

Options Analysis

Cambridge City Council

Hanover and Princess Court

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2 EXECUTIVE SUMMARY

2.1 Introduction and project background

Hanover Court and Princess Court are situated within a Cambridge municipal area, with residential, office, educational and retail uses all within proximity of the site. The two blocks comprise 127 units and in their current form are no longer fit for purpose.

In January 2022 the City Council decided to conduct an options appraisal regarding the future of Hanover Court and Princess Court and to offer Council tenants the opportunity to transfer away from the estate and to offer leaseholders the opportunity to sell to the Council. This offer included compensation for home loss, basic loss and disturbance in line with provisions for compensation in the event of compulsory purchase. The offers were made because all of the options (other than do nothing) would involve disruption to anyone living within Hanover Court and Princess Court, and as such all such options would be best carried out with vacant possession.

2.2 The Case for Change

The buildings are no longer seen as fit for purpose with fire safety concerns, anti-social behaviour and sustainability issues all necessitating a need for change.

2.3 The Options Assessed

The following four options have been considered for the site as part of this Options Analysis:

- Option 1 – Do nothing
- Option 2 – Retain the building in existing form and undertake essential repairs
- Option 3 – Retain the building and retrofit to achieve enhanced energy standards
- Option 4 - Redevelop the blocks through the Cambridge Investment Partnership to provide 138 new homes, including 40-60% affordable homes for rent.

2.4 Options appraisal methodology

Four long-listed options were presented for appraisal and the following methodology used to evaluate these options to identify the optimum solution:

- **Strategic Alignment** sets out the key Council policies specifically related to residential property and incorporates these into a set of Critical Success Factors (“CSF”). The CSFs for each option were qualitatively assessed and provided with a rating of either Green (Good), Amber (Acceptable) or Red (Unacceptable).

- **Financial Performance** evaluates the Net Present Value (“NPV”) and Internal Rate of Return (“IRR”) for all the Options identified.
- **Economic Evaluation** evaluates the broader social and economic benefits of the short-listed option/s using a Benefits Cost Ratio.

2.5 Evaluation outcomes

2.5.1 Strategic Alignment

Sets out the case for change and aligns the project to the Council’s strategic vision by creating Critical Success Factors (“CSF”) against which to evaluate the options. When analysing alignment to the CSFs, it is clear that the number of red flags is too significant for the “do nothing” option to be considered viable and as such Option 1 was discounted. Option 2 (the new base case) does not appear a viable option with 5 of the CSFs being classified as red and only one green flag. Option 3 – major refurbishment with 5 green flags, and only one red flag relating to the safety and security of residents is considered a viable option. However, Option 4 for the full development ticks most boxes out of the CSF’s with no potential red flags.

2.5.2 Financial Performance

The Financial Performance evaluation shows that there is a negative NPV for all options. However, against the base case (option 2), a full development with 40% social housing was seen as the most favourable option from a financial perspective.

2.6 Economic Evaluation

The outcome of the Benefits Cost Ratio reflects a 1.96 base case result over the 30-year period for Option 4 at the All Economy level and 1.33 at the Public Purse level, both favourable returns.

2.7 Conclusion

Considering the options against the Strategic Alignment, the Financial Performance and the Economic Evaluation analysis, the recommendation is to proceed with exploring Option 4, being a full development of the site.

3 STRATEGIC ALIGNMENT

3.1 Strategic context

3.1.1 The property

The property is located in Cambridge, a major regional centre with good road and rail access into London and the Midlands and the North and is within proximity of Stansted Airport. Cambridge is best known for its university and colleges with approximately 25,000 students forming part of the 125,000 population. Cambridge is continuing to grow rapidly and housing is in high demand.

Hanover Court and Princess Court are situated within a municipal area, with residential, office, educational and retail uses all within proximity of the site. The site comprises two rectangular blocks of large scale mid twentieth century flats of a brutalist style, made from concrete and brick, with a parking block forming the northern part of the U-shaped block. There is a central communal amenities space and garden between the two blocks and the site has a number of established trees. The site covers approximately 3.1 acres with building coverage of approximately 30%.

One block fronts George IV Street and the other Bentinck Street. Coronation Street forms the site's immediate southern boundary with St George's Court Care Home, residential dwellings and a primary school adjacent to the site.

A key feature of the site is the presence of large mature trees that predominantly align Bentinck Street and George IV Street as well as the central landscape space. These tall landscape features help filter views of the existing buildings and assist with the visual transition to the lower properties located on the edges of the site.



The site does not fall within any direct planning policy designations. However, the site is located adjacent to the Cambridge Railway Station/ Hills Road Corridor to the City Centre Opportunity Area. The associated policy for this area outlines that development proposals within this area will be supported if “they help promote and coordinate the use of sustainable

transport modes, and deliver and reinforce a sense of place and local shops and services”

The site is well located and the city centre is within walking, or cycling distance. The area is popular with students due to its proximity to local colleges.

In its current form, the 2 blocks comprise 127 units:

	Total units	Tenant		Leasehold	
		1 bed	2 bed	1 bed	2 bed
Hanover Court	78	27	24	16	11
Princess Court	49	20	11	14	4
Total units	127	47	35	30	15

3.1.2 The case for change

The two blocks comprise 127 units and in their current form are no longer fit for purpose. There are a number of key factors which are driving the case for change. These are outlined below. In January 2022 the City Council decided to conduct an options appraisal regarding the future of Hanover Court and Princess Court and to offer Council tenants the opportunity to transfer away from the estate and to offer leaseholders the opportunity to sell to the Council. This offer included compensation for home loss, basic loss and disturbance in line with provisions for compensation in the event of compulsory purchase.

As at 15th November 2022 the movement of tenants and leaseholders was as follows:

	Hanover	Princess	Total
Tenants at commencement	50	32	82
Void	17	13	30
TA	9	5	14
Under notice	3	3	6
New build 'direct let' interest	11	3	14
Remaining if all moves occur	10	8	18
Leaseholders	27	18	45
Sold	5	3	8
Surrender instruction rec'd	2	4	6
Valuation requested	4	1	5
Remaining if all purchases occur	16	10	26

The scale of the response could be seen as indicative of the residents' experience of the estate. Further investigations and a detailed assessment of both essential repairs and full refurbishment is required. The scale of the works and the established decant mean that a full decant strategy is the logical approach to delivering the works safely and effectively.

The assumption for leaseholders in the refurbishment options is that 50% will sell back to the Council and 50% will remain and only decant temporarily. The Council has had experience of difficulties of securing compliance from leaseholders even for relatively minor works. The Council may find that it has to make compulsory purchase orders to ensure that the refurbishment is comprehensive.

The assumption for the refurbishment options is that all the remaining tenants will decant on a building by building basis. A report from Millward Consulting Engineers dated 29 June 2022 states that the following the completion of further identified remedial work, the building is likely to remain stable for another 30 to 40 years. However, the report also mentions that this is subject to the building being surveyed and that maintenance issues are addressed appropriately.

Since the remedial work programme started in 2011, the Council have spent approximately £2.5million on a range of works including re-roofing, concrete and brickwork repairs, lift refurbishment and balcony refurbishments and fire safety issues. The buildings should be structurally sound following the essential works, but there is a concern that there will continue to be a disproportionately high cost of maintenance going forward related to potential future movement and deterioration.

Furthermore, asbestos surveys of the buildings indicated the presence of asbestos that will need to be taken into account.

3.1.2.1 Fire safety concerns

In addition to the maintenance concerns, there are fire safety concerns as the vertical risers have been punctured over the years and need to be repaired or redesigned. A fire risk assessment was undertaken in July 2021 and identified the following concerns:

- **Hanover Court** – “Means of Escape”, “Means of Giving Warning in Case of Fire”, “Measures to Limit Fire Spread and Development” and “Procedures and Arrangements” were all flagged as being Substantial Risk items that require action.
- **Princess Court** – “Means of Escape” and “Procedures and Arrangements” were flagged as Substantial Risk items that require action.

3.1.2.2 Sustainability concerns

The current buildings were developed in 1968 and are not aligned with the Council's vision of being a net zero carbon council by 2030 and delivering sustainable housing solutions. The EPC ratings of these buildings are below the desired standard and this is impacting on operating carbon of the buildings and the energy costs that are being incurred by the residents.

An audit of the EPC ratings of the current units reflected 12 units at EPC C, 10 at EPC D and 5 at EPC E, with 100 units not yet rated. Anecdotally, the external facing units typically perform worse due to lack of insulation.

For the sustainability analysis we assumed an average rating of a blend between C and D.

3.1.2.3 Anti-social behaviour

The current layout of the building, its staircases and circulation routes mean the property is prone to antisocial behaviour which directly impacts the safety and enjoyment of the property by its residents and their visitors.

