

Public Document Pack



RUSHMOOR BOROUGH COUNCIL

CABINET

*at the Council Offices, Farnborough on
Wednesday, 28th July, 2021 at 7.00 pm*

To:

Cllr D.E. Clifford, Leader of the Council
Cllr K.H. Muschamp, Deputy Leader and Customer Experience and Improvement
Portfolio Holder

Cllr Marina Munro
Cllr A.R. Newell, Planning and Economy Portfolio Holder
Cllr M.L. Sheehan, Deputy Leader and Operational Services Portfolio Holder
Cllr P.G. Taylor, Corporate Services Portfolio Holder
Cllr M.J. Tennant, Deputy Leader and Major Projects and Property Portfolio Holder

Enquiries regarding this agenda should be referred to Chris Todd, Democracy and
Community, on 01252 398825 or e-mail: chris.todd@rushmoor.gov.uk

A G E N D A

1. DECLARATIONS OF INTEREST –

Under the Council's Code of Conduct for Councillors, all Members are required to disclose relevant Interests in any matter to be considered at the meeting. Where the matter directly relates to a Member's Disclosable Pecuniary Interests or Other Registrable Interest, that Member must not participate in any discussion or vote on the matter and must not remain in the room unless they have been granted a dispensation (see note below). If the matter directly relates to 'Non-Registrable Interests', the Member's participation in the meeting will depend on the nature of the matter and whether it directly relates or affects their financial interest or well-being or that of a relative, friend or close associate, applying the tests set out in the Code.

NOTE:

On 27th May, 2021, the Council's Corporate Governance, Audit and Standards Committee granted dispensations to Members appointed by the Council to the Board of the Rushmoor Development Partnership and as Directors of Rushmoor Homes Limited.

2. **MINUTES** – (Pages 1 - 4)

To confirm the Minutes of the meeting held on 6th July, 2021 (copy attached).

3. **REGENERATING RUSHMOOR PROGRAMME - UNION YARD REGENERATION SCHEME** – (Pages 5 - 150)

(Cllr Martin Tennant, Major Projects and Property Portfolio Holder)

To consider Report No. RP2106 (copy attached), which sets out the next steps in respect of the Union Yard scheme.

CABINET

Meeting held on Tuesday, 6th July, 2021 at the Council Offices, Farnborough at 7.00 pm.

Voting Members

Cllr D.E. Clifford, Leader of the Council

Cllr Marina Munro, Planning and Economy Portfolio Holder

Cllr A.R. Newell, Democracy, Strategy and Partnerships Portfolio Holder

Cllr M.L. Sheehan, Operational Services Portfolio Holder

Cllr P.G. Taylor, Corporate Services Portfolio Holder

Cllr M.J. Tennant, Major Projects and Property Portfolio Holder

An apology for absence was submitted on behalf of the Deputy Leader of the Council (Cllr K.H. Muschamp).

The Cabinet considered the following matters at the above-mentioned meeting. All executive decisions of the Cabinet shall become effective, subject to the call-in procedure, from **20th July, 2021**.

9. **DECLARATIONS OF INTEREST –**

Having regard to the Members' Code of Conduct, no declarations of interest were made.

10. **MINUTES –**

The Minutes of the meeting of the Cabinet held on 8th June, 2021 were confirmed and signed by the Chairman.

11. **2020/21 REVENUE AND CAPITAL BUDGET OUTTURN - UPDATE –** (Cllr Paul Taylor, Corporate Services Portfolio Holder)

The Cabinet considered Report No. FIN2111, which set out the draft outturn position for 2020/21.

Members were informed that this information was based on the actual income and expenditure recorded on the Council's financial system as at 17th June, 2021 and broad assumptions around the final entries required to complete the outturn process. It was confirmed that Members would be informed of the full outturn position at its meeting on 10th August, 2021. Members noted that the draft outturn position would be subject to change and that it was considered likely that the detailed position would be more favourable.

The Cabinet RESOLVED that the draft revenue and capital outturn positions, as set out in Report No. FIN2111, be noted.

12. **ELECTRICAL SAFETY STANDARDS POLICY –**
(Cllr Maurice Sheehan, Operational Services Portfolio Holder)

The Cabinet considered Report No. OS2106, which set out a proposed new Electrical Safety Standards Policy.

Members were informed that the policy would help the Council to ensure that landlords and property agents complied with improved electrical safety standards in privately rented properties. The Report set out the requirements of the landlord and it was noted that a financial penalty of up to £30,000 could be applied in the case of a failure to comply.

The Cabinet expressed support for this policy, which would help to protect local residents.

The Cabinet RESOLVED that the adoption of the Electrical Safety Standards Policy, as set out in Appendix A of Report No. OS2106, be approved.

13. **MINIMUM ENERGY EFFICIENCY STANDARDS POLICY –**
(Cllr Maurice Sheehan, Operational Services Portfolio Holder)

The Cabinet considered Report No. OS2108, which set out a proposed Minimum Energy Efficiency Standards Policy.

Members were reminded that the Council remained committed to improving energy efficiency and reducing fuel poverty within the Borough's housing stock, particularly in the private rented sector. Regulations now meant that landlords were not permitted to let or re-let a domestic property with an Energy Performance Certificate band of F or G. It was reported that the Council was responsible for the enforcement of the regulations.

The Cabinet RESOLVED that the adoption of the Minimum Energy Efficiency Standards Policy, as set out in Appendix A of Report No. OS2108, be approved.

14. **SOUTHWOOD SANG VISITOR CENTRE AND CAFÉ DESIGN DEVELOPMENT –**
(Cllr Martin Tennant, Major Projects and Property Portfolio Holder)

The Cabinet considered Report No. RP2105, which set out the proposed next steps in relation to the Southwood Country Park in Farnborough.

Members were informed that, since the closure of the golf course, the Southwood Country Park had proved popular with local residents. It was now proposed to procure a professional team to progress the design development for a visitor centre and café at the site. To minimise costs, it was proposed to utilise as many of the existing buildings as possible. It was proposed that £126,000 should be allocated from the Stability and Resilience Reserve to facilitate the design development and planning application stages. Members noted that, subject to the 2020/21 outturn position, alternative funding might become available and this would replace funding from the Stability and Resilience Reserve.

In discussing the proposals, the Cabinet expressed strong support for the development of the new facility and considered the proposal to offer good value to local residents.

The Cabinet

(i) **NOTED**

(a) the entering into a conditional agreement for lease, following marketing, with a suitably experienced café operator, to enable input into the design development process, as set out in Report No. RP2105;

(b) that a Final Business Case would be prepared for review by the Cabinet once planning permission had been received, in order to release the full Capital allocation, estimated to be £1,074,000; and

(ii) **RECOMMENDED TO THE COUNCIL** that £126,000 be allocated from the Stability and Resilience Reserve to facilitate the design development and planning application in relation to the visitor centre and café.

15. **EXCLUSION OF THE PUBLIC –**

RESOLVED: That, taking into account the public interest test, the public be excluded from the meeting during the discussion of the under mentioned item to avoid the disclosure of exempt information within the paragraph of Schedule 12A to the Local Government Act, 1972 indicated against the item:

Minute No.	Schedule 12A Para. No.	Category
16	3	Information relating to financial or business affairs

**THE FOLLOWING ITEM WAS CONSIDERED
IN THE ABSENCE OF THE PUBLIC**

16. **UNION YARD, ALDERSHOT - IDENTIFICATION OF PREFERRED AFFORDABLE HOUSING PURCHASER –**

(Cllr Martin Tennant, Major Projects and Property Portfolio Holder)

The Cabinet considered Exempt Report No. RP2104, which set out the next stages in relation to the Union Yard site in Aldershot.

Members were reminded that planning permission had been received in June, 2020 for a mixed use scheme including 100 residential units, of which, fourteen had been identified as Affordable Rented Units and six had been identified as Affordable Shared Ownership Units. It had been agreed that a disposal route should be agreed for the scheme's affordable housing units to enable the preferred end user to be involved in the development of the technical design specifications. The Report set out the details of the selection process used and the results of the exercise. Following feedback from each of the organisations involved in the selection process,

it was now proposed to reduce the number of affordable units to eighteen and also for all of these to be Affordable Rented Units. The Report set out the reasons for these changes and it was confirmed that a commuted sum would be provided in lieu of the remaining two units.

