108	15.67	1626	151
19	VAT	4,328,263	16.67	1,731	161
TOTAL		25,969,575	100.00	10,390	966

²⁵ Please note that item 18 'other development / project costs' includes inflation assumptions for the project contingency budget.

The budget estimate incorporates the detailed information available following completion of RIBA Work Stage 3 by the professional team procured to deliver Phase 3. A portion of the costs are based on estimates and therefore the overall cost should be treated as having a +/- 5% level of accuracy due to the level of design available and remaining design and procurement to be completed during RIBA Work Stage 4, with additional fine-tuning occurring ahead of RIBA Work Stage 4 throughout November and December 2022. It is inclusive of allowances made for client direct costs and represents the maximum capital budget currently available for the design and construction of the physical infrastructure, agreed at £26m (excluding land acquisition costs from the total funding package of £27.8m) comprising the following:

- Site Abnormals – essential enabling works required to make the site available for the required use.
- Facilitating Works – all site clearance, remediation, services diversions required to facilitate the main construction works.
- Building works – all substructure, superstructure, internal works, finishes, fittings furniture and equipment, building services, external works, and the associated management and supervision by the Main Contractor.
- Sustainability – costs associated with achieving a highly sustainable, energy and carbon efficient building to BREEAM ‘excellent’ standard.
- Fees & Surveys – all design fees applicable by the professional consultants forming the design team, including building control, plus all associated professional reports and surveys and budgets advised by the Combined Authority for the Combined Authority costs and legal fees
- Client Project Costs – the associated client direct costs consisting of loose furniture, wayfinding signage, café fit out, specific ICT enhancements.
- Design Development – contingency funds applied to the facilitating works, building works and client direct costs to cover increased costs resulting from progression and maturity of the design and associated project risk.
- Client Contingency – contingency funds applied to the facilitating works, building works and client direct costs to cover increased costs resulting from changes to clients/employers requirements at various stages of the design and construction of the development.
- Inflation – accounting for increases in building costs to the mid-point of construction in Q1 2024 at 8.5%.
- VAT applied at the standard rate as applicable.

3.3.1 Budget considerations

This section provides further detail on certain aspects of the budget for delivery of Phase 3 capital works.

Land acquisition

The land (the Regional Pool car park site) that the Phase 3 building will be situated on is excluded from the budget for capital works because the land is being provided by PCC.

Inflation

Inflation has been included in line with the master programme for the Programme to Establish a University in Peterborough. Inflation indices are based on Mace's in-house inflation forecast. Inflation has also been applied to the project contingency budget. The inflation allowance is a forecast only and is to be treated with caution under the current economic and wider geo-political climate. This risk is explored further in the Risk Register appended to this FBC.

Once the procurement of packages commences, cost inflation will be actively fixed for each procured package with all inflation costs fixed once the construction contract is signed, limiting the inflation exposure for the construction period of the project.

Cost allowances for specialist equipment and IT/AV equipment to support education delivery and the Living Lab

A £1,604,700 cost allowance is included for specialist IT/AV equipment as provided by ARU pending full confirmation of requirements and approach to procurement. The costs for equipment required for the Living Lab are deemed to be included in this allowance.

Sustainability

At RIBA 1, several sustainability frameworks (BREEAM, Passive Haus etc) were discussed for suitability particularly towards achieving NZCio²⁶. Considerations include materials selection/choice, use of passive building fabric design principles and potential renewable energy solutions to support the sustainability requirements. The design team appointed to the Phase 3 delivery team (Couch Perry Wilkes) has reviewed sustainability options which have been integrated into the design as part of RIBA Work Stage 3, for instance the use of wood panelling internal finishes rather than concrete.

Car parking for Phase 3

The current cost allowance is for 12 parking spaces on campus for Phase 3. The car parking requirements for Phase 3 is based on staff and student car parking capacity being accommodated in existing car parks in the city centre as a result of change in post Covid utilisation. 128 spaces for regional pool users will need to be temporarily relocated as detailed in the section below on displaced services.

In addition, an allowance in the building costs have been made as a means to contribute, if required, to highways mitigation.

Site Access

A cost allowance has been made for the creation of new access from Bishops Road and for some local s278 works associated with that access, which may be a planning requirement. Based on the assumption that all parking will be accommodated in current surplus, further offsite improvements allowances have been made within external works allowances as

²⁶ Net Zero **Carbon** in Operation

Phase 1. Given the existing use of the Option 1 site is a 200-space car park, traffic movements are unlikely to exceed current baseline levels.

Displaced Services

Work undertaken by PCC demonstrates that car parks in the City Centre are underutilised and so replacement car park provision is not considered a requirement at this stage. However, the selection of the Regional Pool car park for the Phase 3 development may necessitate a cost allowance for the provision of additional highways improvements to support the City's wider transport improvement plan.

Exclusions from the budget

The following items are not included in the budget estimate for Phase 3 construction:

- Land purchase costs
- Works to neighbouring properties / boundary wall agreements
- External works outside of site boundary / works area
- Operational costs
- Dewatering works
- Infrastructure improvements, other than those already identified for HV upgrade
- Service diversions, other than those already identified
- Phase Change Materials excluded from costs.
- Asbestos
- Works to satisfy any onerous planning conditions
- Section 106 / 278 works
- Equipment to maintain and clean the facility
- Education Consultant fees
- Land acquisition costs for replacement car park site
- Soft spots in the ground
- Occurrence of Japanese knotweed
- Revenue costs for existing car park on site.

3.4 Benchmarking

A benchmarking exercise was undertaken to review the build cost. Benchmarking data represents an average cost per typical building element, represented as a cost per m² of Gross Internal Floor Area and excludes site specific abnormal elements such as facilitating/demolition works, and external works, to allow a fair comparison. The benchmarking below is representative of schemes delivered 5 to 15 years prior to Brexit and Covid-19 and gives an indication of an average build cost (£Nett/m²) of approximately £3,062/m² (excluding site facilitating and external works) (BCIS²⁷ data).

To further support the above data, the Phase 1 and 2 build costs, which were tendered post Brexit and Covid-19, incorporate the Combined Authority and ARU design standards, and known site wide conditions have also been benchmarked. The benchmarked cost of phases

²⁷ Building Cost Information Service (BCIS)

1 and 2 is £3,936/m². This benchmark figure has been used for the Phase 3 development to ensure a more robust comparison.

This use of the more current Phase 1 and 2 cost benchmark supports the conclusion that the proposed Phase 3 building can be delivered in the current market and to the Combined Authority standards and specifications within the estimated budget.

These costs exclude any cost for land acquisition which is addressed separately and does not form part of the capital costs. VAT has been applied at the prevailing rate of 20% and is not recoverable as confirmed by the Combined Authority. The Combined Authority have made allowances for their costs acting on behalf of PropCo1 taking responsibility for design, procurement, and delivery of Phase 3 as outlined in the management case. These costs include:

- Combined Authority Staff costs.
- Banking and Audit.
- Financial software, insurances, company secretary fees.
- Legal Costs associated with completion of the shareholders agreement, land transaction not relating to the main contract.

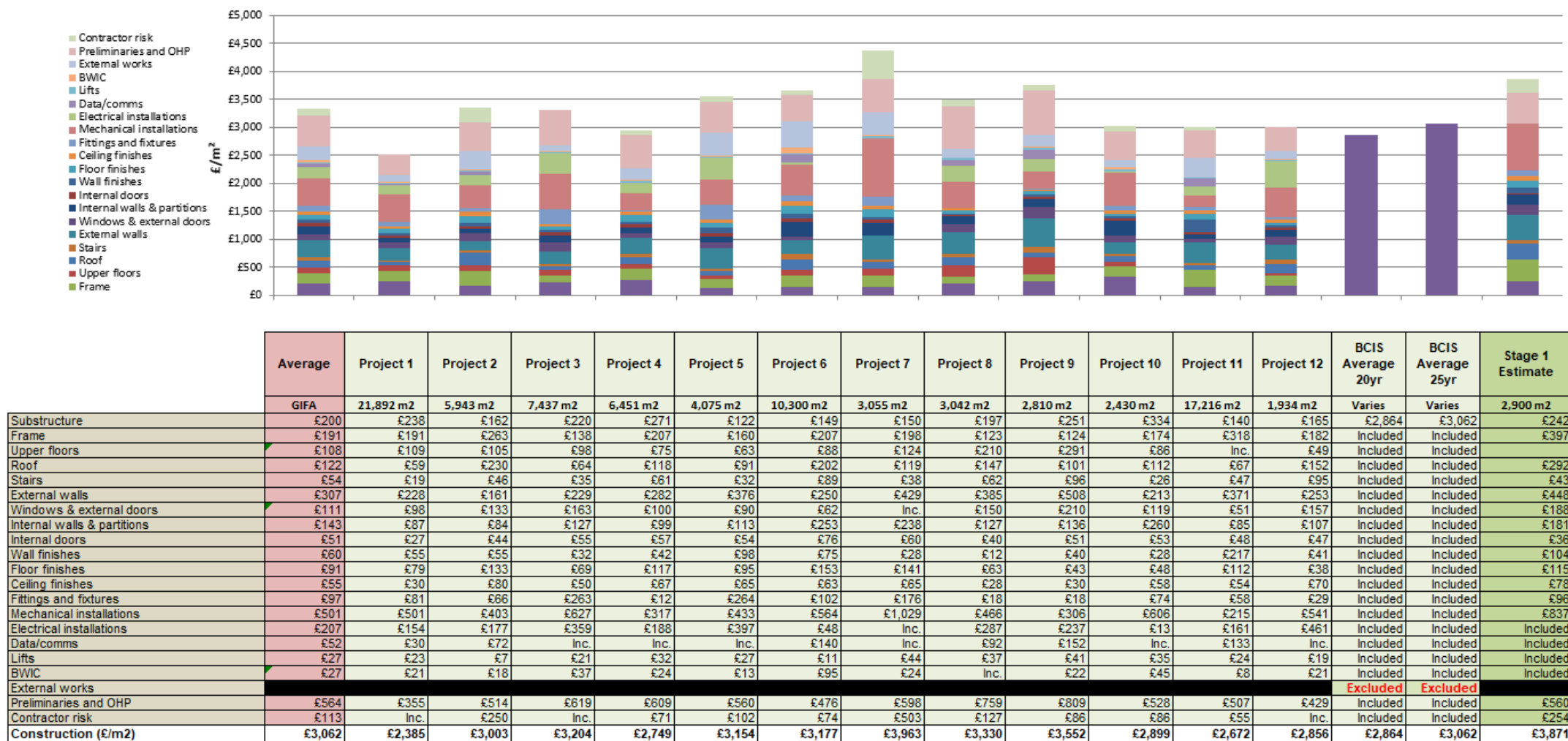
Additional cost allowances have been made for known site-specific conditions.