Over the past two years there have been numerous incidents reported to the local police, detailed in the table below.

Crime	Incidents
5 x public order offences	16 x rowdy nuisance
4 x cycle theft	7 x drug related
1 x criminal damage	6 x street drinking/homeless related
1 x personal robbery	
1 x offensive weapon	

3.2 Options to be considered to address the case for change

Four options are being considered:

- **Option 1 – Do nothing**

Under this option, no further capital work will be done, with none of the concerns addressed.

- **Option 2 – Retain the building in existing form and undertake essential repairs**

The essential repairs include both structural and fire related works, ventilation, rain-water pipe diversions and lifetime maintenance costs to both blocks.

- **Option 3 – Retain the building and retrofit to achieve enhanced energy standards**

Significant refurbishment of the property to primarily address the energy performance whilst also addressing anti-social behaviour concerns and enhancing amenities. The retrofit will include cavity wall insulation, EWI, solar panels and ground source heat pumps.

- **Option 4 - Redevelop**

Under this option the blocks will be demolished and redeveloped through the Cambridge Investment Partnership to provide 138 new homes, including 40-60% (55-82) affordable homes for rent.

3.3 Council Key Objectives

3.3.1 Cambridge's Vision

The Cambridge City Council has a clear vision to lead a united city, 'One Cambridge - Fair for All', in which economic dynamism and prosperity are combined with social justice and equality.

In line with this vision, the Council has developed its Corporate Plan for 2022-2027 which sets out 4 key priorities over the next 5 years. These four key priorities for 2022 to 2027 are:

- Leading Cambridge's response to the climate and biodiversity emergencies and creating a net zero council by 2030
- Tackling poverty and inequality and helping people in the greatest need
- Building a new generation of council and affordable homes and reducing homelessness
- Modernising the council to lead a greener city that is fair for all

3.3.2 Cambridge's Core Requirements

The Greater Cambridge Housing Strategy identifies the following strategic objectives related to housing:

- Increasing the delivery of homes, and in particular affordable housing, including Council homes, to meet housing need
- Diversifying the housing market and accelerating housing delivery
- Achieving a high standard of design and quality of new homes and communities
- Improving housing conditions and making best use of existing homes
- Preventing and Tackling Homelessness and Rough Sleeping
- Working with key partners to innovate and maximise available resources

When assessing the options for Hanover Court and Princess Court, consideration must be given to ensuring that these strategic objectives are met.

3.3.3 Sustainability and social value

Cambridge has a clear vision to create a Cambridge that cares for the planet. This vision statement states they will take robust action to tackle the local and global threat of climate change, both internally and in partnership with local organisations and residents, and to minimise its environmental impact by cutting carbon, waste and pollution.

3.4 Planning

The site itself is the subject of very few allocations/designations, the key one being the site's inclusion within the Conservation Area. The site is however located in a tight knit network of streets and has a number of mature landscaped features present within and around its edges.

Given the relative lack of space, any redevelopment proposal will require very careful design evolution. As with any site, the site's characteristics will mean there are limits on where buildings can be located and how tall they might be.

There are however many significant and wide-ranging opportunities presented by the redevelopment of the site. The existing buildings do not make a positive contribution to the conservation area and key elements of their design detract. The existing buildings also have their flaws and the quality of the accommodation provided is poor.

3.5 Engagement with stakeholders

4-hour public consultation events were held on site on 20 August 2022 and 1 September 2022. This resulted in 75 people attending in person, 12 watching the webinar and 52 survey responses. Key findings from the consultation included:

- 57% rated current condition of buildings less than 5 (1-10, 10 being the best)
- 78% support renovate or redevelop the existing buildings
- 67% preferred redevelop approach
- 73% answered above 5 for new tree planting along Union Road and 38% answered 10 (1-10, 10 being the best)
- 64% agreed or strongly agreed that trees around edge of the existing buildings are important
- 67% think providing at least 82 affordable homes is more important than retaining 3 trees

As part of the feedback, the following improvements to the open space were identified:

- Play equipment and park;
- Dog toilet;
- Exercise equipment; and

- Sense of open space.

3.6 Constraints

- Economic context

The current conflict in Ukraine has disrupted global markets and has resulted in a destabilised economic environment governed by higher inflation and increasing interest rates. This is coupled with higher energy costs, and supply chain issues related to building materials.

- Viability

A key component of this paper is to determine the viable options in terms of delivery, achievability and financial returns in line with the critical success factors.

- Affordability

The affordability component is focused on determining if the costs related to the different options are affordable to the Council in terms of capital outflows and operating costs.

- Funding

Aligned to Affordability, this constraint looks at the sources of public and private funding that the Council may access to fund any development.

3.7 Critical success factors (CSF)

The critical success factors are the key elements that need to be achieved in order for the project to be considered a success in light of the key issues driving the case for change at the Estate, and the wider strategic objectives of the Council. The critical success factors for this project are tied to the broader Cambridge vision, namely:

#	Critical Success Factors	Source
1	The buildings should positively contribute to increasing the delivery of homes, and in particular affordable housing	Greater Cambridge Housing Strategy
2	The buildings should contribute to diversifying the housing market and accelerating housing delivery	Greater Cambridge Housing Strategy
3	The buildings should achieve a high standard of design and quality of new homes and communities	Greater Cambridge Housing Strategy
4	The buildings should improve housing conditions and making best use of existing facility	Greater Cambridge Housing Strategy
5	Working with key partners to innovate and maximise available resources	Greater Cambridge Housing Strategy
6	The buildings should meet the required energy efficiency criteria that aligns with Cambridge's ambition to have net zero carbon housing stock by 2030 and reduce energy usage for residents	Cambridge Housing requirement
7	The buildings should result in a reduction of planned and preventative maintenance costs compared to the current level	Cambridge Housing requirement
8	The buildings should provide a safe and secure environment for all residents and visitors	Cambridge Housing requirement

9	The building should be bought up to standard in terms of fire safety compliance	Cambridge Housing requirement
10	The buildings should provide improved resident amenities and wider community benefits	Cambridge Housing requirement

3.8 Environmental impact appraisal – carbon assessment

CSF 6 relates to delivering energy efficiency criteria, new zero housing stock and reducing energy usage. This section provides a deeper dive into how the different options are able to deliver on this CSF.

When assessing the environmental impact of the different options, an analysis was prepared using JLL's Carbon Twin Track methodology which considers all aspects of embodied carbon and operational carbon and attaches a financial number to this carbon to indicate not only the absolute carbon impact, but also the financial impact.

Only options 2-4 have been modelled, with Option 4 including 3 scenarios depending on the building benchmarks applied. These are described as follows in the graphs and tables included in this section:

- Option 2 – Essential Repairs
- Option 3 – Sustainable Refurbishment
- Option 4 – New Development
 - Scenario 1 – Current Benchmark
 - Scenario 2 – 2020 Target
 - Scenario 3 – 2025 Target

RIBA 2030 Climate Challenge target metrics for domestic buildings

RIBA Sustainable Outcome Metrics	Current Benchmarks	2020 Targets	2025 Targets	2030 Targets	Notes
Operational Energy kWh/m ² /y 	146 kWh/m ² /y (Ofgem benchmark)	< 105 kWh/m ² /y	< 70 kWh/m ² /y	< 0 to 35 kWh/m ² /y	UKGBC Net Zero Framework 1. Fabric First 2. Efficient services, and low-carbon heat 3. Maximise onsite renewables 4. Minimum offsetting using UK schemes (CCC)
Embodied Carbon kgCO ₂ e/m ² 	1000 kgCO ₂ e/m ² (M4i benchmark)	< 600 kgCO ₂ e/m ²	< 450 kgCO ₂ e/m ²	< 300 kgCO ₂ e/m ²	RICS Whole Life Carbon (A-C) 1. Whole Life Carbon Analysis 2. Using circular economy Strategies 3. Minimum offsetting using UK schemes (CCC)
Potable Water Use Litres/person/day 	125 l/p/day (Building Regulations England and Wales)	< 110 l/p/day	< 95 l/p/day	< 75 l/p/day	CIBSE Guide G

3.8.1.1 Assumptions

The below table documents the key assumptions that were used in preparing the carbon analysis:

Scenario	Option 2	Option 3	Option 4			Source
			Current	2020	2025	
Units	127	127	138			
Area (sqm)	6,563	6,563	7,131			Floor area proportional to number of units
Energy Intensity (kWh/m ²)	422	281	146	105	70	Option 2: EPC C/D – average EPC on site Option 3: data from National Energy Efficiency Data-Framework (NEED) -9.5% for cavity wall insulation; -14% for external wall insulation; -10% for solar PV Option 4: RIBA 2030 Climate Challenge
Embodied Carbon (kgCO ₂ e/m ²)	0	350	1,000	650	450	Option 3: assumed to be marginally below a full sustainable development Option 4: RIBA 2030 Climate Challenge
Electricity Price (p/kWh)	34					Average UK Electricity 34p and Gas Price 10p. As there is no gas in the current development, we have used electricity rate only and not a blended rate.
Carbon Price Low (£/tonne)	95					GLA London Plan
Carbon Price High (£/tonne)	121					HM Treasury Green Book

The 3 different scenarios under Option 4 (New Development) reflect the current benchmarks for domestic building per the table below:

3.8.1.2 Environmental analysis

When calculating the cost of carbon, we could not find published data on what the Council's cost of carbon is, so we used two comparative rates. The first is the Greater London Authority rate of £95/tonne and the second is the HM Treasury Green Book rate of £121/tonne.