The Cabinet RESOLVED that

- (i) subject to further due diligence and Council approval to proceed with the main build contract, the disposal of a leasehold interest in the affordable housing element of the Union Yard development to the organisation recommended in Exempt Report No. RP2104, at the conditional value set out in paragraph 3.11 of the Report, be approved, with the Head of Property, Estates and Technical Services, in consultation with the Major Projects and Property Portfolio Holder, being authorised to agree the final terms of the disposal; and
- (ii) the progressing with a deed of variation to the S106 Agreement to reduce the affordable housing provision on site from twenty to eighteen units, with the provision of an off-site financial contribution in lieu of the two units and the agreement of a change to the unit mix to reflect a 100% Affordable Rented offer, be approved, with the Head of Property, Estates and Technical Services, in consultation with the Major Projects and Property Portfolio Holder, being authorised to agree the final terms.

The Meeting closed at 7.23 pm.

CLLR D.E. CLIFFORD, LEADER OF THE COUNCIL

CABINET

COUNCILLOR MARTIN TENNANT
MAJOR PROJECTS AND PROPERTY
PORTFOLIO HOLDER28th JULY 2021

REPORT NO. RP2106

KEY DECISION: YES

**REGENERATING RUSHMOOR PROGRAMME – UNION YARD
REGENERATION SCHEME****SUMMARY AND RECOMMENDATIONS:****SUMMARY:**

This report sets out the further due diligence and financial modelling that has been undertaken since the report considered by Cabinet in April (RP2103) in respect of the Union Yard scheme and updates the project risks. The report principally seeks a recommendation to Council for the funding to proceed with the main build contract and Cabinet approval to enter into contract with Hill Partnerships Limited.

RECOMMENDATION:

That Cabinet:

1. Note the outcomes of the further due diligence set out in this report and in the reports by Grant Thornton UK LLP (GT) and Lambert Smith Hampton Investment Management (LSHIM) in respect of development viability and financial modelling;
2. Agree to proceed with the Union Yard scheme on the basis of a fixed price contract with the proposed project budget set out at exempt Appendix E comprising the direct and indirect costs and recommend to Council to amend the capital programme accordingly;
3. Agree to enter into contract with Hill Partnerships Limited by means of a JCT Design and Build contract for the delivery of the scheme;
4. Consider the proposals and cost implications relating to energy efficiency improvements that can be achieved from further changes to the scheme design and agree any variations;

5. Agrees to the establishment of a Union Yard Project Board for the next stage of the project. The Board to include the Major Property and Projects Portfolio Holder, the Corporate Services Portfolio Holder and the Leader of the Labour Group to work alongside officers in providing oversight on the delivery of the consented scheme;
6. Recommended the Council to delegate authority to the Executive Head of Finance to amend the Treasury Management Strategy and associated prudential indicators in accordance with Council's decision regarding the scheme.
7. Note the next steps.

1. INTRODUCTION

- 1.1. The Cabinet meeting held on the 20th April considered a substantial report setting out due diligence work that had been undertaken to date in relation to the Union Street redevelopment, now known as Union Yard. At that meeting, Cabinet agreed to move forward to the next stage of development and the appointment of Hill Partnerships Limited for technical design and site preliminary works. Cabinet also agreed that up to £2.2m Housing Infrastructure Fund grant funding be used to cover the costs associated with RIBA Stage 4: Technical Design and preliminary works associated with the consented scheme in order to minimise delay in the delivery of the scheme.
- 1.2. Cabinet noted the next steps and that a further report would be presented to Cabinet in due course to enable a final decision to proceed with the scheme with a recommendation to Council to approve further capital expenditure required to deliver the Union Street development.
- 1.3. This report sets out the further due diligence and financial modelling that has been undertaken since the April report and updates the project risks. It seeks the necessary financial approvals to proceed with the main build contract and seeks to establish the appropriate project governance required in order to provide oversight and manage risk as the build progresses.

2. BACKGROUND

- 2.1. The regeneration of Aldershot Town Centre is a corporate priority and Union Street is identified as a key site allocation for regeneration within the Rushmoor Local Plan (adopted February 2019) and the Aldershot Prospectus SPD. It has formed part of the portfolio of sites being progressed by the RDP since its inception in late 2018.
- 2.2. Following Cabinet approval (RP2005), a planning application was submitted to the Local Authority by the RDP on the 4th March 2020 for a mixed use scheme comprising 100 residential units, purpose built student

accommodation (PBSA) (128-bed spaces) for the University for the Creative Arts (UCA) and ground floor commercial uses (2,237sqm GEA) focused around a 'Creators Yard'. The submission followed on from a period of public consultation in January/February 2020, with two public drop-in sessions held in Aldershot town centre on the 16th and 18th January. From the responses received to the feedback forms, approximately 80% of respondents supported the proposals that were presented and 97% agreed that Aldershot town centre needs regeneration.

- 2.3. The planning application was validated on the 6th March 2020 and was considered by Development Management Committee at its meeting on 24 June 2020 and agreed subject to suitable legal agreements to secure the required planning obligations.
- 2.4. Cabinet Report RP2008 set out that the detailed Project Plan associated with the Union Street scheme from the Rushmoor Development Partnership (RDP) was being considered and due diligence was commencing on matters including commercial, property, legal and finance assumptions and procurement options associated with the delivery of the scheme.
- 2.5. Cabinet approved (RP2011) the procurement of demolition works by means of a procurement framework either as a direct award or through a mini competition. The Southern Housing Group Framework was identified as an appropriate route and a Briefing Document was issued to the companies registered on the framework lot. Only one company expressed an intention to submit a proposal, Hill Partnerships Limited, who were subsequently identified as the preferred partner to oversee the works.
- 2.6. The demolition works are underway (contract commenced 1st February 2021) and are due to conclude by the end of October 2021 taking account of further site preliminary works to continue through to construction start on site as approved (RP2103).
- 2.7. The Council is also progressing the technical design phase of works following approval from Cabinet to proceed (RP2103) and has appointed consultancy Bailey Garner as Employer's Agent.

3. PROGRESS UPDATE

- 3.1. Cabinet report RP2103 identified that the following further decisions would be required in order for the Council to make its final decisions to proceed with the scheme:
 - (1) Further certainty in relation to the construction cost;
 - (2) Future lease/sale arrangements with Rushmoor Homes Limited (RHL);
 - (3) Future lease arrangements with registered providers have moved forward;
 - (4) Further work on the options for management and letting of the student accommodation have been progressed; and

- (5) The procurement and contract arrangements in respect of construction and development have been concluded.
- 3.2. In respect of (2) above, RHL have received a formal request from the Council to submit a bid for the 82 private units within the scheme. RHL are currently updating their financial model and will provide this information in due course. It is considered that the original offered sum (£15m) provides sufficient certainty for the purposes of proceeding with the main build contract.
- 3.3. In respect of (3), Cabinet agreed at 8th July to proceed with a disposal of a long lease to Funding Affordable Homes, a Social Impact Investment Company which partners Registered Providers to deliver and manage affordable housing.
- 3.4. Items (1), (4) and (5) are dealt with in the following sections of this report.

Construction costs

- 3.5. The Council is working with Bailey Garner to develop the employers requirements and specification in order to finalise construction costs on the basis of a fixed price contract. That will be confirmed by Hill Partnerships by the 23 July and will be reviewed by Bailey Garner in their role as Employer's Agent for the Council. This figure will be reported to Cabinet at the meeting but is expected to be within the range of costs factored into the updated due diligence undertaken by GT and LSHIM, described in section 4 below.

Student Accommodation

- 3.6. Following the University for the Creative Arts (UCA) withdrawal from lease negotiations, the Council undertook further due diligence on student accommodation in order to consider whether there was merit in proceeding in the absence of a long lease with an institution. The outputs from this due diligence were considered as part of the RP2103 report and subsequently passed on to LSH/GT to consider as part of their revised due diligence as covered off below.