Figure 26. Benchmarking estimates for Phase 3

University of Peterborough

General Teaching New Build (Base date: 4Q21 (351) / Location: Peterborough (99))

Average Build Cost - Excluding external works



3.5 Subsidy Control

The Subsidy Control Act 2022 does not apply to transactions set out within the PropCo1 Shareholders Agreement as they do not fulfil any of the following categories of ‘financial assistance’:

- Direct transfer of funds (such as a grant, a loan or an equity investment);
- A contingent transfer of funds (such as a loan or rent guarantee);
- The forgoing of revenue that is otherwise due (such as a tax relief or exemption);
- The provision of goods or services (as a benefit-in-kind or for payment is received);
- The purchase of goods or services.

However, it is acknowledged that this should continually be reviewed by the Partners as the University programme develops. A review of Subsidy Control is also something that DLUHC request confirmation of in their LUF monitoring processes.

4 Financial Case

This section sets out the financial arrangements for delivery of the Phase 3 building, setting out how funding streams will be used, and conclusions on the overall affordability of the project. It also sets out details of the operating model for the University once Phase 3 is operational alongside Phase 1.

4.1 Financial model to deliver Phase 3 capital works

4.1.1 Funding streams to deliver Phase 3

This section sets out the funding streams for delivery of Phase 3 capital works.

As set out in the Budget Estimate section in the Commercial Case, the capital build costs for the Phase 3 building amount to £26m, which is the maximum funding available for delivery of Phase 3. The Phase 3 capital build is to be funded through contributions from the Levelling Up Fund (LUF) via a 2021 submission made by PCC to the fund, Local Growth Funds provided by the Combined Authority, and direct capital investment from ARU. All funding sources are secured.

In addition, PCC is making a land value contribution for the Regional Pool car park site that the Phase 3 building is situated on, which has been valued at £1.87m. The table below sets out the sources of funding for capital investment in the project, as well as the land value contribution.

Figure 27. Project funding sources

Partner	Funding source	Amount (£)
PCC (contribution as the lead authority for the LUF)	Levelling Up Funds	20,000,000
Combined Authority	Approved recycled Local Growth Funds	2,000,000
ARU	Private investment	4,000,000
Phase 3 Capital Investment Sub-total		26,000,000
PCC	Contribution of land value	1,870,000
Total Funding (Phase 3 only)		27,870,000

4.1.2 Funding strategy

The underlying basis of the funding model is that partners receive shares in PropCo1 in proportion to their financial contribution to the University programme across Phases. This includes the £20m investment secured by PCC from the Levelling Up Fund (LUF) for capital investment into PropCo1.

Following the allocation of the new shares the Company's share designation will be as shown in the table below, after all parties have made their further investment for shares, in relation to the Phase 3 building.

Figure 28. Shareholding in The Peterborough Higher Education Property Company (PropCo1)

		PCC	CPCA	ARU	Total
Phase 1	First teaching building	£1.87m	£24.8m	£5.50m	£32.17m
		5.8%	77.1%	17.%	100.0%

Phase 3	Second teaching building	£21.87m 78.5%	£2.0m 7.2%	£4.0m 14.3%	£27.87m 100.0%
	Total Shareholding in PropCo1	£23.74m 39.6%	£26.8m 44.6%	£9.5m 15.8%	£60.04m 100.0%

All parties must be able to demonstrate sufficient funds to meet the payments for shares in to PropCo1, relative to the cash demands on the Company required to pay its creditors associated with the construction of the Phase 3 building. However, to enable this, PCC will need to negotiate terms with DLUHC to cash flow PCC's payments for shares, in to PropCo1, from the LUF funding. The terms of the LUF funding are payments 6 months in arrears of actual expenditure on the project by PCC.

ARU's £4.0m investment into Phase 3 will be treated in the same way as the original investment in PropCo1. As such, start-up costs and the ongoing operational cashflows for ARU Peterborough taking into account the costs of growing the campus through Phase 3 will be the responsibility of ARU and, as was the case on Phase 1, the Combined Authority and PCC will have no responsibility or obligation to underwrite such cashflows in operating the university.

CPCA's £2.0m investment into Phase 3 will be treated in the same way as the Combined Authority's original investment in PropCo1 as part of Phase 1. As a result, the current Shareholder Agreement for the Company, will be amended to reflect the additional investment for shares. Notwithstanding the dilution of the Combined Authority's majority shareholding, it will retain its drag along rights so that in the event it chooses to exercise its rights to sell its shares in PropCo1 (exercisable 10 years after the completion of the Phase 1 building) then it is able to drag PCC and ARU along with it in order to sell the entire shareholding in the company, subject to ARU having right of first refusal. Due to the increase in PCC's shareholding, it will also be granted such drag along rights.

4.1.3 Funding considerations to meet delivery timescale requirements

For the Phase 3 project it is essential for expenditure of LUF monies to be complete by 31 March 2024, with construction and fitout work occurring after that date to be funded via other funding streams from CPCA and ARU. A significant financial milestone is PropCo1 entering into a binding contract with Morgan Sindall as the Main Contractor for construction of the Phase 3 building, which was reached in Q4 2022.

Proactive procurement decisions, such as awarding orders for long-lead infrastructure works are required in order to meet project timescales. This includes granting approval to Morgan Sindall as the Main Contractor to begin early procurement of the project's CLT package through a sub-contractor mini-competition. This will require Morgan Sindall to begin engagement with their supply chain at the start of RIBA Work Stage 4 and for PropCo1 to instruct to proceed with the recommended CLT supplier at the end of January 2023. This instruction will not be an upfront cost outlay, rather a cancellation liability agreed with Morgan Sindall to cover their risk should the order be cancelled.

A cashflow forecast will be prepared as part of the second stage tender by Morgan Sindall, due in February 2023.

4.2 ARU-P Operating Model

This section sets out details on the operating model for the University once Phase 3 construction is complete and is operational. It is based on a review of the ARU Peterborough Operating Model undertaken to prepare this FBC.

A key project objective is to create a sustainable operating model for the new university such that, after initial start-up costs, it will operate on a self-sufficient basis. The fundamental principles of a sustainable operating model include:

- Effective control of costs in relation to tuition fee income (this is at the core of the operating model).
- Recognition that estates/asset maintenance must be prioritised to avoid backlog maintenance liabilities that add to corporate risk profiles and undermine the core of the operating model.
- Ensuring all operational costs are covered by generated incomes, and any surpluses generated support reinvestment in new facilities to support further growth.

Operating model assumptions

The Phase 3 operating model for ARU Peterborough has been populated using the same assumptions applied for the Phase 1 model with modifications only where required; the assumptions amended for Phase 3 are as follows;

- The Phase 1 model assumed teaching facilities would be in all three buildings – this has now been amended to Phase 1 and Phase 3 only.
- The timing of Phase 3 has been brought forward to Sept 2024.
- The size of buildings has been amended to reflect the available budget and student numbers to deliver the outcomes required in the LUF.
- The rate of growth of ARU Peterborough student recruitment numbers for Phase 3 remains at the original assumption used for Phase 1 of 6% per annum with an additional 6% at the opening of each new phase of building. From 2027-28 the annual growth has been reduced to 2% to reflect the building nearing capacity. Future growth would require further teaching buildings. The model can be adapted to enable a slower rate of student number growth to respond to external market and economic conditions.