Embodied Carbon was assumed to be insignificant for the essential repairs, relatively low for a limited refurbishment and in-line with RIBA standards for each of the development options. Keeping embodied carbon low during the development phase is difficult and all of this carbon would need to be offset for a Net Zero construction. In contrast, operational carbon can be eliminated by using exclusively renewable sources of electricity.

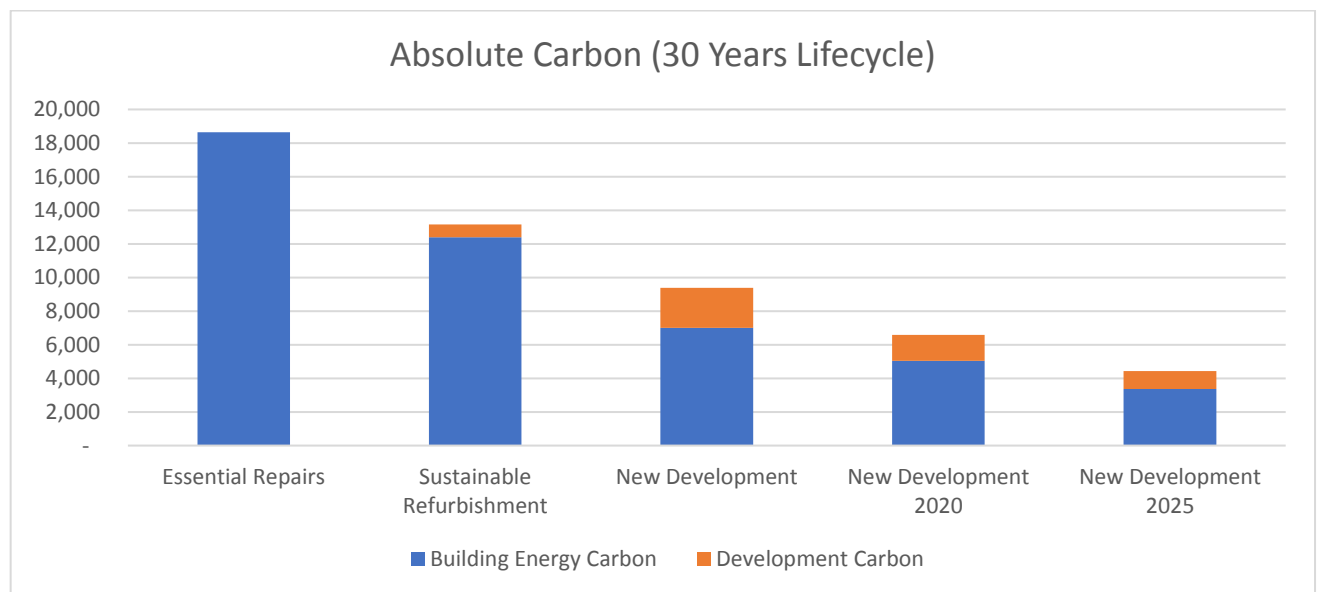
Operational energy (based on utility cost rather than carbon cost in Building Energy Carbon) over the 30-year period is also included in the below analysis and shows similar trends in the level of decrease across the different scenarios.

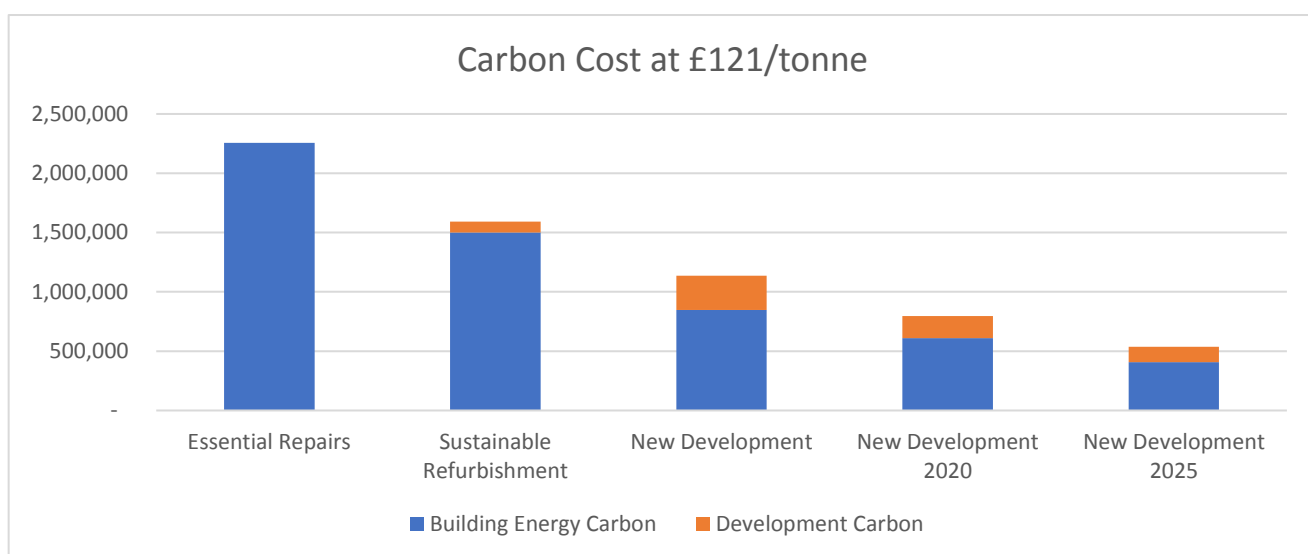
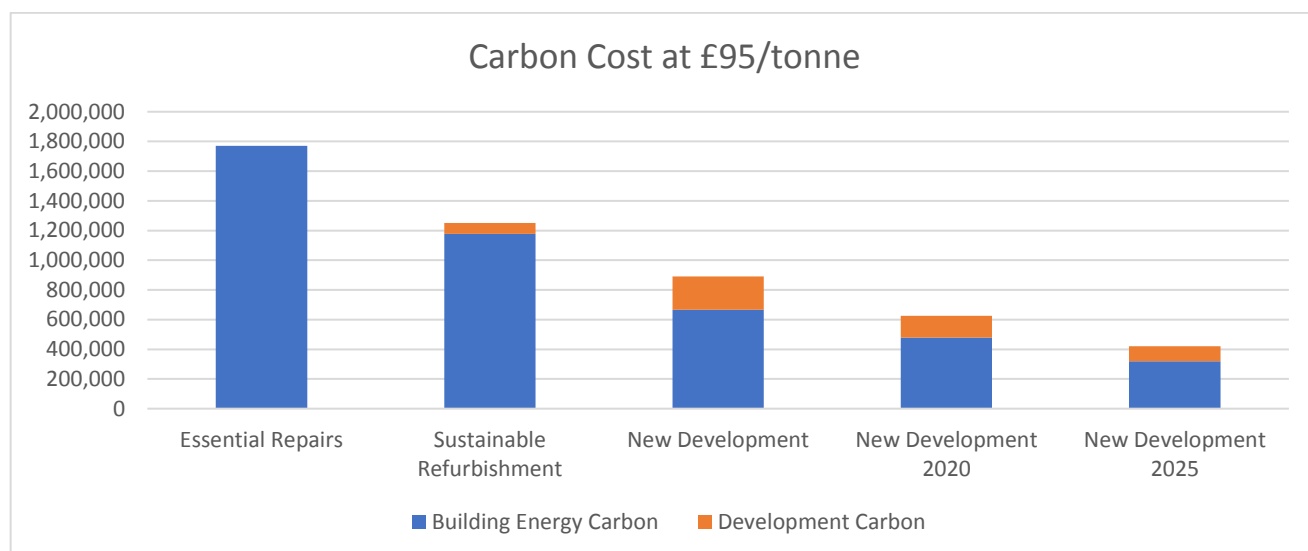
This is an illustrative estimate based on the EPC expected kWh usage for EPC C/D (Essential repairs) rated buildings based on 422kWh per m² per annum and applying the latest blended electricity rate of 34p per kWh. We have assumed that all energy usage is electricity based as the building does not have piped gas.