Construction Procurement and Contract Arrangements

- 3.7. In respect of (5), the RP2103 report set out that in order to meet a start on site target within the calendar year, the most effective route to take would be a direct award from an appropriate framework i.e. without seeking competitive tenders from some or all framework contractors). Cabinet agreed to move forward with a pre-construction services agreement (PCSA) with Hill Partnerships Limited by way of a direct award via the Catalyst Framework.
- 3.8. It is recommended that the Council utilise the Catalyst Framework to enter into the main JCT Design and Build contract with Hill Partnerships Limited in order to meet the start on site target and ensure that the Council can make full use of external funding secured to assist with the delivery of the scheme.

From a value for money perspective, as part of the due diligence, Gleeds advised that the construction costs proposed by Hill represented value for money. Hill has also been working closely with the RDP on developing the scheme to date, providing input on pre-planning to ensure that the proposals are buildable. As such, comfort can be taken from the fact that the cost schedule has been informed by prior knowledge of the site context and aspirations. The fixed price cost schedule associated with the main build will be validated by Bailey Garner.

4. OUTCOME OF FURTHER DUE DILIGENCE AND FINANCIAL MODELLING

- 4.1. Further due diligence and financial modelling was required principally as a result of the UCA withdrawing from lease negotiations in respect of the 128 student bedspaces within the approved scheme. In addition, the Council was able to provide further clarification on the disposal value associated with the affordable housing element of the scheme and confirm that a commercial unit within the High Street frontage was now proposed to be absorbed within the student accommodation offer as communal space.
- 4.2. The student accommodation which has been previously offered to the UCA was proposed to be on a 25 year lease with a 15 year break option at £543,995 per annum. This offer has now been withdrawn. This element was previously valued at 5.5% having regard to the covenant being offered and the security of income which provided an estimated capital value of £8,730,000.
- 4.3. LSH was provided with the following reports commissioned by the Council to assess the potential rental value for the student accommodation:
 - Aldershot Market Summary by Savills Student Accommodation
 - Management Proposal by CRM Students
 - Delivery of Purpose Built Student Accommodation (PBSA) by Avison Young
- 4.4. In considering the above reports, LSH has revised the capital value to £9,811,907 on the basis that a better income can be achieved via a direct let model via an operator. The yield has shifted out to 6% based on comparable evidence within the market.
- 4.5. With regard to the residential element of the scheme, LSH has noted that the affordable provision on site will now be 18 units as opposed to 20. As such, there is additional value achieved from the 2 units that now comprise part of the private accommodation, intended to be disposed of to RHL.
- 4.6. The offer for the affordable element of the scheme is marginally lower than the value factored into earlier due diligence work and this has been reflected in the revised position.

- 4.7. It has been decided to switch a commercial unit on the ground floor to a communal room for the Student Accommodation as the advice we have received is that this would be a benefit to a potential Student Accommodation operator/purchaser. The loss of this commercial unit on High Street has a nominal impact on the commercial element of the scheme and this loss is outweighed by the benefit gained from the student accommodation element of the scheme through the introduction of a communal space in terms of appeal and rental value.
- 4.8. In summary the changes outlined above have the below impact for financial modelling purposes:
- Student Accommodation: The value of the student accommodation has increased from £8,727,723 to £9,811,907 due to the UCA withdrawing from the lease and new assumptions made on the basis of a management contract.
 - Commercial Accommodation: The value of the commercial accommodation has fallen from £2,061,333 to £1,845,849 due to Unit 13 being removed from this element and allocated as part of the student accommodation.
 - Affordable Housing: A further tender exercise has been undertaken and the offers for the affordable housing now relate to 18 units, with the highest offer being £2,950,000.
- 4.9. These changes have resulted in an improved Gross Development Value (GDV) (assuming Rushmoor Homes will purchase the private residential units) of £35,807,756 up from £35,287,339.
- 4.10. The revised LSH report (at Exempt Appendix A) sets out an updated risk register in light of the above changes. A key change here is the fact that the Council holds the occupancy risk on the student accommodation. This increased risk has been reflected in moving the yield out to 6% rather than 5.5% as previously proposed.
- 4.11. The risk register will be adopted into the formal risk register for the project and will be reviewed regularly as part of the governance process. The latest version of the project risk register is appended (Appendix C).
- 4.12. Grant Thornton has taken the above assumptions and undertaken financial modelling (Exempt Appendix B) on the basis of two confirmed scenarios:
- Scenario 1 – The Council delivers the Project, in which the private and affordable residential units are sold to the open market and commercial/student units are retained by the Council for rent. Financed by Public Works Loan Board (PWLB)
 - Scenario 2 – The Council delivers the Project, in which the private residential units are sold to Rushmoor Homes Limited, the affordable housing units are sold to the open market and the commercial/student units are retained by the Council for rent. Financed by PWLB.

- 4.13. GT has modelled a comparison between the outputs shared in March 2021 of the original scenarios i.e. where it was assumed the UCA operate the student accommodation and the revised scenarios i.e. where an management operator model is assumed.
- 4.14. Furthermore, GT was asked to consider the impact of a cost increase on all construction costs in order to reflect present uncertainty in the market related to labour/materials. The total capital expenditure modelled for the scheme in options 1(a) and 2(a) is set out in Exempt Appendix E.
- 4.15. To ensure a like-for-like comparison to the original scenarios, GT has assumed a 15 year operational term across all financial models run, at which point the Council could opt to dispose of the asset or choose to re-finance/re-purpose the asset.
- 4.16. In summary, all 4 scenarios plus the construction cost sensitivities appear to be financially viable on the basis they provide a positive cashflow and Net Present Value (NPV), however, these are dependent on the Council achieving the assumed Terminal Value (proceeds received on a disposal at the end of the 15 year operational term) on the retained properties. The indicative cashflows based on the agreed assumptions for each scenario are set out in Appendix D of the GT report and range from £374,000 to £944,000 per annum. Actual cashflows will be different and will fluctuate year-on-year. Treatment of any cash surplus must take into account market conditions/project risks. Based on Government guidance at the time of writing this report, the Council would not be able to use surplus cash to support other council services but can provide a funding source for other regeneration projects.
- 4.17. The report notes that the Council carries development risk and operational risk on the student accommodation and retail units. As noted above in respect of the LSH report, these risks will be adopted into the Project risk register and managed through the asset life cycle.
- 4.18. In their due diligence report that supported the Cabinet Report of 20 April 2021, LSHIM recommended that if a Direct Delivery option is selected, that a fixed price contract is entered into with the main contractor to prevent costs increasing unreasonably.
- 4.19. By way of background to this, there are two contract procurement options that could be considered for this project which are a fixed price contract and an open book contract.
- 4.20. A fixed price contract typically involving a single stage, lump sum fixed price tender. At the point of entering into contract, cost certainty is high, together with high levels of certainty regarding programme. This form of contractual arrangement also exhibits the ability for the client to pass project risk to the contractor at an early stage. Consequently, due to the contractor normally taking the risk associated with design, design flexibility is low. The ability to fast track the project is also constrained.

- 4.21. An open book arrangement involves reimbursing the contractor for the subcontract packages that are market tested, together with a percentage addition for overheads and profit, and also preliminaries. Preliminaries could be redlined and fixed at the outset. This type of contractual arrangement typically has very low levels of cost certainty because it is not until procurement of the supply chain is completed that the out-turn cost is known. Similarly, there is little programme certainty. This type of cost plus reimbursement contract therefore does not transfer significant risk to the contractor other than the ability to deliver the project within a programme, if the preliminaries are fixed. As the subcontractor procurement will be let as and when working drawings are produced, there is much greater design flexibility, and design can change and be accommodated right up to the point at which sub contract packages are let.
- 4.22. As demolition is underway and planning permission has been secured, we are in a position where early open book arrangements are combined with a lump sum fixed price contract, effectively using a two stage approach. During the demolition period, Hill are securing prices for sub contract works which will then be converted into a lump sum fixed. This blends elements of both approaches highlighted above and aims to transfer the risk to the contractor at the acceptance of the fixed price stage.