Income:

- Tuition fee income is forecast based on a range of full time and part time courses proposed by ARU, including undergraduate and postgraduate courses both on-campus and off-campus.
- The average tuition fee is based on £9,000 per student FTE (after allowing for both premium fee levels and bursaries/hardship grants and other fee discounting practices).

Staffing:

- Academic SSR ratio of 26:1.
- Academic to Professional staff 3:1 for Faculty Professional staff numbers.
- Included numbers for the development phase (19 professional staff, 5 academic staff and 1 Project Manager).
- Included the Principal and other senior management posts.
- Assumed Pas in Professional 3:1 count.

- Assumed the majority of senior staff are part of Academic 26:1 count.
- Assumed Business Engagement & Innovation Manager within Professional staff 3:1 count.
- Professional services staff costs equivalent to ARU's current ratios to cover a shared service function to include services such as HR, Finance, Academic Registry, Library, IT OPEX, Student Services, VCO, Secretary's office, Marketing & Admissions.

Non Pay costs:

- This covers costs such as advertising, printing, stationary, s/w, books, consumables, scholarships, bursaries, staff non pay costs (travel, staff development, employee related costs), contract & professional fees.
- Costs calculated at 35% of faculty staff costs.
- OfS will require student support arrangements which will include scholarships or bursaries within the Access and Participation Plan.

Estates OPEX costs at £200 per m²:

- This is expected to cover the running costs for estates of the buildings based on the size of the buildings provided in the documentation growing in three phases.
- Running costs include items such as cleaning, utilities, rates, insurance.

Asset & Estate Maintenance:

- Assumed this is the LTM costs for Estates and IT.
- Proxy used based on current ARU values of LTM as a percentage of income.
- Rent/Lease costs have been assumed at £140 per m². (£13 per Sq.ft).
- There is an expected ten year 'rent-free' period.

Other Costs at 29% of income:

- Assumed to be equivalent to ARU's indirect costs to cover the costs of professional services such as HR, Finance, Academic Registry, Library, IT OPEX, Student Services, VCO, Secretary's office, Marketing, Admissions (Pay costs are included in the Staff cost section and non-pay costs in this section).

IT Start-up costs;

- Software and infrastructure costs included in the start-up phase are per the IT costings provided as Year 0 costs.

Loan for start-up cash flow

- £5.4m loan at estimated 2.5% interest for five years.

Inflation

- Both pay and non-pay inflation of 2% has been assumed.

The costs associated with facilities management have been provided by ARU and are based upon a rate of £200/m² benchmarked against ARU's internal data. These costs remain as Phase 1, which were reviewed against internal cost data provided by the Combined Authority's professional advisors (Mace FM) and benchmarked against reputable and well-established independent industry data, with the conclusion that these costs represent fair and reasonable allowance. The costs associated with facilities management include all aspects of hard and soft facilities management, incorporating

insurances; routine maintenance; security; cleaning and waste management; energy usage; telephone communications; and general real estate management; any change to the original assumptions made for Phase 1 as a result of sustainability will be managed by ARU within the current operating costs.

Mace FM advised in Phase 1 that as a rule of thumb a cost of 1% of capital expenditure per year has historically been applied to public sector projects under a design, develop, construct and operate contract to determine affordability prior to agreement of contracts. This relates to major replacements only and is in addition to the routine maintenance costs incurred in preserving the assets to ensure they reach their optimum life expectancy (covered by the facilities management costs). In this financial appraisal long term maintenance has been based on 1% on this basis as assumed in Phase 1.

4.2.1 University income and expenditure

The financial model forecasts revenues and expenditure for the period to 2030/31 for Phase 1 and Phase 3 together. This is due to the highly interrelated nature of the two Phases making it complex and unrealistic to prepare a standalone financial model for Phase 3.

The financial operating model includes the operational costs and incomes only. The capital costs of the project and associated enabling works are to be funded from other sources as set out above.

The operating model that has been reviewed in the course of the preparation of this business case shows sufficient revenues are generated throughout to cover operational costs, on a broadly breakeven basis from 2022/23 and revenues generated appropriately thereafter to fund the ongoing operational expenditures, with a marginal profit delivered year on year which reaches no greater than 1%.

The operating expenditures run very close to the revenues generated and there is a linear relationship between revenue and expenditure, which indicates that economies of scale and operational efficiencies are not anticipated.

Continued growth in revenue is predicted but is dependent on subsequent project phases to maintain growth in student numbers and income generated via tuition fees. The reported revenues are based on student numbers identified by ARU across a range of course types including full time, part time and distance learning-based tuition.

The operating model generates only a marginal surplus. The start-up phase does not generate any surplus, and the revenues identified are only sufficient to cover expenditures. A surplus of approximately £56,000 is generated over the 2 years Phase 1 alone is in operation, culminating in a total of £311,150 by 2030/2031 including Phase 3, which would be insufficient to fund any future infrastructure expansion plans, which in turn will require capital investment from alternative sources. The operating model is the responsibility of ARU/ARUP to continually review and adapt to reflect the market and economic environment. There is sufficient scope to reduce expenditure to reflect any changes in income.

4.2.2 Risk analysis

Whilst the shadow financial model set out in the OBC targeted a surplus to be generated each academic year, the financial model provided by ARU shows only a marginal surplus in each year and does not generate significant financial returns for long term growth. This is an understandable result of reduced optimal student numbers and increased staff costs within the ARU Peterborough operating model.

The differences from the original financial model and the associated risks are analysed in summary below:

- The shadow financial model included higher turnover figures as a result of higher **student numbers**, whereas the ARU model is based on lower student numbers, and as student numbers grow as a result of future growth, increased revenues are offset by increased operational costs. The absence of **economies of scale** as student numbers increase leaves scope in the model for greater efficiencies in operational expenditure. The current model, therefore, represents a worst-case scenario in this respect.
- The ARU-Peterborough model sets **staff costs** at a higher rate than the shadow financial model, starting at 56% of income, and rising to 64% of income (the shadow financial model limited staff costs at 52% of income). This also leaves scope for future cost reductions that could further improve the outcome of the financial operating model. Conversely, the financial model is very sensitive to **cost inflation** (e.g. University staff pay increases), which may reduce the scope for economies of scale and operating efficiencies to yield financial savings.
- Costs for asset maintenance are shown as 1% of income. The shadow financial model set asset maintenance at 5% of IRV, which is more typical for Higher Education. There is a risk that 1% of revenue will result in **underfunding of building maintenance**, with resultant deterioration of the asset. Should maintenance costs be increased to 5% of IRV this would have a detrimental impact on the operational model and further funding may be required if the **contingency provision** is insufficient (see below). As the building design is finalised there may be opportunity to **review the costs associated with long term maintenance** that could result in an improvement on the current forecast figures.
- The financial model does not include any **rent payments** (i.e., it assumes a 10-year rent-free period). At the end of the 10-year rent free period PropCo1 will agree, as part of the rent review defined in the agreement to lease, any rent to be paid; PropCo1 will determine how this income will be used. Rent payments beyond the rent-free period will adversely affect the model in that period and, given the marginal operating surplus in the first 10 years this could result in a deficit once rent payments fall due.
- The operating model indicates the £5.4m start-up costs being funded by a short term (5 year) loan, based upon a 2.5% interest rate. There remains a low risk to the project that this **interest rate** may not be achievable, resulting in a higher loan repayment.
- The financial model includes an ongoing **contingency** provision throughout the ten year period, averaging approximately £1m per annum. Given the other risks inherent in the financial model, this contingency provision will be a critical tool for management of financial risk in the operation of the new University, including the risks described above. If the contingency is not required, it represents a potential opportunity to provide betterment to the financial model.

A key risk in the current climate is that the level of student fees assumed may not be achievable. A reduction in revenues would negatively impact the operating model, should staff numbers and staff expenditure remain unchanged, and could lead to an annual deficit. However, ARU's analysis of HE demand in the region predicts an increase in the number of 18-year-olds over the next 5 years leading to a 13% increase in students entering HE by 2025 with a static participation rate of 44%, and a 20% increase if the participation rate grows to the England average of 47%.

Sensitivity testing of the operating model carried out for the OBC showed that a 1% net loss of revenue would translate into a cumulative deficit of approximately £300,000 within 3 years (i.e. by the end of Phase 1). If revenues fall by 3%, that deficit exceeds £1m and at 5% approaches £1.9m. Therefore, the sensitivity of the model to fluctuations in revenues is very high and this remains the case at FBC stage. Flexibility in the operating cost base has been identified by ARU as a scalable factor and a contingency budget is included in the model, however there are likely to be other calls on such contingencies and with such low initial margins, operating costs may be set too high to create a sustainable model. Further attention will be given to these variables during detailed negotiations with a view to achieving a target surplus in a range acceptable to both partners and which will help to mitigate these risks.

As a matter of principle for on-going operations the new University pedagogy will need to be managed by ARU to ensure that the predicted revenue generated from tuition fees is realised and the costs are managed to match the student numbers and hence reasonable and sustainable surpluses achieved.