- **30-year model**

A 30-year model was also run for the 3 options to determine the carbon impact of the options:

Absolute Carbon (tCO ₂ e)	Essential Repairs	Sustainable Refurbishment	New Development	New Development 2020	New Development 2025
Building Energy Carbon	18,644	12,398	7,006	5,038	3,359
Development Carbon	-	766	2,377	1,545	1,070
Total Carbon (tCO₂e)	18,644	13,164	9,383	6,583	4,429





	Essential Repairs £'000	Sustainable Refurbishment £'000	New Development Current £'000	New Development 2020 £'000	New Development 2025 £'000
Operational Energy	28,261	18,794	10,620	7,638	5,092
Savings over Base Case	-	9,467	17,641	20,623	23,169

Conclusion

Option 2: Essential repairs - Assumed to perform the same as the current building with poor EPC ratings (an average of C/D). This building will be expensive to operate and will negatively contribute towards Net Zero goals.

Option 3: Sustainable refurbishment - Should result in a 30% improvement in energy performance and bring significant operational savings but would be far from what a Net Zero building should be performing like.

Option 4: New Development – Three scenarios have been considered, aligned to RIBA current (Ofgem benchmark), RIBA 2020 and RIBA 2025 targets. All of these options would bring about large carbon and operational cost savings (50% - 75%). RIBA specifies aspirational targets for new residential buildings and this redevelopment should aim to align itself with the 2025 targets.

Embodied Carbon was assumed to be insignificant for the essential repairs, relatively low for a limited refurbishment and in-line with RIBA standards for each of the development options. Keeping embodied carbon low during the development phase is difficult and all of this carbon would need to be offset for a Net Zero construction. In contrast, operational carbon can be eliminated by using exclusively renewable sources of electricity.

Note: the longer lifecycle makes the embodied carbon less significant to the overall lifecycle carbon and a higher emphasis should be placed on operational carbon reduction.

3.9 Appraisal of Options

Each of the options has been assessed against the above CSFs using a qualitative assessment on a RAG basis:

- R = Red – Indicates that under this scenario, the CSF will not be met and that it falls materially short of meeting this requirement
- A = Amber – Indicates that the CSF meets, or falls just below the requirement, but that it does not materially impact the overall decision
- G = Green – Indicates that the CSF requirement has been met or exceeded.

The individual CSFs have not been weighted, with the number of flags being used as the primary assessment of whether the option meets the required standard.

3.9.1 Critical Success Factors appraisal

3.9.1.1 Option 1: Do nothing

#	Critical Success Factor	Options Response
1	The buildings should positively contribute to increasing the delivery of homes, and in particular affordable housing	The “do nothing” option maintains the status quo, so does not positively or negatively contribute to this CSF

#	Critical Success Factor	Options Response
2	The buildings should contribute to diversifying the housing market and accelerating housing delivery	The “do nothing” option maintains the status quo, so does not positively or negatively contribute to this CSF
3	The buildings should achieve a high standard of design and quality of new homes and communities	The current buildings do not deliver a high standard of design and quality, so does not positively contribute to this CSF
4	The buildings should improve housing conditions and making best use of existing facility	The current buildings are not aligned with the expected level of housing condition and the facility is not optimally used.
5	Working with key partners to innovate and maximise available resources	There is no innovation or maximising of resources through the do nothing option
6	The buildings should meet the required energy efficiency criteria that aligns with Cambridge’s ambition to have net zero carbon housing stock by 2030 and reduce energy usage for residents	The current buildings do not meet the required energy efficiency criteria and energy costs for residents are high.
7	The buildings should result in a reduction of planned and preventative maintenance costs compared to the current level	The ongoing maintenance costs of the current buildings are above benchmark and these are likely to escalate due to the age and condition of the buildings.
8	The buildings should provide a safe and secure environment for all residents and visitors	The current ongoing anti-social behaviour on site, which includes drug taking in the stairwells, will remain under this option as the layout is conducive to providing spaces where this type of behaviour prevails.
9	The building should be bought up to standard in terms of fire safety compliance	The fire safety issues with the building need to be addressed to ensure the continued safety of residents. In particular the vertical risers have been compromised which in the event of a fire may result in the fire spreading though the building rapidly.
10	The buildings should provide improved resident amenities and wider community benefits	The current amenities are limited in the benefits they provide to residents and the wider community.

It is clear from the above review of this option against the 10 critical success factors, that the “do nothing” option is not a viable option and should be discounted from any further analysis. Under this approach, Option 2: Retain the building in existing form and undertake essential repairs should be seen as the true baseline option.

3.9.1.2 Option 2: Retain the building in existing form and undertake essential repairs

#	Critical Success Factor	Options Response
1	The buildings should positively contribute to increasing the delivery of homes, and in particular affordable housing	The essential works option maintains the status quo, so does not positively or negatively contribute to this CSF
2	The buildings should contribute to diversifying the housing market and accelerating housing delivery	The essential works option maintains the status quo, so does not positively or negatively contribute to this CSF

#	Critical Success Factor	Options Response
3	The buildings should achieve a high standard of design and quality of new homes and communities	The current buildings do not deliver a high standard of design and quality, and undertaking only the essential repairs will not materially change this, so does not positively contribute to this CSF.
4	The buildings should improve housing conditions and making best use of existing facility	The current buildings are not aligned with the expected level of housing condition. The essential repairs will make a difference, but it certainly does not make best use of the buildings.
5	Working with key partners to innovate and maximise available resources	There is no innovation or maximising of resources through only making essential repairs.
6	The buildings should meet the required energy efficiency criteria that aligns with Cambridge's ambition to have net zero carbon housing stock by 2030 and reduce energy usage for residents	The current buildings do not meet the required energy efficiency criteria and energy costs for residents are high. The essential repairs will not address this.
7	The buildings should result in a reduction of planned and preventative maintenance costs compared to the current level	The essential repairs option only covers basic maintenance and fire safety works so unlikely to materially reduce ongoing maintenance.
8	The buildings should provide a safe and secure environment for all residents and visitors	The current ongoing anti-social behaviour on site, which includes drug taking in the stairwells, will remain under this option as the layout is conducive to providing spaces where this type of behaviour prevails.
9	The building should be brought up to standard in terms of fire safety compliance	The fire safety issues with the building will be addressed as part of the essential works.
10	The buildings should provide improved resident amenities and wider community benefits	The current amenities are limited in the benefits they provide to residents and the wider community.

3.9.1.3 Option 3: Retain the building and retrofit to achieve enhanced energy standards

#	Critical Success Factor	Options Response
1	The buildings should positively contribute to increasing the delivery of homes, and in particular affordable housing	The refurbishment option maintains the status quo, so does not positively or negatively contribute to this CSF
2	The buildings should contribute to diversifying the housing market and accelerating housing delivery	The refurbishment option maintains the status quo, so does not positively or negatively contribute to this CSF
3	The buildings should achieve a high standard of design and quality of new homes and communities	The refurbishment of the buildings will contribute to improving the standard of design and quality.
4	The buildings should improve housing conditions and making best use of existing facility	A refurbishment of an established building will positively contribute to improving housing conditions and making best use of the existing housing stock.
5	Working with key partners to innovate and maximise available resources	There will be limited innovation through the refurbishments and resources will not fully be maximised, but there will certainly be an uplift in both these areas.
6	The buildings should meet the required energy efficiency criteria that aligns with Cambridge's	The refurbishment will address a number of energy efficiency elements and will positively contribute to reducing energy usage for

#	Critical Success Factor	Options Response
	ambition to have net zero carbon housing stock by 2030 and reduce energy usage for residents	residents. However, there is uncertainty over whether the external cladding to insulate the building is able to be installed or that the walls will be able to carry the additional weight. If this does not prove possible it will impact the buildings energy efficiency.
7	The buildings should result in a reduction of planned and preventative maintenance costs compared to the current level	The full refurbishment should result in a reduction in ongoing maintenance costs.
8	The buildings should provide a safe and secure environment for all residents and visitors	The current ongoing anti-social behaviour on site, which includes drug taking in the stairwells, will remain under this option as the layout is conducive to providing spaces where this type of behaviour prevails.
9	The building should be bought up to standard in terms of fire safety compliance	The fire safety issues with the building will be addressed as part of the essential works.
10	The buildings should provide improved resident amenities and wider community benefits	The current amenities located between the two buildings do not meet expectations for the residents and also do not provide wider community benefits.

3.9.1.4 Option 4: Redevelop the blocks through the Cambridge Investment Partnership to provide 138 new homes, including 55/82 affordable homes to rent.