Energy and Sustainability Enhancements

- 4.23. At the request of the Cabinet a further report was commissioned to consider what further measures may be introduced into the current development plans for the Union Yard project to enhance its performance in relation to energy and sustainability through further reducing the buildings carbon emissions and improving its energy performance.
- 4.24. The current building design and specification proposed already meet the key regulatory and local planning policy targets, achieving a 48.51% improvement over current Part L 2013 regulations.
- 4.25. The attached report (see Appendix D) sets out that further enhancements through fabric efficiency (roof/windows) and improvements to building services, renewable provision and lighting would improve the performance to 56.30% over current Part L 2013 regulations. The estimated costs associated with these improvements in their entirety is £764,000 over and above the present build cost. A breakdown of each element is provided within the report.
- 4.26. The introduction of a new communal heating system (e.g. air source heat pumps) would bring with it further improvements to efficiency but would also result in substantial project delays through the need for planning resubmission and design adjustments. Given that the Council has approved the commencement on technical design it is not recommended to proceed with this option.

- 4.27. Officers view is that the additional build costs outweigh the value achieved by the additional improvement of around 8% but recognise Members desire to accelerate their commitments in the Council's climate change strategy. Cabinet is therefore asked to consider the attached report and confirm how it wishes to proceed in terms of enhancements summarised in para 4.25 that could be secured through the design and specification of the scheme.

Project Resources

- 5.1 Grant Thornton and LSHIM previously identified that whatever routes the Council take, it will need to make sure that it has access to the appropriate level of skills and expertise to act as an effective client. The regeneration programme has been revised and the internal project team is being strengthened through the addition of interim additional senior resource with substantial previous experience of delivering complex regeneration schemes. The Council will also need to appoint additional project management in addition to Bailey Garner and other external technical advisors to make a full development management function as required.
- 5.2 LSHIM provided a breakdown of the estimated costs associated with this. On the basis of a direct delivery, the indicative costs associated with a Development Management function are likely to be as follows:
- Senior Development Manager (Director Level) – up to £150k per annum
 - Development Manager (Associate Level) – up to £70k per annum
 - Project Manager – up to £50k per annum
 - Project Administrator – up to £30k per annum
- 5.3 Set against an estimated delivery timescale of 2.5 to 3 years, this gives rise to an order of cost of approx. £750k - £800k (plus accommodation/expenses). In addition, the Council would need to resource the following:
- Clerk of Works – up to £40k per annum (assumed over 2 years)
 - Client Representative – up to £200k per annum (assumed over 2 years)
 - Quantity Surveyor – up to £25k (one off cost)
 - Legal Services – up to £60k (initial costs relating to contract documentation and state aid/subsidy control advice)
- 5.4 The above costs are factored into the due diligence and pricing that has been undertaken.

6 RISKS AND LEGAL AND FINANCIAL IMPLICATIONS

Risks

- 6.1 The Council has a risk register in place for the scheme and this is reviewed regularly by the Project Office. As the project moves into delivery it will be

important for the risk register to be updated reflecting new circumstances and increased levels of risk resulting from the Council undertaking the role of developer and potentially being the sole funder for the scheme.

- 6.2 The decision to move ahead to the next stage of development of the scheme should be taken after balancing the benefits of the scheme against the substantial costs and risks as set out throughout this report.

Legal Implications

- 6.3 Cabinet report RP2103 covered off a number of legal implications with regard to the chosen delivery route for the scheme.
- 6.4 The Council has entered into contract with Homes England in respect of the £5m of HIF funding. The contract sets out the milestones that the Council needs to meet in order to secure the funding. The inability to meet these milestones would result in the Council defaulting on its legal obligations and put at risk the funding drawdown.
- 6.5 The Council has retained the services of Browne Jacobson to assist with contractual matters relating to the delivery of the project.

Financial and Resource Implications

- 6.6 The report sets out the outcome from the due diligence undertaken on the Union Street scheme and provides members with a significant update on the delivery and financing options for the scheme.
- 6.7 There are a number of significant financial implications that the Council will need to consider in agreeing to proceed with a project of this value.
- 6.8 The scheme will utilise £5m of HIF grant funding. The Council need to ensure adequate risk mitigation measures have been put in place to ensure eligibility criteria are met throughout the scheme.
- 6.9 The Council will be entering into a significant long-term commitment with capital expenditure of up to the proposed budget set out at Exempt Appendix E to be financed. The Council's capital expenditure is predominantly financed from prudential borrowing as other sources of finance are limited. The Council already has undertaken £102m of external borrowing to finance the capital programme to date. Further borrowing will need to be undertaken to finance the Union Yard scheme and any additional capital expenditure plans. The affordability of the Council's capital programme was considered as part of the Capital Strategy approved by members at their meeting on 25 February 2021.
- 6.10 Members are advised that approval of the Union Yard scheme will increase the level of external borrowing required to finance the capital programme. Whilst the assessment is that the additional borrowing is affordable, members should be aware of the revenue implications of additional

borrowing and the cumulative impact this may have on affordability of future decisions in the Council's Regeneration and Property and Major Works programmes.

- 6.11 The Council's Treasury Management Strategy (TMS) for the current financial year was approved by Council at their meeting on 25 February 2021. This sets out the Council's capital expenditure and financing plans and the borrowing strategy. The TMS did not take into account any capital expenditure or financing associated with the Union Yard scheme as the due diligence process had not concluded at the time of preparing the strategy. Therefore, the TMS and associated prudential indicators will need to be amended should the Council decide to approve the capital scheme. It is noted within the decision box that delegation is given to the Executive Head of Finance to amend the Treasury Management Strategy and associated prudential indicators in accordance with Council's decision regarding the scheme.
- 6.12 Changes to the PWLB Lending Terms in November 2020 require the Council to confirm that its capital expenditure plans are compliant. The PWLB Lending Terms defines 4 activity areas that the government will support through PWLB lending. This includes Regeneration activity with one or more of the characteristics defined below:
- *the project is addressing an economic or social market failure by providing services, facilities, or other amenities that are of value to local people and would not otherwise be provided by the private sector*
 - *the local authority is making a significant investment in the asset beyond the purchase price: developing the assets to improve them and/or change their use, or otherwise making a significant financial investment*
 - *the project involves or generates significant additional activity that would not otherwise happen without the local authority's intervention, creating jobs and/or social or economic value*
 - *while some parts of the project may generate rental income, these rents are recycled within the project or applied to related regeneration projects, rather than being applied to wider services*
- 6.13 Access to PWLB lending is dependent on the Council ensuring that it does not undertake capital expenditure in relation to investment assets primarily for yield. For the avoidance of doubt, the Council will not be able to purchase any investment assets regardless of how the acquisition is financed if it is to access PWLB borrowing throughout funding cycle of this scheme. The Council's Executive Head of Finance (Section 151 Officer) is required to confirm the organisation does not plan to buy investment assets primarily for yield prior to undertaking any PWLB borrowing.
- 6.14 The report outlines the need to appoint a client team and engage appropriate external advisors to enable the scheme to progress to the next stage. Indicative costs have been provided by LSHIM. It is likely that a proportion of these costs can be capitalised as the scheme progresses and have been included in the scheme cost estimate.

- 6.15 Land assembly costs of approx. £9.5m have already been incurred as a cost of the regeneration to date. The financial modelling undertaken for the Union Yard scheme has indicated it may not be possible to recoup this funding in the short term or medium term. The Council will as part of later decisions on the scheme need to consider the final treatment of land assembly costs to ensure the capital financing costs are considered. In the meantime debt interest on borrowing to date included in the MTFS should be dealt with as a cost of regeneration and whether provision will need to be made in the Council's revenue budget for recovery of the land value.

Equalities Impact Implications

- 6.16 There are no known specific equalities impact implications arising from this report.