Furthermore, the Phase 1 agreements in place include terms to terminate ARU's involvement with ARU Peterborough (in the event of a failure to take reasonable steps to achieve the milestones and naturally as it becomes a university in its own right), provided always that ARU Peterborough will remain entitled to occupy the facilities on a rent-free basis during the period required to teach out students enrolled on ARU courses in Peterborough. The Terms of Agreement also include further remedies for any failures by ARU to achieve the plans set out in those documents including ARU working with the Combined Authority, PCC and PropCo1 (with the aspiration for there to be a long term continuing relationship between the new University and ARU beyond the achievement of University Title to support the long-term sustainability of ARU Peterborough as a university).

As outlined above, the operating model does not generate sufficient surpluses to build reserves to fund the expansion of the new University in future phases nor is there adequate headroom to underpin borrowing to fund such expansion. Alternative funding strategies for any future expansion phases will therefore need to be developed by the Combined Authority and partners, including PCC and ARU, to facilitate further growth in student numbers.

4.3 Affordability

The project funding position is outlined in the table below. All figures are inclusive of VAT and other tax requirements.

Funding Source	Amount (£)
LUF Funding	20,000,000
Combined Authority	2,000,000
Anglia Ruskin University anticipated capital investment	4,000,000
Total Budget	26,000,000
Construction Works (Phase 3 building, inc. Client Directs and Contingency)	26,000,000
Land Acquisition (Land transferred for shares at £1.87m value by PCC as part of PropCo1)	1,870,000
Total Expenditure	27,870,000
Balance	0

The LUF from PCC and the capital expenditure and financial investment from the Combined Authority for the Phase 3 construction project is capped at £22m with the remaining investment provided by ARU. The current anticipated investment required by ARU is £4m (independent of short-term loans secured for the start-up costs). The land for the Phase 3 site will be invested into PropCo1 by PCC in return for shares, with the land to be valued using the independent land valuation from Phase 1 totalling £1.87m, which will form part of the PCC contribution to PropCo1.

The Commercial Case sets out how the Phase 3 capital spend will be utilised. The scope of the capital build for Phase 3 has been managed to be deliverable within the total funding envelope of £26m (excluding land value contribution of £1.87m). Detailed cost planning carried out as part of RIBA Work Stage 3 supports the conclusion that the proposed Phase 3 building can be delivered to a suitable standard within this budget. Any cost escalations beyond contingency will require partners to undertake value engineering to ensure Phase 3 can be delivered within the available funding budget, which would occur as part of RIBA Work Stage 4.

Conclusions

Project affordability is, therefore, critically dependent on:

1. Securing the transfer of LUF funding into PropCo1 as well as all other investment capital funding within the company held account or an agreement reached through the PropCo1 members on releasing sufficient funding to cover costs to date and up to contract award in December 2022.
2. Risks associated with income (student numbers) and expenditure being able to be mitigated through cost control, increased income and/or use of the contingency provision.
3. Risks associated with enabling works, Land Acquisition, planning approval and agreement of contract sum being able to be mitigated through management of each workstream within the required timeline and budget while continuing to meet the outcomes of the LUF.
4. Risks associated with inflation and the increasing cost of building materials being mitigated through ongoing risk management and procurement protocols which will fix prices in place at the point of contracts being awarded to suppliers.

Subject to these considerations, at this stage of project development and implementation, it is anticipated that funds will be available (as described above) to meet both the project budget, requirements of ARU Peterborough's operating model and the LUF.

With respect to the infrastructure works, no cash-flow implications are anticipated for the PropCo1 as the Funding source in place by each party will be transferred into PropCo1 before the construction phase goes ahead.

5 Management Case

This section sets out how the project will be delivered in terms of the roles and responsibilities of various partners, project management arrangements, change management and benefits realisation, risk management, project assurance and post-project evaluation, and a proposed methodology to measure the ongoing wider impact of the university's operations.

The approach to delivering Phase 3 builds on the successful approach adopted by partners for the delivery of the Phase 1 building, updated to incorporate lessons learned which are relevant to Phase 3.

5.1 Stakeholders

The project has a number of stakeholders, summarised in the following categories.

1. Peterborough City Council (PCC) and the Combined Authority, including Peterborough Ltd, the PCC subsidiary operating the Regional Pool and Athletics Track.
2. Academic Delivery Partner – Anglia Ruskin University (ARU) and ARU Peterborough.
3. The owner of the Peterborough Innovation & Research Centre – The Peterborough R&D Property Company Ltd (PropCo2), including future Innovation Incubator tenants.
4. Neighbours including local residents and owners, and in particular the Civic Society and Peterborough & Nene Valley Athletic Club (PANVAC).
5. ARU Peterborough and specifically the Living Lab partners, such as NIHR Applied Research Collaborations (ARC) East of England, the Cambridge Science Centre, and STEMpoint East.

The communications strategy will be managed by the Combined Authority with support from the appointed consultant team in the design procurement and delivery of Phase 3.

The stakeholder analysis associated with Phase 3 can be split into two phases: first the design, procurement and delivery of Phase 3; and second the expansion of the operations of ARU-Peterborough to deliver the anticipated outputs of Phase 3.

This Business Case describes the approach to procurement of the consultant team, stakeholder management during the design, procurement and delivery phase and in expansion of the operations of ARU Peterborough.

Design Procurement and Delivery of Phase 3

On behalf of PropCo1 the Combined Authority have procured a consultant team to design, procure and deliver Phase 3, as set out in section 3.1 of this document.

These key internal and external stakeholder relationships will be managed by the Combined Authority and its appointed team of consultants, in consultation through the design, procurement and delivery of Phase 3 on behalf of PropCo1. The relationships with the stakeholders are managed under an agreed communications strategy outlined between PCC, the Combined Authority and ARU.

Set up and Operation of the New University of Peterborough

ARU will be responsible for the management of associated stakeholders to achieve the objectives of the new University (taking into account its expansion with Phase 3), working with employers and stakeholders in the communities the University will serve. This will be led and managed by ARU in consultation with PCC and the Combined Authority. Once operational, ARU Peterborough will also be solely responsible for the management and activities to occur within the Living Lab.

5.2 Achievability

The Combined Authority and PCC have put in place the resources needed to manage the work streams required to deliver the project, based on an understanding of the priorities outlined in the LUF bid. Both authorities have to date provided resources in line with those requirements and both are, therefore, confident that the project is achievable based on their readiness and the available resources to meet the requirements of both agreements. The Combined Authority will appoint external consultants, where required, to ensure the necessary capacity and capability is available for successful implementation of the project including:

- Design, project and cost management: as described with in the project management section below.
- External legal support to augment the Combined Authority's and PCC legal teams.

Further external support or internal resources will be secured and deployed should any capacity/capability shortfalls be identified, subject to relevant governance approvals across the partner organisations, to ensure the project is fully resourced for successful delivery.

PCC have provided resources to support the project in its successful application for LUF funding and development of this Phase 3 Full Business Case. In addition, the development management role undertaken by the Combined Authority will be complemented by a client-side project manager for PCC to coordinate the various workstreams and approvals necessary to resolve corporate landlord issues and land transfer among other activities.

ARU has put in place the resources needed for project delivery based on the timeline from contract award (see section 3 above). ARU has provided details of the resource profile required for the effective delivery of Phase 3 and ongoing operations, including the recruitment and employment of Senior Management, Academic and Professional staff, based on the proposed student numbers and staffing forecasts within their final submission. ARU is committed to added value in recruitment as set out in the following extract from their final submission:

Economic: *We will ensure we adopt a 'think local' policy for recruitment of staff and procurement of resources to ARU-P, so that we develop a circular economy and keep as much wealth as possible in the local area*

Social: *Our Recruitment Policy already supports applications from individuals with protected characteristics and this will also be embedded in recruitment of staff at ARU-P. We believe ARU-Peterborough needs to a place where the community feels welcome.*

5.3 Project management

5.3.1 Structure and Governance

PCC, ARU and the Combined Authority have already formed a special purpose vehicle – the Peterborough HE Property Company Ltd ('PropCo1') – to deliver Phase 1 of the new university campus in Peterborough. The Phase 3 project is intended to be delivered by PropCo1 which will continue to be the entity through which funding is deployed, and delivery of both Phases 1 and 3 will be PropCo1's responsibility.

Project governance will be re-established to reflect the arrangements within each organisation and specific terms of reference for the project will be mandated by each organisation.

The Combined Authority's governance arrangements require all further investments into PropCo1 and all Shareholder Protection Matters included in the PropCo1 Shareholders Agreement to be

agreed by the Combined Authority Board. All decisions of this nature will be submitted to the Combined Authority Skills Committee and the Business Board, if necessary and in accordance with the terms of approval of the LGF contribution, and then taken to the Combined Authority Board for final approval.

PCC governance arrangements require all decisions relating to transfer of LUF funding to PropCo1 and the transfer of land to be approved by the Executive Director, Place and Economy in conjunction with the Chief Financial Officer, as jointly delegated officers by the PCC cabinet. PropCo1 will acquire the land for Phase 3 from PCC in return for shares in PropCo1, under a separate Land Transfer Agreement. The transfer will be completed at the point of building contract award alongside the Agreement for Lease (AFL) between PropCo1 and ARU Peterborough.