#	Critical Success Factor	Options Response
1	The buildings should positively contribute to increasing the delivery of homes, and in particular affordable housing	There is a marginal increase from 127 to 138 homes. However, the number of affordable houses will at best remain the same, or more likely decrease.
2	The buildings should contribute to diversifying the housing market and accelerating housing delivery	The newly developed homes will provide new stock to the housing market, but this will be more replacement than diversifying or accelerating.
3	The buildings should achieve a high standard of design and quality of new homes and communities	As a new build, it is likely that these will be of a high standard and quality.
4	The buildings should improve housing conditions and making best use of existing facility	Redevelopment on an existing site will improve housing conditions and will be making the best use of an existing facility.
5	Working with key partners to innovate and maximise available resources	A new development will provide opportunities for innovation and maximising available resources.
6	The buildings should meet the required energy efficiency criteria that aligns with Cambridge's ambition to have net zero carbon housing stock by 2030 and reduce energy usage for residents	The buildings will be built at a standard that align with Cambridge's ambition and in accordance with the recommended RIBA standards. It is challenging to have net zero carbon build costs other than through offsets, but there will be significant reduction in energy costs.
7	The buildings should result in a reduction of planned and preventative maintenance costs compared to the current level	A new build will require less ongoing preventative and planned maintenance costs.
8	The buildings should provide a safe and secure environment for all residents and visitors	The new development should meet this requirement as the proposed layout will meet design accreditation standards that should

#	Critical Success Factor	Options Response
		reduce the types of spaces that result in anti-social behaviour.
9	The building should be bought up to standard in terms of fire safety compliance	The new development will be built in accordance with the latest fire safety regulations so will meet this requirement fully.
10	The buildings should provide improved resident amenities and wider community benefits	A new development will incorporate feedback from the residents to ensure the amenities and community benefits are delivered.

3.10 Conclusion

The Strategic Case set out the case for change and the strategic objectives for the Council. It identified 10 Critical Success Factors aligned to these strategic objectives and each of the four options were assessed on a qualitative basis against these CSFs.

#	Critical Success Factor	Option 1: Do Nothing	Option 2: Essential Repairs	Option 3: Full refurbish	Option 4: Redevelop
1	The buildings should positively contribute to increasing the delivery of homes, and in particular affordable housing				
2	The buildings should contribute to diversifying the housing market and accelerating housing delivery				
3	The buildings should achieve a high standard of design and quality of new homes and communities				
4	The buildings should improve housing conditions and making best use of existing facility				
5	Working with key partners to innovate and maximise available resources				
6	The buildings should meet the required energy efficiency criteria that aligns with Cambridge's ambition to have net zero carbon housing stock by 2030 and reduce energy usage for residents				
7	The buildings should result in a reduction of planned and preventative maintenance costs compared to the current level				
8	The buildings should provide a safe and secure environment for all residents and visitors				
9	The building should be bought up to standard in terms of fire safety compliance				

#	Critical Success Factor	Option 1: Do Nothing	Option 2: Essential Repairs	Option 3: Full refurbish	Option 4: Redevelop
10	The buildings should provide improved resident amenities and wider community benefits				

The below table clearly reflects that at a strategic level, option 4 that is most aligned to meeting the CSFs, with option 3 seen as a possible fall-back position. Option 1 with 8 red flags should not be considered further and Option 2 will be used as the baseline for assessing the two remaining viable options.

Option	Red Flags	Amber Flags	Green Flags	Status
Option 1: Do nothing	8	2	0	Not viable
Option 2: Essential Repairs	5	4	1	Base Case
Option 3: Refurbish	1	5	4	Viable
Option 4: Redevelop	0	2	8	Viable (preferred)

4 FINANCIAL PERFORMANCE

4.1 Introduction

The Financial Performance appraisal incorporates a detailed set of financial models that align with a set of agreed assumptions.

The Strategic Alignment assessment determined that Option 1 – Do Nothing is not a viable option, so this option has not been included in this analysis. Instead, Option 2 – Essential Repairs is seen as the true base case for comparative purposes.

The assumptions related to each option are included below, followed by the outcomes of the DCF calculation over a 30-year period. For financial modelling purposes, we have used January 2023 as the base period for determining values and costs. Although actual project commencement date will differ, we do not believe that any change in date will materially impact the outcomes as all cases will be affected equally.

4.2 Financial Performance and Evaluation

4.2.1 Option 2 – Essential Repairs

- Assumptions

Assumption	Commentary
Unit Mix	Social Rent units: 104 Right to Buy (RtB) units returned: 23
Timescales	Within our model we have assumed an illustrative project start date and valuation date of January 2023 as detailed below: • January 2023 - 2026 • Pre-construction / Decant of properties: 36 months • Construction: 24 months (development period phased with decant of blocks) • Total development period: 48 months. • We have assumed during the first 24 months whilst the blocks are being decanted the Council will receive 25% of the rental income. • We have assumed a life expectancy of the building of 30 years.
Estimated Rental Income (Social Units)	We have been provided with <i>Rental and charges for sharing – Hanover and Princess</i> . This outlines the current Social Rent to be £91 per week. We have been advised that there is an allowance for a 5% increase to the rent regime where justifiable improvements and quality standards can be evidenced. We have assumed in this case that the refurbishment works would justify an increase. Therefore, we have adopted a rent of £96 per week for all of the social rents.

Assumption	Commentary																																																																										
	We have been advised that it is probable that at least 50% of the RtB units (23 units) will relocate back into the refurbished blocks. As a result, we have assumed that these units will not be income producing due to a like for like swap and have not been accounted for within the financial model. Having regard to the above we have assumed that the remaining RtB units will return as Social Rent units. Therefore, we have applied £96 per week to 104 Social Rent units. We have assumed a phased return to the blocks seeing 50% of the income being received in year 4 and full rental income in year 5.																																																																										
Service Charge	We have assumed service charge at £20 per week as advised.																																																																										
Decant Costs	We have been provided with a total decant cost of £18,197,200. Please see summary below: <table><tr><th>Existing</th><th>1b</th><th>2b</th><th>3b</th><th>Total</th></tr><tr><td>Tenant</td><td>47</td><td>35</td><td>0</td><td>82</td></tr><tr><td>Leasehold</td><td>30</td><td>15</td><td></td><td>45</td></tr><tr><td>Freehold</td><td></td><td></td><td></td><td>0</td></tr><tr><td></td><td>77</td><td>50</td><td>0</td><td>127</td></tr></table> <table><tr><th>Buybacks</th><th>1b</th><th>2b</th><th>3b</th><th></th></tr><tr><td>Assumed Values</td><td>£295,000</td><td>£420,000</td><td>£535,500</td><td></td></tr><tr><td>Buybacks</td><td>£8,850,000</td><td>£6,300,000</td><td>£0.00</td><td>£15,150,000</td></tr></table> <table><tr><th>Expense</th><th>Assumption</th><th>x by</th><th>Total</th></tr><tr><td>Homeloss (Tenant)</td><td>£7,100</td><td>82</td><td>£582,200</td></tr><tr><td>Disturbance (Tenant)</td><td>£1,250</td><td>82</td><td>£102,500</td></tr><tr><td>Homeloss (Buyback)</td><td>10.00%</td><td>£15,150,000</td><td>£1,515,000</td></tr><tr><td>Disturbance(Buyback)</td><td>5.00%</td><td>£15,150,000</td><td>£757,500</td></tr><tr><td>Legal Fees (Buyback)</td><td>£2,000</td><td>45</td><td>£90,000</td></tr></table> <table><tr><td>Total decant cost</td><td>£18,197,200</td></tr><tr><td colspan="2"></td></tr><tr><td>Total RtB decant cost (buy back homeloss & legal fees)</td><td>£16,755,000</td></tr><tr><td>50% of RtB decant cost</td><td>£8,377,500</td></tr><tr><td>50% RtB decant cost + Social Rent homeloss and disturbance)</td><td>£9,819,700</td></tr></table>	Existing	1b	2b	3b	Total	Tenant	47	35	0	82	Leasehold	30	15		45	Freehold				0		77	50	0	127	Buybacks	1b	2b	3b		Assumed Values	£295,000	£420,000	£535,500		Buybacks	£8,850,000	£6,300,000	£0.00	£15,150,000	Expense	Assumption	x by	Total	Homeloss (Tenant)	£7,100	82	£582,200	Disturbance (Tenant)	£1,250	82	£102,500	Homeloss (Buyback)	10.00%	£15,150,000	£1,515,000	Disturbance(Buyback)	5.00%	£15,150,000	£757,500	Legal Fees (Buyback)	£2,000	45	£90,000	Total decant cost	£18,197,200			Total RtB decant cost (buy back homeloss & legal fees)	£16,755,000	50% of RtB decant cost	£8,377,500	50% RtB decant cost + Social Rent homeloss and disturbance)	£9,819,700
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	We have assumed that the Council will be responsible to pay homeloss and disturbance for all 92 Social Rent tenants. Due to assuming that half of the refurbished RtB units will be returned to leaseholders we have reduced the total decant costs (buy backs, homeloss and legal fees) for these units																																																																										