Alternative Options

- 6.17 The Cabinet could consider not proceeding with the recommendations set out within this report and choose to cease any further activity on site with a view to having more certainty within a volatile market. There will always be unknown circumstances, uncertainties and element of future visioning required with any major regeneration scheme that takes over 2 years to build and such a delay would put at risk the ability to draw down and make use of the external funding that has been secured to support delivery of the scheme by March 2022.
- 6.18 A further alternative to consider would be to revisit the scheme mix and seek a variation through the planning process. This is not recommended by officers as it would add significant timescales on delivery to account for scheme re-design, validation and determination followed by the conclusion of a revised legal agreement before planning permission could be issued. That would result in the Council having to relinquish the £5m of funding allocation from the HIF as it would not be feasible to meet milestones set out within the agreement.
- 6.19 A further option would be to dispose of the site with planning permission in place and a requirement to build out the scheme. However, the current scheme viability it would be unlikely to secure a purchaser at a value that would represent good value for money as the Council has demonstrated that the scheme can achieve a surplus if held for 15 years and then disposed at the terminal values indicated. A further alternative would be to sell the land unincumbered but this would not guarantee the approved scheme was built and there would be no influence over any further schemes put forward.

7 CONCLUSIONS AND RECOMMENDATIONS

- 7.1 This development is a major part of the Council's regeneration programme and delivery of the 'Place' priority within the Council's Business Plan and critical to the regeneration of Aldershot town centre.

- 7.2 The due diligence demonstrates that all 4 scenarios modelled over 15 years demonstrate the scheme to be financially viable on the basis they provide a positive cashflow and Net Present Value (NPV) albeit these are dependent on the Council achieving the assumed Terminal Value (proceeds received on a disposal at the end of the 15 year operational term) on the retained properties. Positive cashflows were maintained even with the inclusion of construction cost sensitivities.
- 7.3 Whilst the due diligence assumes retention of the majority of the development, as with any of its property assets the Council will have opportunity to review the approach to holding or sale of the completed scheme at any point.
- 7.4 Taking the due diligence, assessment of risk and further information set out in this and earlier reports it is recommended that the Cabinet agree that the scheme proceed and recommend the Council to make the necessary changes to the capital programme to make funding available for the delivery of the scheme.

BACKGROUND DOCUMENTS:

Cabinet Reports RP2005, RP2008, RP2011 and RP2103

Council Meeting 25th July 2019 - Agenda Item no. 5(3) Rushmoor Development Partnership – Approval of Business Plan

APPENDICES

Appendix A (Exempt) – LSHIM Development Delivery Addendum July 2021

Appendix B (Exempt) – GT Due Diligence Report on Union Street, Aldershot July 2021

Appendix C – Project Risk Register July 2021

Appendix D – Energy Improvement Document (Darren Evans) May 2021

Appendix E – (Exempt) – Union Yard Project Budget Parameters (July 2021)

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Hill





Union Street Development
Union Street
Aldershot
GU11 1EG

Potential Areas for Site Wide Improvements

May 2021

Prepared for:
Rushmoor Development Partnership

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1.0 Version History

Version	Revision	Date
First Issue	-	25.05.2021
Amendments to content and layout	1	28.05.2021
Heating solution adjustment	2	01.06.2021
Costs and text adjustments made	3	03.06.2021
Amendments to Costs	4	04.06.2021
Savings added for running costs	FINAL	07.06.2021

Disclaimer

This report is provided for the sole purpose of providing information for Rushmoor Development Partnership. It is confidential to Darren Evans Assessments and Rushmoor Development Partnership. Darren Evans Assessments accept responsibility that the report has been prepared with skill, care and diligence. No responsibility is accepted whatsoever for any other parties. Any such parties rely upon the report at their own risk. Neither the whole nor any part of the report nor reference to it may be included in any published document, circulation or statement without Darren Evans Assessments and Rushmoor Development Partnership's written approval of the form and content in which it may appear. This report has been created to demonstrate compliance in relation to energy and sustainability policy and regulations only. The impacts of these recommendations on other elements of the project/ building regulations will need to be checked and confirmed by suitably qualified professionals.



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3.0 Summary

This Statement has been prepared to demonstrate what further measures may be introduced into the current development plans / specifications for the project at Union Street, Aldershot. The additional measures investigated seek to outline how the proposed building might be enhanced in relation to energy and sustainability through further reducing the buildings carbon emissions and improving its energy performance. The additional measures have been modelled in SAP and SBEM under the current Part L 2013 regulations. The London Plan carbon tool for SAP 10 has been used also to investigate potential performance under the proposed fuel tariff changes outlined under SAP 2020.

The current building design and specifications proposed already meet the key regulatory and local planning policy targets established by Rushmoor Local Plan 2014-2032 (Adopted February 2019). This current design and specification achieves a **48.51%** improvement over current Part L 2013 regulations (Appendix A). The additional measures investigated seek to build upon this energy efficient design to ascertain what further improvements might be made.

By improving the fabric of the building in the following ways:

- Roof U Value from 0.12 W/m²K to 0.10 W/m²K
- Window U Value (commercial) from 1.4 W/m²K to 1.27 W/m²K
- Window U Value (domestic) from 1.4 W/m²K to 1.00 W/m²K

And by improving the building services, renewable provision & lighting in the following

- Lighting efficiency improvement within commercial and communal spaces
- Enhanced MVHR efficiency
- More efficient PV panels from 36 KW peak to 50 KW peak
- Low Temperature Underfloor Heating

Incorporating these measures within the design and specification of the building the building performance improves of the building over the current building performance by **15.25%** and over Part L 2013 by **56.30%** (Appendix B).

$$\frac{(Current\ Design - Improved\ Design)}{Current\ Design} \times 100 = \% Improvement$$

$$\frac{(139,167.38 - 117,948.09)}{139,167.38} \times 100 = 15.25\%$$

Estimated Costs

- Circa an additional £105,000 to improve the Main Roofs U Value from 0.12 to 0.10 W/m²k.
- Circa an additional £121,000 to improve the U value of residential windows from 1.4 to 1.00 W/m²k.
- Circa an additional £93,000 to improve the u value of commercial windows from 1.4 to 1.27 W/m²k. (note commercial doors would need to remain a u value of 1.8 W/m²k)
- Circa an additional £23,000 to improve PV from 36kw to 50kw. (subject to confirmation on space, approximately 9m² more space needed based upon higher efficiency panels)
- Circa an additional £366,000 to improve MVHR units to Passivhaus units.
- TBC regarding lighting efficiency improvements.
- Circa £56k to omit radiators & add Under Floor Heating to Residential & Student Units.

- All proposed improvements come to an overall total cost of £764,000.

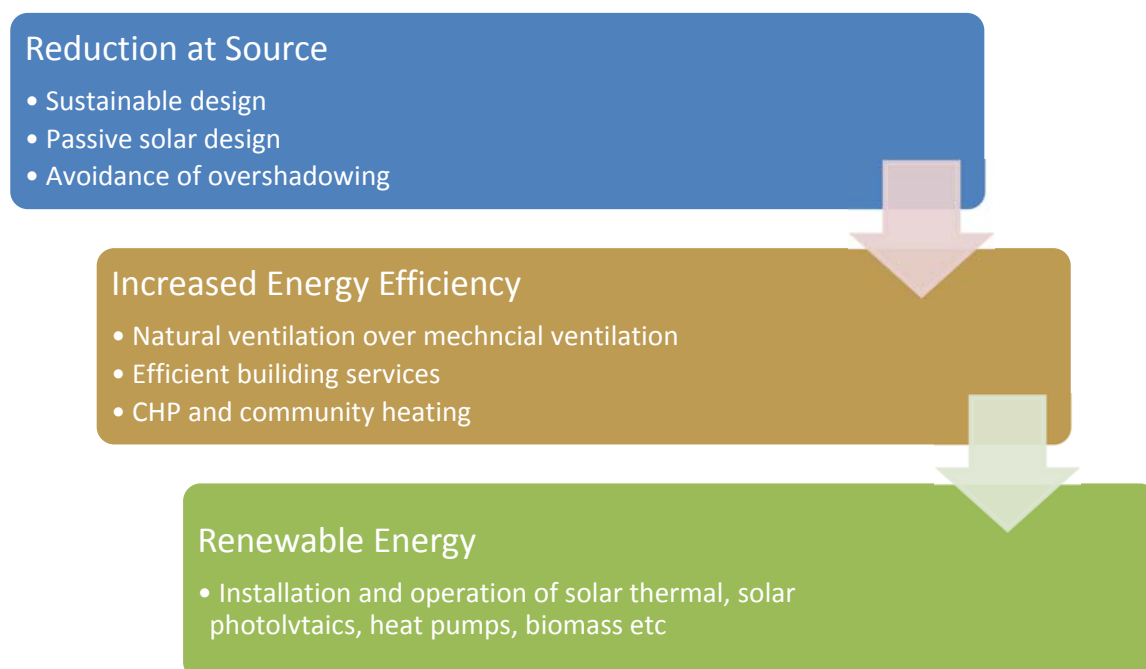
The specification adjustments proposed will save 17,828 KWh / year in domestic heating and hot water which represents a 6.2% saving. This equates to a £713.10 total saving across all domestic flats (using a gas tariff of 0.04p KWh).