ARU governance is led by its Vice-Chancellor's Group (VCG) which acts as a forum for discussion of strategy and direction, and determination of high-level priorities for approval by the Board of Governors. The University Executive Team (UET) is the formal, senior decision-making body of the University (under delegated authority from the Board) and the wider Corporate Management Team (CMT) acts as a forum for discussion and development of strategy and operational delivery, bringing together all Director-level appointments whom are based at the main campuses of the University. One member of the UET will be the Principal and Chief Executive of ARU Peterborough, reporting directly to the Vice-Chancellor and leading the Peterborough Development Team, working closely with the Combined Authority and key stakeholders. The Senior Management and Board of Governors of ARU Peterborough will have an increasingly significant role in the governance of ARU Peterborough from 2022 onwards as operations commence.

The three parties (PCC, the Combined Authority and ARU) are governed by the PropCo1 Shareholders Agreement which defines parties' contractual obligations in relation to their shareholdings in PropCo1.

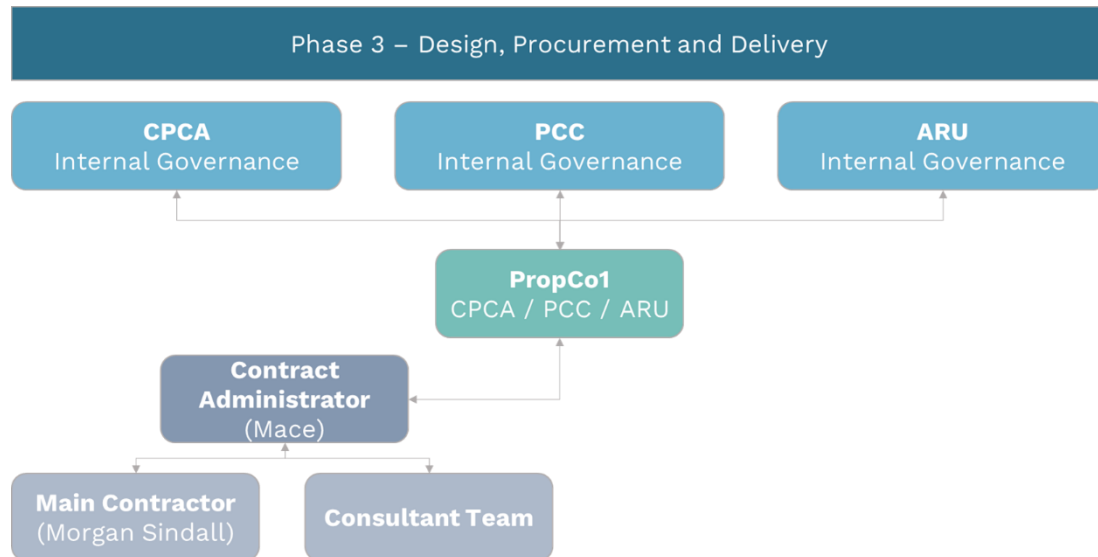
The Combined Authority will, under the Development Management Agreement be granted authority by PropCo1 to manage the design, procurement and delivery of Phase 3, with the Board of PropCo1 acting as the project management board. In this arrangement, responsibility for the delivery of Phase 3 remains with PropCo1; this will remain in place up to completion of the Phase 3 building.

ARU will update the Board in respect of curriculum design and development as the project progresses.

The main building contractor Morgan Sindall will report to PropCo1 via the contract administrator in respect of the agreement of the contract sum, enabling works and delivery of Phase 3.

Day to day management and progress meetings will be managed by the contract administrator and will include ARU and the Main Contractor for delivery of the Phase 3 building.

The organisational structure for the delivery of Phase 3 is outlined below.

Figure 29. Phase 3 Design, Procurement and Delivery

5.3.2 Roles and Responsibilities

Combined Authority

The development of Phase 3 of the new university campus will be led by PropCo1 with delegated authority to the Combined Authority who, under the Development Management Agreement will be granted authority by PropCo1 to manage the design, procurement and delivery Phase 3.

The Combined Authority (led by the SRO – Higher Education Programme Director for the new ARU Peterborough development) is providing leadership for the project, supported by a professional services team which is in place to support the design procurement and contract administration for delivery of the infrastructure for Phase 3.

Funding for the Combined Authority, as development manager, will be provided as part of the overall capital funding received from it as share investments from the Partners into PropCo1.

Peterborough City Council (PCC)

PCC is providing the land for Phase 3 of the project and will continue its representation on the PropCo1 board.

ARU

As described in section 3, ARU will provide the skills, knowledge, experience and resources to make a practical reality of ARU Peterborough as a new higher education provider and ultimately a university with degree awarding powers and University Title. This includes responsibility for:

- Staff recruitment
- Curriculum design and development
- Staff workload planning, resource scheduling and timetabling
- Student recruitment, marketing and admissions
- Student and academic services and systems development
- Library and learning resources services/systems
- Strategic planning, finance and governance services and systems development
- Full range of 'soft' FM and ICT services and resources.

As the Academic Delivery Provider for the university, ARU has responsibility for determining and delivering academic courses in the Phase 3 building.

ARU Peterborough has already made available twenty-seven courses, with further provision starting in January and September 2023, as the Phase 1 portfolio for the new University in Peterborough. This includes an innovative course design methodology including engagement with key stakeholders (schools, colleges, businesses, community groups). A data led approach to market segments has been implemented.

The development of the ARU Peterborough curriculum has been undertaken in conjunction with key stakeholders, using expertise within ARU to drive curriculum development forward and using many of the methodologies ARU already uses to engage employers. ARU is using both existing contacts and, where relevant, those in the Combined Authority's networks. Opportunity Peterborough and other regional bodies provide another route to engage with local businesses, to create awareness and develop courses that will ensure the current and future talent pool in the region is trained and work-ready.

The course design phase has ensured employer input is firmly embedded throughout the design and approval process. ARU's active curriculum model, 'live' briefs and course design intensive process are designed to ensure the courses are meeting the needs of both students and employers with a focus on developing the skills needed to seek and be successful in employment.

ARU has been developing new local, regional and national industrial partnerships targeting companies or organisations within the areas of its current and future ARU Peterborough curriculum. They have prioritised engagement of local companies including PhotoCentric, Caterpillar, Bauer and Engines. These partnerships match ARU's key strengths to make ARU Peterborough sustainable in the medium and long term, comprising

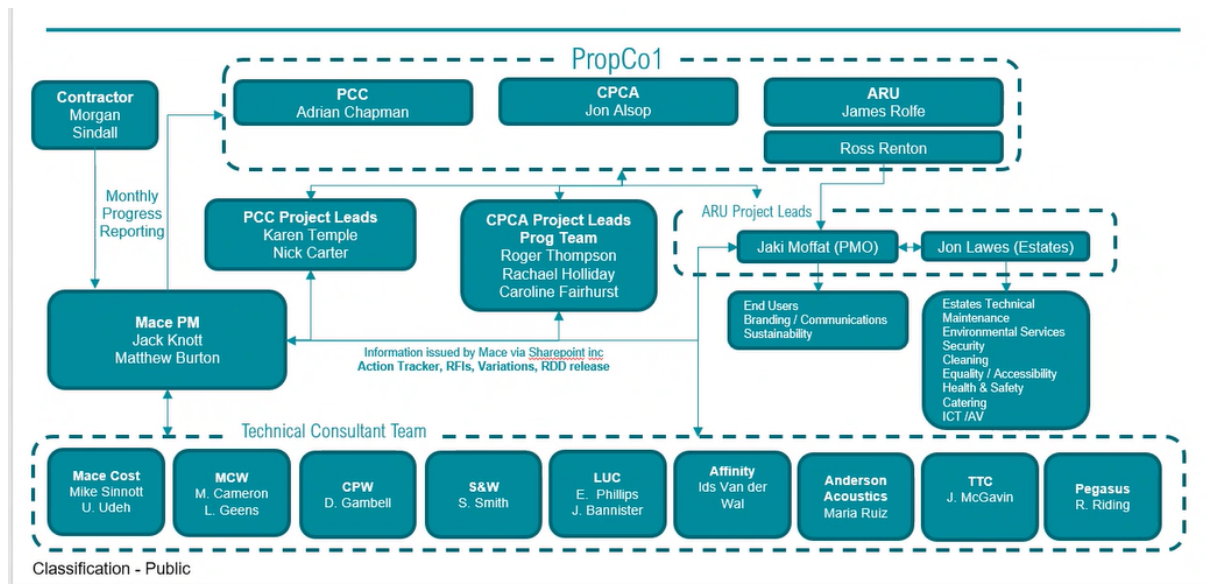
- Short term partnerships with local/regional companies that have the potential to bring immediate results. These partnerships have already resulted in employer engagement in curriculum design and enhancement, student placements, internships and local graduate employment opportunities.
- Medium-term tactical partnerships in response to needs across the education portfolio.

Long-term strategic partnerships with 1-2 companies in each curriculum area who are keen to engage with the new University across teaching, placements, employability, and further business opportunities including corporate education, research and knowledge transfer.

ARU Peterborough will also have sole responsibility for the operations and activities of the Living Lab within the Phase 3 building.