Assumption	Commentary
	by 50% . We have still made an allowance for disturbance costs. Therefore, this provides a total decant cost for the blocks of £9,819,700. Following the above assumptions Option 2 will see an additional 22 Social Rent units.
Construction Costs	We have applied a total construction cost of £12,610,000 as per the Potter Raper cost plans for retain options. It should be noted that the total construction cost is exclusive of professional fees. We have modelled these as a separate allowance.
Professional Fees	We have modelled an allowance of £1,261,000 for professional fees during the development period. This is at 10% of the construction costs. We have assumed this will fall during the construction phase.
Repairs and Maintenance Cost (Ongoing)	At this stage we have assumed ongoing repairs cost of £1,180 per unit.
Letting & Management Fees (Ongoing)	We have modelled the ongoing letting fees at 10% of the annual ERV to cover the cost of letting and legal fees during the cashflow period. We have assumed growth of 2.5% per annum.
Operating Contingency	We have applied an operating contingency of 5% of all operating costs to account for unexpected expenditure during the cashflow period.
Rental Growth	As advised we have applied rental growth at 3% across the cashflow period in the base model.
Net Present Value (NPV)	Utilising a discount rate of 3.50% we have calculated the Present Value of the Net Cashflow to generate the Net Present Value.
Internal Rate of Return (IRR)	We have calculated the Internal Rate of Return (IRR) based on the NPV of the net cash flow.

Net Present Value = -£13.2m

IRR = -16.0%

4.2.2 Option 3 - Refurbishment

Assumption	Commentary
Unit Mix	Social Rent units: 104 Right to Buy (RtB) units returned: 23
Timescales	Within our model we have assumed a project start date of January 2023 as detailed below: January 2023 - 2026

Assumption	Commentary																																																				
	• Pre-construction / Decant of properties: 36 months • Construction: 24 months (development period overlaps with decant of blocks) • Total development period: 48 months. • We have assumed during the first 24 months whilst the blocks are being decanted the Council will receive 25% of the rental income. • We have assumed a life expectancy of the building of 30 years.																																																				
Estimated Rental Income (Social Units)	We have been provided with <i>Rental and charges for sharing – Hanover and Princess</i>. This outlines the current Social Rent to be £91 per week. We have been advised that there is an allowance for a 5% increase to the rent regime where justifiable improvements and quality standards can be evidenced. We have assumed in this case that the refurbishment works would justify an increase. Therefore, we have adopted a rent of £96 per week for all of the social rents. We have been advised that it is probable that at least 50% of the RtB units (23 units) will relocate back into the refurbished blocks. As a result, we have assumed that these units will not be income producing due to a like for like swap and have not been accounted for within the financial model. Having regard to the above we have assumed that the remaining RtB units will return as Social Rent units. Therefore, we have applied £96 per week to 104 Social Rent units. We have assumed a phased return to the blocks seeing 50% of the income being received in year 4 and full rental income in year 5.																																																				
Service Charge	We have assumed service charge at £20 per week as advised.																																																				
Decant Costs	We have been provided with a total decant cost of £18,197,200 . Please see summary below: <table><tr><th>Existing</th><th>1b</th><th>2b</th><th>3b</th><th>Total</th></tr><tr><td>Tenant</td><td>47</td><td>35</td><td>0</td><td>82</td></tr><tr><td>Leasehold</td><td>30</td><td>15</td><td></td><td>45</td></tr><tr><td>Freehold</td><td></td><td></td><td></td><td>0</td></tr><tr><td></td><td>77</td><td>50</td><td>0</td><td>127</td></tr></table> <table><tr><th>Buybacks</th><th>1b</th><th>2b</th><th>3b</th><th></th></tr><tr><td>Assumed Values</td><td>£295,000</td><td>£420,000</td><td>£535,500</td><td></td></tr><tr><td>Buybacks</td><td>£8,850,000</td><td>£6,300,000</td><td>£0.00</td><td>£15,150,000</td></tr></table> <table><tr><th>Expense</th><th>Assumption</th><th>x by</th><th>Total</th></tr><tr><td>Homeloss (Tenant)</td><td>£7,100</td><td>82</td><td>£582,200</td></tr><tr><td>Disturbance (Tenant)</td><td>£1,250</td><td>82</td><td>£102,500</td></tr></table>	Existing	1b	2b	3b	Total	Tenant	47	35	0	82	Leasehold	30	15		45	Freehold				0		77	50	0	127	Buybacks	1b	2b	3b		Assumed Values	£295,000	£420,000	£535,500		Buybacks	£8,850,000	£6,300,000	£0.00	£15,150,000	Expense	Assumption	x by	Total	Homeloss (Tenant)	£7,100	82	£582,200	Disturbance (Tenant)	£1,250	82	£102,500
Existing	1b	2b	3b	Total																																																	
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Expense	Assumption	x by	Total																																																		
Homeloss (Tenant)	£7,100	82	£582,200																																																		
Disturbance (Tenant)	£1,250	82	£102,500																																																		

Assumption	Commentary			
	Homeloss (Buyback)	10.00%	£15,150,000	£1,515,000
	Disturbance (Buyback)	5.00%	£15,150,000	£757,500
	Legal Fees (Buyback)	£2,000	45	£90,000
	Total decant cost			£18,197,200
	Total RtB decant cost (buy back homeloss & legal fees)			£16,755,000
	50% of RtB decant cost			£8,377,500
	50% RtB decant cost + Social Rent homeloss and disturbance)			£9,819,700
	We have assumed that the Council will be responsible to pay homeloss and disturbance for all 92 Social Rent tenants. Due to assuming that half of the refurbished RtB units will be returned to leaseholders we have reduced the total decant costs (buy backs, homeloss and legal fees) for these units by 50% . We have still made an allowance for disturbance costs. Therefore, this provides a total decant cost for the blocks of £9,819,700. Following the above assumptions Option 3 will see an additional 22 Social Rent units.			
	Construction Costs We have applied a total construction cost of £18,818,302 as per the cost plan prepared by <i>Potter Raper</i> for retain options. It should be noted that the total construction cost is exclusive of professional fees. We have modelled these as a separate allowance.			
	Professional Fees We have modelled an allowance of £1,881,830 for professional fees during the development period. This is at 10% of the construction costs. We have assumed this will fall during the construction phase.			
Repairs and Maintenance Cost (on going)	At this stage we have assumed ongoing repairs cost of £1,180 per unit.			
Letting & Management Fees (Ongoing)	We have modelled the ongoing letting fees at 10% of the annual ERV to cover the cost of letting and legal fees during the cashflow period. We have assumed growth of 2.5% per annum.			
Operating Contingency	We have applied an operating contingency of 5% of all operating costs to account for unexpected expenditure during the cashflow period.			
Rental Growth	As advised by the Council we have applied rental growth at 2.5% across the cashflow period in the base model.			
Net Present Value (NPV)	Utilising a discount rate of 3.50% we have calculated the Present Value of the Net Cashflow to generate the Net Present Value.			
Internal Rate of Return (IRR)	We have calculated the Internal Rate of Return (IRR) based on the NPV of the net cash flow.			

Net Present Value = - £20.4m

IRR = -19.0%

4.2.3 Option 4 – New Development of 138 homes

Assumption	Commentary
Unit Mix	Option 4a – 60% affordable (retention of equivalent affordable provision) • Social Rent Units: 82 • Market Units: 56 Option 4b – 40% affordable (planning policy compliant affordable provision) • Social Rent Units: 55 • Market Units: 83
Timescales	Within our model we have assumed a project start date of January 2023 as detailed below: • January 2023 - 2026 • Pre-construction / Decant of properties: 12 months • Construction: 36 months (development period phased with decant of blocks) • Total development period: 48 months. • We have assumed during the first 12 months whilst the blocks are being decanted the Council will receive 25% of the rental income. • We have assumed the scheme will complete in 2026.
Estimated Rental Income (Social Units)	We have been provided with <i>Rental and charges for sharing – Hanover and Princess</i>. This outlines the current Social Rent to be £91 per week. We have been advised that there is an allowance for a 5% increase to the rent regime where justifiable improvements and quality standards can be evidenced. We have assumed in this case that the refurbishment works would justify an increase. Therefore, we have adopted a rent of £96 per week for all of the social rents. We have been advised that it is probable that at least 50% of the RtB units (23 units) will relocate back into the refurbished blocks. As a result, we have assumed that these units will not be income producing due to a like for like swap and have not been accounted for within the financial model. Having regard to the above we have assumed that the remaining RtB units will return as Social Rent units. Therefore, we have applied £96 per week to 104 Social Rent units. We have assumed a phased return to the blocks seeing 25% of the income being received in year 4 and full rental income in year 5.
Estimated Market Sales	We have assumed the GDV sale values for private from <i>Hanover Court - Appraisal summary spreadsheet</i>. 4a. £25,545,000 4b. £36,701,000