A further option was modelled which looked at the building performance (domestic ONLY) using the improved measures outlined above in combination with a communal heat pump solution (350% efficient). However, it is acknowledged that this change in heating solution would bring with it project delays through planning resubmission and fundamental design adjustments which would need to be made. This is in addition to the competition for roof space that the ASHP plant would place up on the space available for PV provision. This combination of measures achieved a performance over Part L 2013 regulations of **63.37%** (Appendix C).

The best solution seems to be the CHP solution with enhanced fabric, MVHR, underfloor heating and increased PV efficiency. This yields a performance that is beyond the next proposed regulation standards change and is hot on the heels of the 75% reduction proposed for the Future Homes Standard in 2025 and does not require a planning resubmission along side any roof space competition which can be maximised one further design has been completed for PV provision. It also helps to future proof the scheme through the installation of low temperature underfloor heating. It is also possible to review the provision of hydrogen in place of gas in due course through the building services set up proposed. This can be undertaken along with associated costs provided in due course.

4.0 Fabric Performance

The current building design and specification includes a very focused 'fabric first' approach to the project. This approach to design is focused on minimising heat loss and maximising both passive solar gain as well as recirculating latent heat from the building to reduce the demand for the heating system to be used.



The improved project fabric specification is detailed below compared against current permitted Part L average U Value thresholds as well as future thresholds that have been proposed under recent consultations.

Fabric Element	Current Part L Average U Value threshold	Project Proposal	% improvement over Part L 2013
Floor U Value (W/m ² K)	0.25	0.12	52%
Wall U Value (W/m ² K)	0.30	0.15	50%
Roof U Value (W/m ² K)	0.20	0.1	50%
Window U Value (W/m ² K)	2.00	1.00	50%
Door U Value (W/m ² K)	2.00	1.4	30%
Air Permeability 50 Pa	10.00 m ³ /(h.m ²)	3.00 m ³ /(h.m ²)	70%

Table: Improved project fabric specification compared against current Part L average U Value thresholds

The above table confirms that the proposed specification is highly efficient and overperforms against current average Part L U Value thresholds by over 50%.

The table below further confirms the performance of the proposed fabric improvements against future proposed fabric standards under Part L proposed changes up to 2025

Element	Proposed 'zero carbon homes' standard	2021 Part L Standard	Indicative FHS specification (2025)	Project Proposal
Floor U Value (W/m ² K)	0.13	0.13	0.11	0.12
External Wall U Value (W/m ² K)	0.18	0.18	0.15	0.15
Roof U Value (W/m ² K)	0.13	0.11	0.11	0.1
Window U Value (W/m ² K)	1.40	1.20	0.80	1.00
Door U Value (W/m ² K)	1.00	1.00	1.00	1.4
Air Permeability m ³ /(h.m ²)	5.00	5.00	5.00	3.00
Heating Appliance	Gas Boiler	Gas Boiler	Low-Carbon Heating	CHP Boiler
Heat Emitter Type	Radiators	Low Temp Heating	Low Temp Heating	Low Temp Heating
Ventilation Type	Natural	Natural	Natural	MVHR
PV	30% GIFA	30% GIFA	None	50 KW peak

Table: Improved project fabric specification compared against fabric standards proposed to come in towards 2025

The proposed fabric improvements for the building design and specification place to scheme on par with the standards that are being proposed under the SAP 2021 and Future Homes Standard 2025 consultations.

These standards will ensure a solid fabric first approach that is ahead of current regulations and in line with those that are proposed to come into force in the coming 5 years.

The current approach to put fabric first and reduce emissions from our buildings would be reflected well within this approach.

5.0 Photovoltaics

The current building design and specification includes PV, however, there is room for more efficient panels to be used across the building to improve the performance of the building.

The current scheme includes provision for the installation of 36kWp PV. This is based on 144 x 250 watt panels. The additional PV array would be generated through an improved panel wattage so that the array would be closer to 50kWp PV.

6.0 MVHR

MVHR is specified within the current building design, however, under the improved approach the MVHR modelled used is closer to a PassivHaus model which leads to further improvements in energy capture and heat recovery.

7.0 Heat Pumps

Electricity from an ever decarbonising grid is becoming cleaner and this is recognised in the fuel factor change that is proposed to come into effect within the next change in regulations, making the use of electricity fuelled heating systems a more attractive option in the coming years. This is alongside the fact that gas boilers are proposed to be banned from new properties from 2025 onwards.

However, the use of heat pump technologies on this scheme is restricted mainly by the way in which the heat pump plant will be competing for space on the roof of the building with the required PV array. Heat pump usage would also require the scheme to undergo a revision through planning which will delay the project start and completion timeframes. The use of electricity would also present an increased cost to the end user given the higher tariffs in place at present.

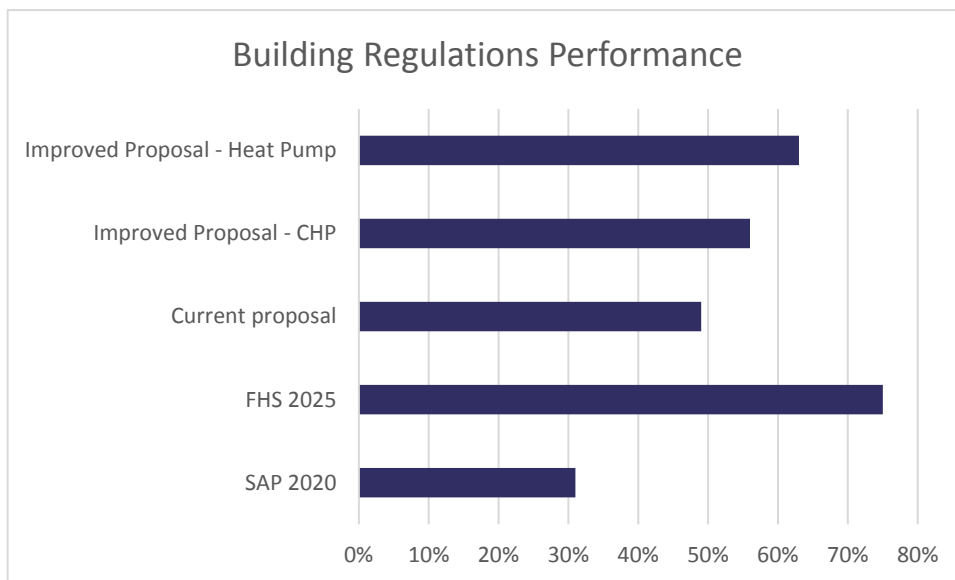
The performance of the heat pump solution with improved fabric and PV does not yield the same improvement under the current Part L 2013 regulations under which this development.

It is also recognised that the provision of low temperature underfloor heating is of value to future proofing the scheme for further changes that the building will undergo during its life.