Consultant team

The Combined Authority has procured a professional consultant team to deliver Phase 3. The Consultant team and lead individuals are outlined below, including relations with PropCo1 and overall project governance.

Figure 30. Professional consultant team and governance arrangements

5.3.3 Project Plan

The project plan for delivery of Phase 3 is set out in Annex 6.1: Phase 3 Project plan. The project plan for the Outline Planning Application pertaining to Phase 3 is set out in Annex 6.2: Outline Planning Application project plan. These project plans have been developed in conjunction, with different key milestones associated to each.

The project plan has been developed around the following key dates:

1. Spade in the ground (commencement of Phase 3) Q1 2023.
2. Structure, complete construction of the building structure by March 2024.
3. Fitout fit out the living lab and teaching facilities to be complete in autumn 2024.
4. Completion of Phase 3 (for occupation) in autumn 2024.

To achieve these milestones there are 5 key work streams:

1. Procurement of the consultant team by February 2022 (complete).
2. Determination of full planning application by January 2023 (planning application submitted).
3. Develop, design and procure a Main Contractor to deliver Phase 3 infrastructure by Q4 2022 (complete).
4. Approval of this Full Business Case with delegated authority to develop the design by Q4 2022.
5. PropCo1 to formalise legal agreements for land by Q4 2022 to align with award of the main contract and planning approval to allow commencement on site Q1 2023.

The programme timeline has been developed based on ensuring the determination of full planning by January 2023 in tandem with an agreed contract sum, shareholders agreement and land transfer to allow contract award and mobilisation to commence in line with the LUF programme in March 2023.

Master schedule for the Programme to Establish a University in Peterborough

The collaboration agreement between the Combined Authority, PCC and ARU requires all parties to work together to deliver the programme in accordance with the terms of the agreement. The parties

have agreed to work in partnership and co-operate with each other to achieve the project steps and milestones within the timescale envisaged in the master schedule. There will be a quarterly review of the master schedule steps and milestones and the nominated representatives for each of partners will meet on a monthly basis (or frequency to be agreed) to discuss project progress and any disagreements which may arise. The Parties remain on track to meet milestones outlined in the master schedule which in summary are:

1. 2020 ARU Peterborough is incorporated – COMPLETE.
2. 2022 ARU Peterborough starts provision of education to students at the start of the academic year 2022 - COMPLETE.
3. 2024 Opening of the Living Lab and expansion of the University with the opening second teaching building
4. 2025 ARU Peterborough is registered with OfS by the start of the Academic year 2025/26.
2028 ARU Peterborough is granted unlimited TDAPs by the start of the academic year 2028/29.

5.4 Change management

Change management with respect to the delivery of Phase 3 of the new university campus under delegated authority from PropCo1 to the Combined Authority and subsequently the occupation of the building by ARU Peterborough.

The key principles are that PropCo1 will delegate authority to the Combined Authority and its agent to manage the delivery of Phase 3 under the Development Management Agreement, reporting to PropCo1. Should change be required then authority will need to be sought from PropCo1.

ARU Peterborough will occupy the Phase 3 building, reporting to PropCo1 on an annual basis in respect of the building condition and maintenance. ARU and ARU Peterborough will also monitor, review and report to the Combined Authority and PCC on its progress against the roadmap set out in the Collaboration Agreement between the Combined Authority, PCC and ARU. The Collaboration Agreement sets out the intended corporate and academic governance arrangements for delivery of higher education courses by ARU Peterborough (moving towards registration with the OfS degree awarding powers and University title). The parties agree to review each of the roadmap, milestones and steps towards them on an annual basis to consider whether the plan remains achievable and compliant and where it is not believed to be so, to agree changes to be made. The parties are all members of the ARU Peterborough Board of Governors and have the ability to monitor progress through the established governance processes.

5.5 Benefits realisation

The benefits sought from the project are a critical element of the Combined Authority's investment programme under the Devolution Deal as well as monitoring and evaluation requirements set out by DLUHC through the LUF. Benefits realisation arrangements, within overall project governance, must, therefore, ensure benefits are realised over the life of the project.

The objectives and benefits of the project will be realised at key project milestones as follows:

1. Completion of the main transactional agreements including land transfer. Legal support has been procured by the Combined Authority to aid the Combined Authority to make the necessary changes to the Shareholders Agreement for PropCo1, to accommodate the

additional investments and the use of those monies for the construction of the second teaching building.

2. Meeting the agreed milestones and targets for design and delivery of the physical Infrastructure. This will be managed via PropCo1 in line with the agreed programme for completion of the Phase 3 building and the wider programme objectives

Responsibility for benefits realisation above will be for PropCo1. ARU will be responsible for taking reasonable steps to meet the student headcount growth targets and for the quality of HE delivery.

Infrastructure

The agreed infrastructure milestones and targets will be reported against at monthly PropCo1 Board meetings by the Combined Authority who will be granted authority under the Development Management Agreement to act on behalf of PropCo1 to manage the delivery of Phase 3 to practical completion and close out of 12 months defects.

Academic Delivery Partner Benefits Realisation

Milestones, targets are set out in the Collaboration Agreement. These will be audited under the terms of the Collaboration Agreement and will be reviewed on an annual basis by nominated representatives for each of the partners. It is envisaged that a programme delivery board will need to be established whereby all milestones are reviewed. These are outlined in the Collaboration Agreement master schedule and can be summarised as follows up to 2028 which will continue to be monitored and progress regularly reported against by ARU:

1. 2020 ARU Peterborough is incorporated – COMPLETE.
2. 2022 ARU Peterborough starts provision of education to students at the start of the academic year 2022 - COMPLETE.
3. 2024 Opening of the Living Lab and expansion of the University with the opening second teaching building
4. 2025 ARU Peterborough is registered with OfS by the start of the Academic year 2025/26.
5. 2028 ARU Peterborough is granted unlimited TDAPs by the start of the academic year 2028/29.

5.6 Risk management

Project managers Mace maintain a detailed project risk register which includes risk control strategies and owners, attached in Annex 6.3. Risks are grouped into the following risk categories:

1. Operational
2. Planning
3. Cost
4. Funding
5. Programme
6. Design
7. Surveys and site conditions
8. Procurement
9. Construction / logistics

The top-level risks and control measures are outlined in preceding sections of this Business Case.

Project managers Mace Consulting have produced a risk report based on the risks detailed in the risk register, which has evaluated the probability of each risk and costed their impact. The table below provides a list of the top 10 highest risks based on their expected value (as of October 2022).

Figure 31. Top 10 risks by expected risk value

Rank	Name	EV
1	Materials supply shortages	£180,000
2	Site logistics	£88,000
3	Risk of inflation	£87,500
4	Planning delays	£37,333
5	Planning conditions	£26,000
6	Regional pool car park closure and land transfer	£24,000
7	Provision of improvements to Public Transport	£18,000
8	LUF Monitoring forms	£18,000
9	Construction logistics	£17,500
10	Design brief	£16,000

The responsibility for management of risk will lie with PropCo1 under the joint venture in respect of the development of the Phase 3 building and with ARU Peterborough for the operational delivery risks. Under the Development Management Agreement between PropCo1 and CPCA, PropCo1 has delegated authority to the Combined Authority for the management of risk associated with the design, procurement and delivery of the Phase 3 building.

Authority for the management of risk will remain with PropCo1 up to completion of the Phase 3 building. Day to day responsibility for project risk management will be the responsibility of the Project Manager, Mace, who will hold quarterly risk workshops with members of the project team. The risk register will be reviewed at least monthly by the PropCo1 Board of directors. These monthly risk reviews will be an integral part of monthly reporting to PropCo1.

Where management of risk requires interventions beyond the authority delegated to the Combined Authority by PropCo1, decisions will be referred by exception to PropCo1 for agreement on how risks are to be mitigated in line with the governance and agreed terms of reference outlined above and set out in the Development Management Agreement.

Risks are also reported on a quarterly basis to DHLUC as they pertain to the use of Levelling Up Funds for Phase 3. The risks identified in LUF quarterly monitoring returns are drawn from the master risk register for Phase 3.

Project risk registers

Project risk registers are updated by selected members from the Partners team on a monthly basis. In accordance with the project governance arrangements these reports are issued to the PropCo1 Board and are scrutinised at the monthly PropCo1 Board meetings. In addition to the above the top 5 project risks, and all programme risks, are reported by the SRO for HE to the Combined Authority Business Board via a Highlight Report and a Business & Skills Risk Register. The Highlight Reports and Business & Skills Risk Register are scrutinised by the CPCA Performance and Risk Committee. Elements of the reports are also included in the Performance Dashboard which goes to Combined Authority Board. Projects with an overall amber and red rating are included in the Exception

Performance Dashboard that goes to Combined Authority Board members on a quarterly basis as a confidential item.