Assumption	Commentary
	We have assumed that 50% of Market Sales will be achieved in year 3 (2025), 35% in year 4 (2026) and 15% in year 5 (2027).
Service Charge	We have assumed service charge at £20 per week as advised
Decant Costs	We have assumed the full decant cost of £18,617,000. We have split these costs out over 36 month period.
Construction Costs	We have applied a total construction cost of £ £32,263,808 as per the <i>Hanover Court - Appraisal summary spreadsheet</i>. It should be noted that the total construction cost is exclusive of professional fees. We have modelled these as a separate allowance.
Professional Fees	We have modelled an allowance of £3,226,381 for professional fees during the development period. This is at 10% of the construction costs. We have assumed this will fall during the construction phase.
Repairs and Maintenance Cost (on going)	At this stage we have assumed ongoing repairs cost of £800 per unit.
Letting & Management Fees (Ongoing)	We have modelled the ongoing letting fees at 10% of the annual ERV to cover the cost of letting and legal fees during the cashflow period. We have assumed growth of 2.5% per annum.
Operating Contingency	We have applied an operating contingency of 5% of all operating costs to account for unexpected expenditure during the cashflow period.
Rental Growth	We have applied rental growth at 2.5% across the cashflow period in the base model.
Net Present Value (NPV)	Utilising a discount rate of 3.50% we have calculated the Present Value of the Net Cashflow to generate the Net Present Value.
Internal Rate of Return (IRR)	We have calculated the Internal Rate of Return (IRR) based on the NPV of the net cash flow.

Scenario A – 60% Affordable housing

- Net Present Value = -£18.6m
- IRR = -2.9%

Scenario B – 40% Affordable housing (Preferred Option 4 scenario)

- Net Present Value = -£13.3m
- IRR = -2.8%

4.3 Sensitivity Analysis – Build Costs and Sales Rate

We have carried out a sensitivity analysis on Option 4, analysing the NPV where the build costs and Gross Development Value has been increased and decreased in increments of 5%. The tables below outline the impact on the NPV (top line) and IRR (bottom line) where these factors have been altered.

Option 4a - Develop 138 units with 60% affordable					
Sales: Rate /ft ²	Construction: Rate /ft ²				
	-10%	-5%	0%	5%	10%
-10%	-17,126,667 -2.59%	-18,953,868 -3.05%	-20,781,070 -3.50%	-22,608,272 -3.92%	-24,435,474 -4.32%
-5%	-16,025,131 -2.28%	-17,852,333 -2.76%	-19,679,534 -3.22%	-21,506,736 -3.65%	-23,333,938 -4.06%
0%	-14,923,595 -1.96%	-16,750,797 -2.45%	-18,577,999 -2.93%	-20,405,200 -3.37%	-22,232,402 -3.80%
5%	-13,822,059 -1.62%	-15,649,261 -2.14%	-17,476,463 -2.63%	-19,303,664 -3.09%	-21,130,866 -3.53%
10%	-12,720,523 -1.28%	-14,547,725 -1.82%	-16,374,927 -2.32%	-18,202,129 -2.80%	-20,029,330 -3.25%

Option 4b - Develop 138 units with 40% affordable					
Sales: Rate /ft ²	Construction: Rate /ft ²				
	-10%	-5%	0%	5%	10%
-10%	-12,970,263 -2.69%	-14,767,457 -3.32%	-16,564,651 -3.91%	-18,361,845 -4.47%	-20,159,039 -4.99%
-5%	-11,381,148 -2.06%	-13,178,342 -2.73%	-14,975,536 -3.36%	-16,772,730 -3.94%	-18,569,924 -4.49%
0%	-9,792,033 -1.40%	-11,589,227 -2.11%	-13,386,421 -2.78%	-15,183,615 -3.39%	-16,980,809 -3.97%
5%	-8,202,918 -0.69%	-10,000,112 -1.45%	-11,797,306 -2.16%	-13,594,500 -2.82%	-15,391,694 -3.43%
10%	-6,613,803 0.05%	-8,410,997 -0.76%	-10,208,191 -1.51%	-12,005,385 -2.20%	-13,802,579 -2.85%

As outlined above even where the sales rate increase by 10% and the construction costs decrease by 10% both options still deliver a negative NPV even where no affordable housing is delivered.

4.4 Sensitivity Analysis

We have carried out a sensitivity analysis on Option 4, analysing the NPV where the affordable housing is reduced in increments of 10%. The scenarios we have carried out are outlined in the table below:

Sensitivity Analysis	Social Rent Units	Market Units
1. Develop 138 units with 30% affordable	41	97
2. Develop 138 units with 20% affordable	28	110
3. Develop 138 units with 10% affordable	14	124
4. Develop 138 units with 0% affordable	0	138

We have used the same assumptions outlined above for Option 4a and 4b. However, we have adopted the following assumptions that are amended within the sensitivity analysis:

Assumption	Commentary										
Estimated Market Sales	As outlined above we have been provided with the overall GDV sale values for private units from <i>Hanover Court - Appraisal summary spreadsheet</i> for Option 4a and 4b.										
	These differ per unit in both scenarios, as a result within the sensitivity analysis we have adopted the average price per unit, which provides us with the following breakdown:										
	<table><tr><th>Option</th><th>GDV per Unit</th><th>Average</th></tr><tr><td>4a</td><td>£456,160</td><td rowspan="2">£449,171</td></tr><tr><td>4b</td><td>£442,181</td></tr></table>	Option	GDV per Unit	Average	4a	£456,160	£449,171	4b	£442,181		
	Option	GDV per Unit	Average								
	4a	£456,160	£449,171								
	4b	£442,181									
	This provides the following total GDV for each scenario:										
	<table><tr><th>Sensitivity Analysis</th><th>GDV</th></tr><tr><td>1</td><td>£43,569,560</td></tr><tr><td>2</td><td>£49,408,779</td></tr><tr><td>3</td><td>£55,697,169</td></tr><tr><td>4</td><td>£61,985,559</td></tr></table>	Sensitivity Analysis	GDV	1	£43,569,560	2	£49,408,779	3	£55,697,169	4	£61,985,559
	Sensitivity Analysis	GDV									
	1	£43,569,560									
2	£49,408,779										
3	£55,697,169										
4	£61,985,559										
Construction Costs	As outlined above we have been provided with the total construction cost from <i>Hanover Court - Appraisal summary spreadsheet</i> for Option 4a and 4b.										
	These differ per unit in both scenarios, as a result within the sensitivity analysis we have adopted the average price per unit, which provides us with the following breakdown:										
	<table><tr><th>Option</th><th>Construction Cost per Unit</th><th>Average</th></tr><tr><td>4a</td><td>£237,699</td><td rowspan="2">£235,748</td></tr><tr><td>4b</td><td>£233,796</td></tr></table>	Option	Construction Cost per Unit	Average	4a	£237,699	£235,748	4b	£233,796		
	Option	Construction Cost per Unit	Average								
	4a	£237,699	£235,748								
	4b	£233,796									
We have applied a total construction cost for each scenario of £32,533,162.											

Assumption	Commentary
	It should be noted that the total construction cost is exclusive of professional fees. We have modelled these as a separate allowance.

The table below outlines the sensitivity analysis where the number of affordable units are reduced in the 138 unit scheme:

Sensitivity Analysis	NPV	IRR
1. Develop 138 units with 30% affordable	-£ 10,549,619	-2.6021%
2. Develop 138 units with 20% affordable	-£ 7,507,456	-1.8095%
3. Develop 138 units with 10% affordable	-£ 4,540,147	-0.6615%
4. Develop 138 units with 0% affordable	-£ 1,710,414	1.5653%

As outlined above it is to be noted that all options still deliver a negative NPV even where no affordable housing is delivered.

4.5 Conclusion

The Essential Repairs option was seen as the new base case as the “do nothing” option was not a viable option.

The below summary shows that the full redevelopment with 40% affordable housing produces a marginally lower NPV, but a significantly improved IRR

Option	NPV	IRR	Difference to base case
Option 2 - Essential repairs (Base Case)	-£13,225,447	-16.2581%	
Option 3 - Refurbishment	-£20,401,752	-19.0195%	-£7,176,305
Option 4a - Develop 138 units with 60% affordable	-£18,577,999	-2.9268%	-£5,352,552
Option 4b - Develop 138 units with 40% affordable	-£13,386,421	-2.7752%	-£160,975

5 ECONOMIC EVALUATION

5.1 Introduction

The purpose of the Economic Evaluation is to assess the wider economic and social benefits arising from each option. Under this case we identify the critical success factors against which each of the options will be evaluated. This case also explores the quantitative social and economic benefits on the basis of "additionality" as well as the broader sustainability impact.