8.0 Performance against Part L

The graph below outlines the performance of the current strategy as well as the proposed improved strategies over and above that of different up and coming building regulation standard enhancements.

- FHS 2025 – Future Homes Standard due to come into force 2025 (75% better than current building regulation performance)
- SAP 2020 – Due to come into force 2021 (31% better than current building regulation performance)



The improved specification including the CHP improves more than the SAP 2020 standard and is close on the heels of the FHS improvements that will be required in 5 years time.

Appendix A

Current building and specification design proposals

Design SAP Data Input Table			
Element		Details	Comments
Floor U-Values	New Build Exposed Floor to Car Park	0.12 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction PIR Insulation in Soffit Insulation
	New Build Exposed Floor to Commercial Units	0.12 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction PIR Insulation in Soffit Insulation - U-Value to be Halved in Line with SAP Conventions
Wall U-Values	New Build External Walls	0.15 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction Steel Frame/Concrete Walls with Non- Combustible Insulation
	Party Wall to Existing Building	0.00 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction Insulation to Inner Leaf. Any Cavities Need to be Fully Filled to Obtain U-Value
	Party Wall Between Flats	0.00 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction Fully Filled Cavities Between Flats. Any Cavities Need to be Fully Filled to Obtain U-Value
	Party Wall to Heated Corridor	0.00 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction Fully Filled Cavities Between Flat and Heated Corridor. Any Cavities Need to be Fully Filled to Obtain U-Value
Roof U-Values	New Build Roof - Flat Roof	0.12 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction Insulation Above Concrete
Opening U-Values	Windows	1.40 W/m ² K	Double Glazed, Low-E Coated. G Value: 0.60
	Door - Solid	1.40 W/m ² K	Solid Composite, Fireproof Door
Y- Value	Thermal Bridging	Various	Accredited Construction Details Used
Ventilation	Air Tightness	3.00	-
	Mechanical Ventilation	Mechanical Ventilation with Heat Recovery (MVHR)	Zehnder ComfoAir MVHR Units in Kitchen and Wet Rooms Only
Heating and Hot Water	Primary Heating System	CHP Boiler	Combined Heat & Power (CHP) Boiler - Assumed Heating Efficiency 55.8%, Electrical Efficiency 34.3%
	Controls	Programmer	Flat Rate Charging System with Programmer with Room Thermostats and TRVs in Every Dwelling
	Emitters	Radiators	Radiators Installed Throughout
	Water Heating	From Gas Boiler	Hot Water Supplied Directly from Combi Boiler
	Secondary Heating	N/A	No Secondary Heating Specified
Renewable Technologies		Photovoltaic Panels (PV)	Proposed 36kWp PV to be Installed Site Wide, PV Allocated to Each Dwelling Via Floor Area. Panels Installed in a Southerly Orientation at a Pitch of 30°. Total Area 230.4m ² (144 x 250Watt Rated Panels)
Low Energy Lighting		LED Fittings	Minimum Efficiency 45 Lumens per Circuit Watt

Table 1: Energy Efficient Measures of SAP Calculations

Design SBEM Student Accommodation Data Input Table				
Element		Details	Comments	
Floor U-Values	New Build Exposed Floor to Car Park	0.15 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction PIR Insulation in Soffit Insulation	
	New Build Exposed Floor	0.20 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction PIR Insulation in Soffit Insulation	
Wall U-Values	New Build External Walls	0.15 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction Steel Frame/Concrete Walls with Non- Combustible Insulation	
	Wall to Bin Stores	0.25 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction Steel Frame/Concrete Walls with Non- Combustible Insulation	
	Internal Partitions	0.33 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction Fully Filled Cavities	
Roof U-Values	New Build Roof – Flat Roof	0.12 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction Insulation Above Concrete	
Opening U-Values	Windows	1.40 W/m ² K	Double Glazed, Low-E Coated. G Value: 0.60	
	Door - Solid	2.20 W/m ² K	Solid Composite, Fireproof Door	
Alpha Value	Thermal Bridging	10.40%	Accredited Construction Details Used (Alpha Value is the % of the Buildings Heat Transfer Coefficient which is due to Thermal Bridging)	
Ventilation	Air Tightness	3.00	-	
	Mechanical Ventilation	Mechanical Ventilation	Extract Fans in the Following Rooms Air Flow Rates Based on Part F Minimum Standards	
			Bathrooms	Maximum S.F.P - 0.5 W/l/s - Fan Remote from Zone
			Communal Areas	Maximum S.F.P - 1.0 W/l/s - Fan Remote from Zone with Grease Filter
Heating and Hot Water	Primary Heating System	CHP Boiler	Combined Heat & Power (CHP) Boiler – Assumed Heating Efficiency 55.8%, Electrical Efficiency 34.3%	
	Controls	Programmer	Central Time Control, Local Time Control, Local Temperature Controls	
	Emitters	Radiators	Radiators Installed Throughout	
	Water Heating	From Gas Boiler	1000L Part L Compliant Tank - 3.91kWh/day Loss Factor	
Renewable Technologies		Photovoltaic Panels (PV)	Proposed 36kWp PV to be Installed Site Wide, PV Allocated to Student Accommodation Via Floor Area. Panels Installed in a Southerly Orientation at a Pitch of 30°. Total Area 230.4m ² (144 x 250Watt Rated Panels) – Installed Capacity to Commercial Area 12.82kWp	
Low Energy Lighting		LED Fittings	Minimum Efficiency 75 Lumens per Circuit Watt	
Metering		Heating	No Separate Metering Provisions to Heating System	
		Lighting	No Separate Metering Provisions to Heating System	

Table 2: Energy Efficient Measures of SAP Calculations

Design SBEM Retail Units Data Input Table				
Element		Details	Comments	
Floor U-Values	New Build Ground Floor	0.12 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction PIR Below Screed	
	New Build Exposed Floor to Car Park	0.12 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction PIR Insulation in Soffit Insulation	
Wall U-Values	New Build External Walls	0.15 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction Steel Frame/Concrete Walls with Non- Combustible Insulation	
Roof U-Values	New Build Roof – Flat Roof	0.12 W/m ² K	Target U-Value - Construction Details to be Confirmed - Assumed Construction Insulation Above Concrete	
Opening U-Values	Windows	1.40 W/m ² K	Double Glazed, Low-E Coated. G Value: 0.60	
	Door - Solid	2.20 W/m ² K	Solid Composite, Fireproof Door	

Table 3: Energy Efficient Measures of SAP Calculations

Current building design and specification performance

Dwelling	Floor Area m ²	Target Emission Rate kgCO ₂ /m ² /yr	Dwelling/ Building Emission Rate kgCO ₂ /m ² /yr	Percentage Improvement	Total Emissions kgCO ₂ /year
Plot G-02 (Exposed Floor to Car Park)	88.47	16.47	5.99	63.63%	529.94
Plot G-05 (Exposed Floor to Retail Unit)	71.58	17.99	6.60	63.31%	472.43
Plot F-08 (Exposed Floor to Retail Unit)	74.87	17.75	6.54	63.15%	489.65
Plot F-10 (Exposed Floor to Retail Unit)	73.20	16.57	6.28	62.10%	459.70
Plot F-14 (Exposed Floor to Retail Unit)	63.32	19.08	7.14	62.58%	452.10
Plot F-19 (Exposed Floor to Retail Unit)	54.00	16.81	6.45	61.63%	348.30
Plot F-25 (Exposed Floor to Retail Unit)	59.87	16.23	6.25	61.49%	374.19
Plot F-16 (Mid Floor)	50.16	15.91	6.17	61.22%	309.49
Plot F-22 (Mid Floor)	71.58	14.69	5.72	61.06%	409.44
Plot S-43 (Mid Floor)	75.01	15.74	5.94	62.26%	445.56
Plot S-44 (Mid Floor)	92.27	14.17	5.47	61.40%	504.72
Plot T-57 (Mid Floor)	57.69	13.81	5.58	59.59%	321.91
Plot T-59 (Mid Floor)	50.16	16.10	6.22	61.37%	312.00
Plot T-70 (Mid Floor)	56.94	15.65	5.95	61.98%	338.79
Plot S-37 (Top Floor)	63.32	20.32	7.11	65.01%	450.21
Plot Fr-74 (Top Floor)	70.02	18.93	6.70	64.61%	469.13
Plot Fr-80 (Top Floor)	75.08	16.59	6.11	63.17%	458.74
Plot Fth-92 (Top Floor)	71.35	20.04	7.08	64.67%	505.16
Plot Fth-96 (Top Floor)	75.50	17.70	6.52	63.16%	492.26
Plot Fth-98 (Top Floor)	79.01	16.71	6.04	63.85%	477.22
Student Accommodation	3,582.40	31.10	14.30	54.02%	51,228.32
Retail Unit CX-05	58.52	43.10	42.10	2.32%	2,463.69
Retail Unit CX-07	89.33	49.40	42.20	14.57%	3,769.73
Retail Unit CX-10	62.35	40.90	36.90	9.78%	2,300.72
Retail Unit CX-13	131.33	35.70	34.00	4.76%	4,465.22
Retail Unit CX-14	212.62	45.50	36.80	19.12%	7,824.42
Total					80,673.01