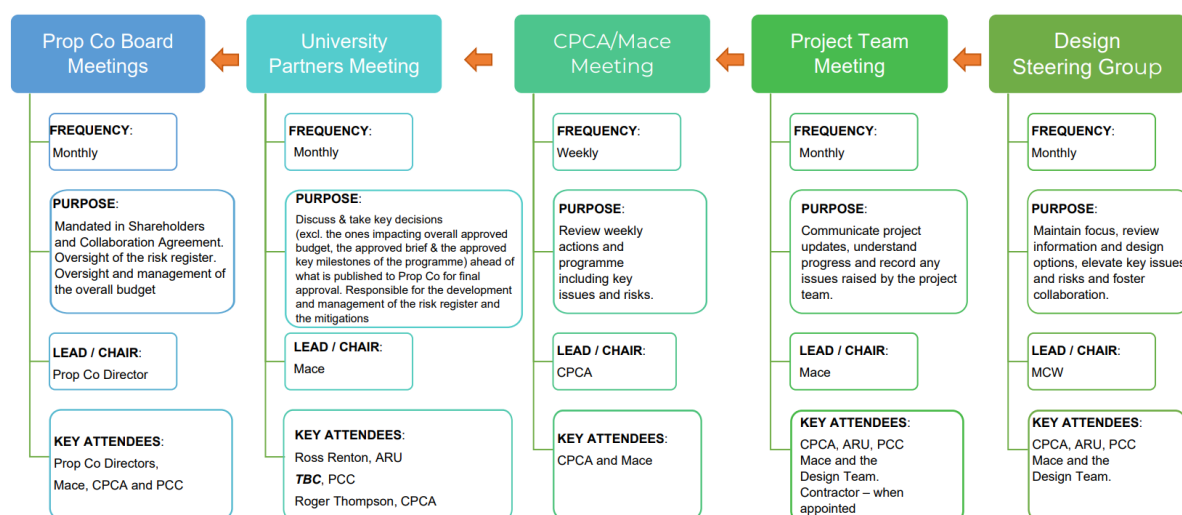
5.7 Project assurance

Phase 3 project assurance and risk management will be delivered in the following ways:

1. Overarching project assurance processes including monthly Highlight Reports - Overseen by CPCA and reported to CPCA Performance and Risk Committee.
2. Post project completion and lessons learned from phase 1 and phase 2 project's – Overseen by CPCA and reported to CPCA Performance and Risk Committee. Final outputs will be shared with the Partners and reported to PropCo1 Board.
3. PropCo1 governance and reporting facilitation (see Governance, Management & reporting arrangements) – All partners.
4. Review of the final FBC and approval– All partners.
5. Updates to FBC - As per PropCo1 governance facilitation (see Governance, Management & reporting arrangements) – All partners.
6. LUF Monitoring and reporting – overseen by CPCA and sign off by PCC Section 151 Officer.
7. Project risk reviews and monitoring – As per PropCo1 governance facilitation (see Project risk management) – All partners.

It is acknowledged that there is a need to move this towards a programme assurance approach and this will be reviewed in 2023 alongside the development of a programme business case for the University.

Figure 32. Governance management and reporting



5.7.1 Financial compliance

PropCo1 is registered as a Limited Company and as part of the services covered in the Development Management Agreement CPCA pay invoices, maintain accounting records, prepare finance reports and process call notices in accordance with the Shareholders Agreement. Annual financial accounts are prepared, audited and filed by Azets accountancy practice.

All expenditure is registered on the company's accountancy system (Xero) and approved prior to payment. All PropCo1 Board Directors can authorise expenditure. However, the Board of PropCo1

have provided delegated authority to the CPCA SRO for the University of Peterborough to authorise invoices on behalf of the company with a value over £500k. The CPCA is a supplier of PropCo1 so invoices raised from the CPCA are reviewed on a 6-monthly basis by ARU's nominated Director.

The business plan of PropCo1 is a shareholder reserved matter, as such PCC, ARU and CPCA review and approve the plan which the Board then implement. After investment of the LUF PCC have the right to appoint 2/5 of the directors of the company, the current ratio being 2 CPCA directors, 1 PCC director and 1 ARU which makes the Board quorate.

The Board of directors meet monthly and receive monthly finance reports alongside delivery, progress and milestones which contribute to the monthly monitoring of project delivery.

5.7.2 Legal compliance

The governance and legal framework to support PropCo1 are in place. The CPCA Legal Team will also ensure the following:

1. Shareholders Agreements are signed and kept in a readily accessible central location.
2. That business plans are in place for each of its subsidiary companies and ensure that these business plans (and business cases where relevant) are being reviewed and updated periodically, in line with each company's Shareholder Agreement.
3. That risk registers are in place for all current and future operational subsidiary companies and will establish a standard approach to risk management.
4. A clear governance, reporting and oversight structure for its existing subsidiary companies. As part of this structure, the methods by which the Overview and Scrutiny Committee and the Audit and Governance Committee will fulfil their responsibilities in relation to these subsidiary companies will be established and implemented.

5.8 Post-project evaluation

The project will adopt the BSRIA Soft Landings framework and follow the five Stages of the Soft Landings process. Stage 1: Inception and Briefing, Stage 2: Design Development is predicated on Stage one; while Stage 3: Pre-handover requires follow-through with Stage 4: Initial Aftercare.

The benefit of this approach is that it will help solve any performance gap between design intentions and operational outcomes by appointing soft landing champions who will agree the roles and responsibility of the client, contractor and professional team.

This process will commence from Royal Institute of British Architect (RIBA) stage 2 and run through to completion of the construction of Phase 3 and into the occupation and aftercare stages.

Design

Workshops will be held with the project team to review learning from previous projects/phases and develop a design that will work from the point of view of the ARU Peterborough and users. This will include agreement and review of an energy strategy and commissioning (for incorporation into relevant tenders) as well as review of proposed systems for usability and maintainability.

Construction

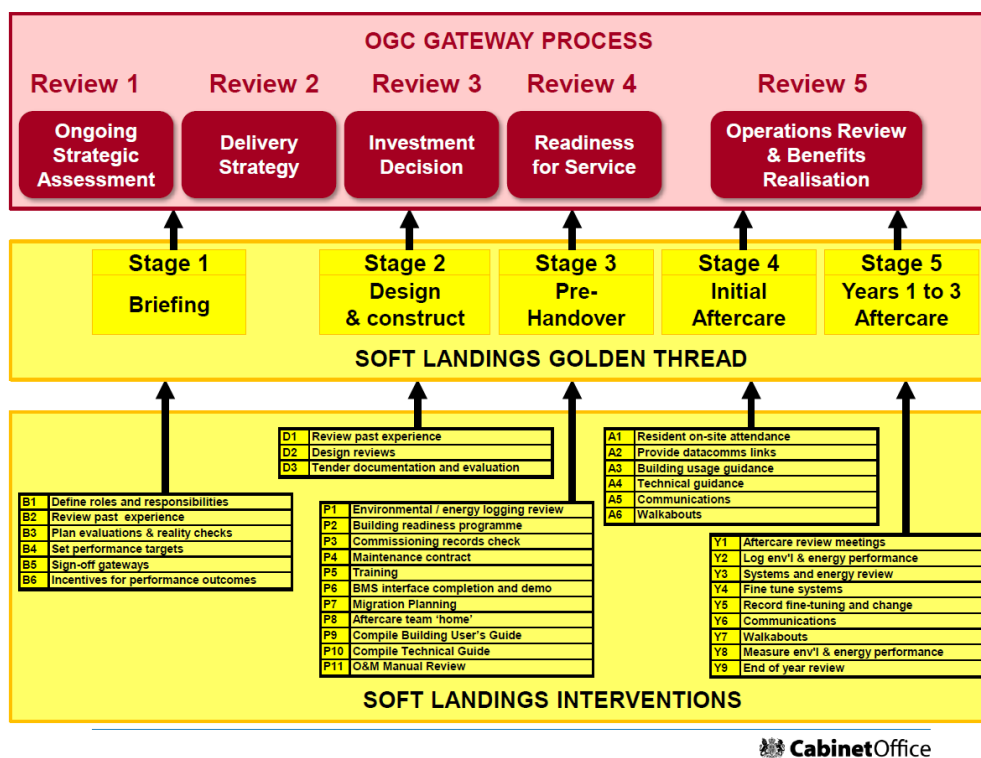
Soft landings considerations will be incorporated into the project plan, employer's requirements and the role and responsibilities of the contractor's soft-landing champion up to and following completion of the Phase 3 building.

Operation in use

The contractor will be required to provide comprehensive operation and maintenance manuals; escorted tours of completed facilities to demonstrate functionality; Building Information Modelling models to assist with future maintenance; and aftercare for an agreed period post-handover. The contractor will carry out post occupancy evaluation.

Key Milestones for Stage reviews of the Soft-Landing Process

Figure 33. OGC Gateway Process for post-project evaluation



5.9 Measuring the ongoing wider impact of the University

Partners will develop a range of progress measures to monitor the ongoing wider impact of the University, with these measures tied into broader strategic objectives for Peterborough and the wider Cambridgeshire and Peterborough region. Yet to be confirmed, the type of measures that partners are considering are set out in the table below. It is anticipated that there will need to be an ongoing review of these measures and agreement on how and where they are reported.