Based on the outcomes of the Strategic Alignment and the Financial Performance assessments, the Economic Evaluation has been prepared for only Option 4 Redevelopment of the site to 138 units, with 40% affordable housing.

5.2 Benefits Cost Ratio Analysis

The Benefits Cost Ratio is a tool that has been adopted from HM Treasury's appraisal guidance and looks at Public Sector benefits and broader local economy benefits. Benefit themes relate to:

- Employment creation – construction worker benefit included
- Health and wellbeing - no quantifiable direct benefit
- Environmental impact – improved sustainability and reduction in energy usage included
- Transportation and public service accessibility – excluded as all options are on same site
- Improved safety or crime reduction – included as reduction in anti-social behaviour

We have selected those themes aligned to the redevelopment of social housing. When developing the BCR we look at additionality over what is currently being provided in the base case. It is only Options 4a and 4b which delivers additional housing units into the market.

Option 2: Essential Repairs is the base case against which the other options are assessed. As such there are no social or economic benefits accruing from undertaking this work and a BCR cannot be prepared.

There are some sustainability benefits which are derived from Option 3 Refurbishment, but there are no additional benefits from Option 2 Essential Repairs, so this option has been excluded as a BCR cannot be calculated.

5.2.1 Option 3 Essential Repairs

Benefit Theme	Hypothesis	Assumptions	Benefit Type	30 Y Benefit £'000
1 Reduction in Total Carbon	The Essential repairs include elements that will improve the building efficiency and reduce operating carbon	Development will be inline with RIBA 2025 targets	All Economy	890
2 Reduction in resident energy consumption	A new development built in line with 2025 standards will significantly reduce energy requirements for all residents	RIBA 2025 consumption target x current electricity price less current consumption EPC C/D level	All Economy	11,160
Total value of benefits				12,050
Present value of All Economy benefits				6,684
Present value of Public Purse benefits				0
Present value of Costs				7,113
BCR for All Economy				0.94
BCR for Public Purse				0.00

As can be seen from the above table, the BCR for Essential Repairs is below 1, indicating that the value in social and economic benefits would not exceed the cost of these repairs, resulting in an erosion of value delivered.

5.2.2 Options 4a and 4b New Development with 40% or 60% affordable housing

The initial development proposal of 165 residential units would have resulted in an additional 38 residential units and this would have allowed for a viable BCR analysis. However, the revised scheme allows for an immaterial increase in unit numbers, so in this instance, only an indicative BCR has been included that covers the option 4 scenario.

The benefits and costs remain the same for both Options 4a and 4b as there is no difference in development benefits generated or costs.

Benefit Theme	Hypothesis	Assumptions	Benefit Type	30 Y Benefit £'000
1 Reduction in Total Carbon	A new development will reduce absolute carbon over the life of the building compared to the existing state	Development will be inline with RIBA 2025 targets	All Economy	2,180
2 Reduction in resident energy consumption	A new development built in line with 2025 standards will significantly reduce	RIBA 2025 consumption target x current electricity price less current	All Economy	27,310

Benefit Theme	Hypothesis	Assumptions	Benefit Type	30 Y Benefit £'000
	energy requirements for all residents	consumption EPC C/D level		
3 Increase in Council Tax receipts	Assumed that the increase in unit numbers will result in additional units that have to pay Council Tax	50% of additional units pay CT. ie. 138-127 x 50% x £2014.66	Public Purse	395
4 Reduction in anti-social behaviour	The antisocial behaviour is resulting in additional cleaning costs which will be reduced in the new development.	Current cost per unit per annum x 5% £1196 x 5% x 127 units	Public Purse	2,685
5 Employment generation from construction	Job creation related to contractors appointed for the site development	Assumed 50% of net salary of £30k will be spent locally	All Economy	2,595
		Income Tax and NI Contributions based on under 65-year-old employee	Public Purse	3,445
6 Proceeds on disposal of sale units	Proceeds from the sale of the developed units will result in a cash receipt into the public purse	83 sales to private owners at an average fee of £442k per unit	Public Purse	39,455
Total value of benefits				78,065
Present value of All Economy benefits				58,175
Present value of Public Purse benefits				39,520
Present value of Costs				29,750
BCR for All Economy				1.96
BCR for Public Purse				1.33

	Base	Low	Medium	High
All Economy 30 year	1.96	1.86	1.69	1.61
Public Purse 30 year	1.33	1.26	1.13	1.11

When determining the BCR, any number above 1 represents the additional benefit that will be delivered, and a number below 1 indicates that the broader benefits are outweighed by the costs.

The outcome reflects an All Economy return of £1.96 for every £1 invested, which is a favourable position. Even when accounting for a high level of optimism bias, the BCR remains favourable at 1.33, indicating resilience in the Economic Evaluation.

At a Public Purse level the BCR is also favourable with a return of £1.33 for every £1 spent. The majority of the benefits relate to the disposal proceeds from the private units and the sustainability benefits. Even in the high optimism case, Public Purse BCR remains favourable at 1.11.

5.3 Conclusion

Although the BCR was only indicative, it does show a positive outcome of 1.96 over the 30-year time frame for both Option 4a and 4b. This effectively means that for every £1 spent on the development, an expected £1.96 in broader benefits will be derived. Public Purse benefits are also positive at 1.33 on this scenario.

Option 3: Essential Repairs delivers a value eroding BCR of 0.94 at an All Economy Level and there would be no Public Purse benefits.

6 CONCLUSION

This report has explored the Strategic Alignment, Financial Performance and Economic Evaluation appraisals for the four primary options identified for Hanover Court and Princess Court in Cambridge.

The Strategic Alignment assessment unpacked the current state of the buildings and outlined the Cambridge Council's strategic objectives for the city and in particular the provision of housing. When analysing each of the options against the 10 Critical Success Factors, it was clear that a “do nothing” option was not a viable option and option 2 - essential repairs was used as the revised baseline. When assessing the options against the CSFs, option 4 – full redevelopment was seen as most favourable, with option 3 - full refurbishment also potentially viable.

When considering the Financial Performance assessment, all options effectively deliver a negative NPV, however there has already been significant investment into the properties and many of the residents have already decanted. This property should be seen as an opportunity to materially improve the standard of housing stock and as such is a regeneration opportunity where the primary focus should not be on generating a positive financial return. Option 4 – full development was the option which resulted in a negative NPV but the most favourable IRR of the options.

The indicative BCR analysis in the Economic Evaluation assessment looked at the broader economic benefits that could flow from a redevelopment on site – the only case where there would be additional units added. This showed a positive BCR of 1.96, which equates to £1.96 of benefit for every £1 spent on the development over a 30-year period. This is a favourable position and enforces the decision that Option 4 is seen as a viable option.

Taking into account all three of the above assessments, Option 4 is the preferred option.

7 APPENDIX A – SOURCES OF INFORMATION

Assumption	Document	Source
Option 2		
Estimated Rental Income	Council database of current rents and service charges	
Decant Costs	Compensation including Home Loss, Basic Loss and Disturbance payments estimated in accordance with Land Compensation Act 1973. Values based on desktop review of market sales from online resources, and valuations of flats at Hanover and Princess through current repurchase programme.	
Construction costs	Potter Raper Cost Planning Feasibility Estimate	
Repairs and Maintenance Cost	Average maintenance cost of a residential unit for the Cambridge Council HRA Business Plan	
Option 3		
Estimated Rental Income	Council database of current rents and service charges	
Decant costs	Compensation including Home Loss, Basic Loss and Disturbance payments estimated in accordance with Land Compensation Act 1973. Values based on desktop review of market sales from online resources, and valuations of flats at Hanover and Princess through current repurchase programme.	
Construction costs	Potter Raper Cost Planning Feasibility Estimate	
Repairs and Maintenance Cost	Average maintenance cost of a residential unit for the Cambridge Council HRA Business Plan	
Option 4a / 4b		
Estimated Rental Income	Council database of current rents and service charges Social rent levels are likely to be higher than modelled to reflect the improved quality of newly developed stock, but that will not materially impact the outcomes of the financial analysis.	
Estimated Market Sales	Estimated values provided by Cambridge Investment Partnership.	
Decant costs	Compensation including Home Loss, Basic Loss and Disturbance payments estimated in accordance with Land Compensation Act 1973. Values based on desktop review of market sales from online resources, and valuations of flats at Hanover and Princess through current repurchase programme.	
Construction costs	Estimated construction costs provided by Cambridge Investment Partnership.	
Repairs and Maintenance Cost	Based on market survey of average maintenance costs (including new builds) for 2 bed residential units across the UK in 2021.	