Table 4: Summary of Emissions (Regulated) of the Be Green Assessment

By multiplying out the sampled emissions and energy demands for the sampled SAP& SBEM Calculations to the remaining residential and retail units the emissions for the site are estimated to be **139,167.38 KgCO₂** per annum whilst the Energy Demand for the site is estimated to be **980,012.44 kWh per annum**.

When comparing the emissions of the site with a Combined Heat & Power boiler and PV this has reduced the emissions for the development against the residual baseline Target Emission Rate by **48.51%**. This equates to a saving carbon dioxide of **131,111.91 KgCO₂** per annum.

Appendix B

Improved building design and specification performance - CHP

Dwelling	Floor Area m ²	Target Emission Rate kgCO ₂ /m ² /yr	Dwelling/ Building Emission Rate kgCO ₂ /m ² /yr	Percentage Improvement	Total Emissions kgCO ₂ /year
Plot G-02 (Exposed Floor to Car Park)	88.47	16.47	4.57	72.23%	404.57
Plot G-05 (Exposed Floor to Retail Unit)	71.58	17.99	5.17	71.25%	370.26
Plot F-08 (Exposed Floor to Retail Unit)	74.87	17.75	5.09	71.35%	380.77
Plot F-10 (Exposed Floor to Retail Unit)	73.20	16.57	4.84	70.80%	354.14
Plot F-14 (Exposed Floor to Retail Unit)	63.32	19.08	5.68	70.21%	359.93
Plot F-19 (Exposed Floor to Retail Unit)	54.00	16.81	5.08	69.78%	274.36
Plot F-25 (Exposed Floor to Retail Unit)	59.87	16.23	4.90	69.84%	293.08
Plot F-16 (Mid Floor)	50.16	15.91	4.87	69.42%	244.08
Plot F-22 (Mid Floor)	71.58	14.69	4.31	70.67%	308.45
Plot S-43 (Mid Floor)	75.01	15.74	4.44	71.80%	332.93
Plot S-44 (Mid Floor)	92.27	14.17	4.06	71.32%	374.92
Plot T-57 (Mid Floor)	57.69	13.81	4.30	68.88%	247.93
Plot T-59 (Mid Floor)	50.16	16.10	4.91	69.49%	246.42
Plot T-70 (Mid Floor)	56.94	15.65	4.63	70.39%	263.88
Plot S-37 (Top Floor)	63.32	20.32	5.57	72.56%	353.01
Plot Fr-74 (Top Floor)	70.02	18.93	5.28	72.11%	369.70
Plot Fr-80 (Top Floor)	75.08	16.59	4.68	71.81%	351.10
Plot Fth-92 (Top Floor)	71.35	20.04	5.56	72.25%	396.76
Plot Fth-96 (Top Floor)	75.50	17.70	4.91	72.29%	370.35
Plot Fth-98 (Top Floor)	79.01	16.71	4.56	72.73%	359.97
Student Accommodation	3,582.40	31.10	12.60	59.49%	45,138.24
Retail Unit CX-05	58.52	43.10	36.70	14.85%	2,147.68
Retail Unit CX-07	89.33	49.40	37.00	25.10%	3,305.21
Retail Unit CX-10	62.35	40.90	31.90	22.00%	1,988.97
Retail Unit CX-13	131.33	35.70	29.80	16.53%	3,913.63
Retail Unit CX-14	212.62	45.50	32.40	28.79%	6,888.89
				Total	70,039.21

Table 5: Summary of Emissions (Regulated) of the Be Green Assessment with Improved Fabric

By multiplying out the emissions to all the dwellings and the commercial areas of the site the total emissions have been calculated at **117,948.09kgCO₂/year**. It has also been calculated that the energy demand on site is **915,885.11kWh/year**. This accounts for a reduction emission from Part L of **56.30%** and a **15.25%** improvement on the Be Green Assessment.

Appendix C

Improved building design and specification performance – Heat Pump

Dwelling	Floor Area m ²	Target Emission Rate kgCO ₂ /m ² /yr	Dwelling/ Building Emission Rate kgCO ₂ /m ² /yr	Percentage Improvement	Total Emissions kgCO ₂ /year
Plot G-02 (Exposed Floor to Car Park)	88.47	24.06	8.43	64.97	745.59
Plot G-05 (Exposed Floor to Retail Unit)	71.58	26.32	8.89	66.24	636.03
Plot F-08 (Exposed Floor to Retail Unit)	74.87	25.98	9.36	63.97	700.90
Plot F-10 (Exposed Floor to Retail Unit)	73.20	24.13	8.90	63.12	651.37
Plot F-14 (Exposed Floor to Retail Unit)	63.32	27.95	10.47	62.54	662.88
Plot F-19 (Exposed Floor to Retail Unit)	54.00	24.33	9.29	61.82	501.60
Plot F-25 (Exposed Floor to Retail Unit)	59.87	23.46	8.92	61.99	533.89
Plot F-16 (Mid Floor)	50.16	22.82	8.75	61.64	439.10
Plot F-22 (Mid Floor)	71.58	21.2	7.88	62.83	564.11
Plot S-43 (Mid Floor)	75.01	22.86	8.15	64.37	611.00
Plot S-44 (Mid Floor)	92.27	20.54	7.49	63.53	691.20
Plot T-57 (Mid Floor)	57.69	19.69	7.76	60.59	447.66
Plot T-59 (Mid Floor)	50.16	23.13	8.84	61.76	443.61
Plot T-70 (Mid Floor)	56.94	29.87	10.26	65.63	649.97
Plot S-37 (Top Floor)	63.32	22.51	8.37	62.8	476.75
Plot Fr-74 (Top Floor)	70.02	27.68	9.57	65.43	670.10
Plot Fr-80 (Top Floor)	75.08	24.12	8.50	64.77	637.92
Plot Fth-92 (Top Floor)	71.35	29.5	10.22	65.36	729.14
Plot Fth-96 (Top Floor)	75.50	25.91	9.03	65.17	681.42
Plot Fth-98 (Top Floor)	79.01	24.38	8.37	65.66	661.43
Total					12,135.67

Table 6: Summary of Emissions (Regulated) of the Be Green Assessment with Improved Fabric and Photovoltaics & Air Source Heat Pumps

By multiplying out the emissions to all the dwellings the total emissions have been calculated at **60,251.78kgCO₂/year**. It has also been calculated that the energy demand on site is **279,677.04Wh/year**. This accounts for a reduction emission from Part L of **63.37%**

Total Target Emission Rate: **164,471.92 KgCO₂/Year**

Total Design Emission Rate: **60,251.78 KgCO₂/Year**

Total CO₂ Savings over Part L: **104,220.14 KgCO₂/Year**

Improvement over Part L: **63.37%**



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By virtue of paragraph(s) 3 of Part 1 of Schedule 12A
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