Figure 34. Indicative progress measures for the university

Category	Measure	Basis
Supporting access to Higher Education	Year on year increase in total learners	Annual HESA reporting
	Percentage of 'home' undergraduate students from the region	PE postcodes
	Participation of young people in HE in underrepresented areas	TUNDRA (tracking underrepresentation by area) data reports (or by POLAR)
	Student feedback on experience	National Student Survey Results

Student experience and employability	Graduate employability	<i>Annual Graduate Outcomes report on employability</i>
	Longer term graduate outcomes, including salaries	<i>Longitudinal Education Outcomes (LEO) data</i>
	Alignment of curriculum to local sector requirements	<i>Annual review of curriculum developments</i>
Local engagement	Public engagement activity, including through the Living Lab	<i>Annual report on the volume and nature of outreach and inreach</i>
Wider economic benefits	Increasing progression rates post-18 into HE	<i>CPCA Employment and Skills Strategy progress measures (Peterborough-specific measures)</i>
	Increasing number of professional and technical jobs, at least at level 3	
	Reducing numbers of workers at level 1 and 2 and increasing at level 3 and 4	
	Falling levels of economic inactivity and UC claimants	
	Reducing NEETs and un-sustained destinations after school	

The agreed outcomes will need to align with Higher Education Statistics Agency (HESA) reporting cycles and the requirements for registration with the Office for Students, including the need for an Access and Participation Plan.

In addition, the Board of Governors of ARU Peterborough have agreed to the development of a five year Strategic and Operational Plan for the University. Reporting cycles will need to align to ensure consistency. Due to commercial confidentiality some reporting will only be made directly to the ARU Peterborough Board members, for example the budget and annual accounts. Governors will also have access to more granular data and insight. The University partners will need to establish either a benchmark or baseline for some of the measures as part of ongoing project governance.

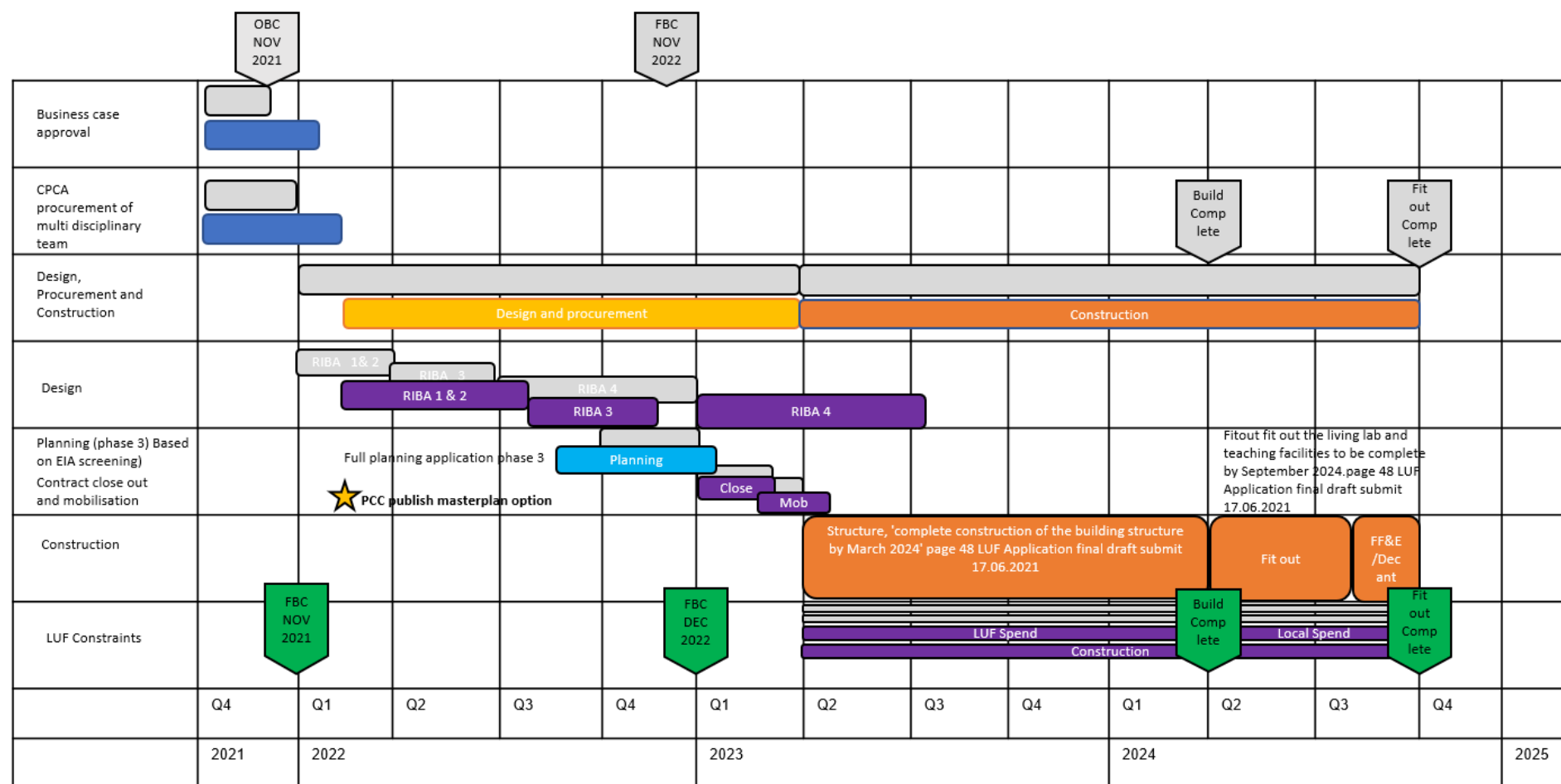
To maximise its contribution to Peterborough and the wider Cambridgeshire and Peterborough region the university should also be a factor in other partner initiatives and strategies, such as local transport strategies and plans to commission skills delivery.

6 Annexes

6.1 Phase 3 Project Plan



6.2 Phase 3 Outline Planning Application project plan



6.3 Examples of activities and events to be supported by the Living Lab

Activity	Eco Fair The Living Lab would host a weeklong Eco Fair with different themes each day targeted at different audiences to engage schools, community groups and the public in interactive experiences to highlight environmental and sustainability issues. The activity zone would be augmented by environmental trails around the university campus and local “eco” businesses and charities invited to exhibit their services or project work. Marketed as a family friendly event with some days reserved for school and community groups it is envisaged that 500 visitors per day would be achieved on public access days and 300 per day on targeted days (approx 3000 visitors). The Eco Fair would be organised by ARU Peterborough undergraduate Event Management and Leisure and Tourism students and the interactive displays and activities designed and run by the Environmental Management students. ARU Peterborough is already working with companies across the region who are passionate about sustainability in sectors as diverse as manufacturing engineering and medical device decontamination and the companies are eager to support public facing events that showcase Peterborough’s aspiration to be an Environmental Capital.
Reach	• 3000 visitors • 25 local businesses/community groups exhibiting over the week • 100 students engaged in organising and running events including acting as guides volunteers across the fair.

Activity	Café Scientifique Café Scientifique is an established model for delivering STEM focused public lectures and demonstrations in an informal environment that encourages people from heterogenous backgrounds to come together and discuss “Grand Challenges” and cutting-edge technologies and their impact in a safe environment. Speakers will be selected not only for their areas of expertise but also for their science communication skills to ensure all members of the audience are able to benefit. 6th form students, industry experts, university and college students, academics and interested members of the community and specialist groups will all be able to access these events. The benefits of these events are evident in creating opportunities for people from different backgrounds and with diverse experience to discuss and debate together.
Reach	Events to be run every week for a ten-week series for example, expected audiences 60 people per event. 2 series to be run each year. • 10x2 events per year • 1,200 engagements per year

Activity	Health Sciences Innovation Days A series of 1 day exhibitions focusing on key areas of Future Health. These include: • Health Manufacturing, covering medical manufacturing, PPE advances and supply chain and medical device design. • Digitisation of Health Care covering Digital Technologies and medical devices, health cybersecurity, personalised health monitoring and gamification of health care. • Wellbeing including preventative medicine and wellbeing, patient safety, improved medical practice and treatment advances. Many of the areas covered are interdisciplinary, bringing people from sectors outside of health together to explore how innovations in their fields of expertise can benefit the key areas of health. Visitors would be invited from all the local NHS trusts and associated areas as well as businesses from across the city of Peterborough and the fens. Students in the university and local FE and 6th forms would be invited as well as open invitations to interested members of the public.
Reach	• Approximately 300 visitors per day, 900 visitors in total

Activity	Supporting Participatory Research Community-based participatory research (CBPR) is a collaborative approach to research that aims to engage end users in evaluation and development. An example could be partnering with a mobile medical technology company – smart phones are increasingly utilised for delivering diagnostic and monitoring metrics for health conditions that would traditionally require hospital visits. The Living Lab would be utilised to bring community end user groups, including both patients and their carers and healthcare workers (nurses), into a safe non-clinical environment to evaluate their attitudes and compliance with the mobile technology. Healthcare students from the university would be able to assist with research project providing them with authentic research experience whilst also providing resource support for the project alongside our academic research teams. Research of this type is effective at assessing the functionality of new medical technologies and allows for modification and retesting if required for downstream application in domestic or residential care settings.
Reach	• Local med tech companies. • 300 community end users • 300 carers/family • 100 health care workers/students.