

Appendix A – Additional Background Information

Introduction:

Over the past 18 months, the Strategy and Development Team have been working to identify several housing projects to utilise some of the capital funds. The idea being that the housing funds are used to progress projects to address specific housing issues that are unlikely to progress without some form of additional funding.

There is a paper also being presented at November Overview and Scrutiny committee requesting Members set up a Task and Finish Group to work with officers to identify projects and prioritise them to bring forward firm proposals.

Climate Change considerations:

Hart District Council recognises that climate change is a key issue and at full Council on 29th April 2021 councillors declared a Climate Emergency in Hart and committed to becoming a carbon neutral authority by 2035 and a carbon neutral district by 2040. This was following the adoption of Hart's Climate Change Action Plan in 2020.

The Action Plan has five key elements:

- Pledge to make Hart District carbon neutral by 2040, whilst bringing forward the current 2040 target to 2035, for areas under direct control of Hart District Council.
- Report to Full Council every six months setting out the current actions the Council is taking to address this emergency and the plan to measure annual District wide progress towards meeting the 2040 target.
- Meaningfully engage with the local community and to work with partners across the District and County to deliver these new goals through all relevant strategies and plans, drawing on local, national and global best practice.
- Actively work with the County Council and the Government to provide the additional powers and resources needed to meet the 2040 target.
- Actively encourage and push for Hampshire County Council to reduce its target for net zero carbon to 2040, acknowledging that 2050 is too far away for such an emergency.

Planning considerations:

- In January 2021 the Government published the Future Homes Standard 2025 consultation which proposes a Future Building Standard for more efficient homes. It states that all new homes built from 2025 will produce 75-80% less carbon emissions than homes built under current regulations. No new home built under the Future Homes Standard will be reliant on fossil fuels.
- There is a legal duty on local authorities to ensure climate mitigation across all local planning policy. The National Planning Policy Framework (NPPF) was updated to include climate change specifically.
- Buildings must help reduce climate change emissions.

Design:

- Buildings can achieve zero carbon (or zero carbon ready) performance by eliminating fossil fuel use for heating, using on-site and/or off-site renewable energy, reducing the use of high global warming potential refrigerants and using low carbon, reused or recycled materials in construction.
- Design features can include external shutters, overhangs, shading on balconies and ways to remove excess heat like mechanical heat ventilation. It is important to look at the design of homes and specification especially as people work from home more.
- 80% of energy used in homes is used to heat the house and water.
- Need to be able to store the energy produced e.g., solar - generated during the day and higher generation during the summer months which will need to be stored.
- Modern Methods of Construction or MMC can also be utilised to deliver more energy efficient housing. MMC properties are estimated to use 20-30% less energy to heat.

What is Passivhaus?

Passivhaus literally means “passive house”. It is a voluntary standard for energy efficiency in a building, which includes highly energy efficient design which reduces the building’s ecological footprint and provides very low-energy buildings that need very little fuel. The design captures energy e.g., heat from the sun, and keeps this within the envelope, or fabric of the property itself.

- A passivhaus property has an airtight building envelope, and can include triple glazed windows, mechanical heat ventilation and overhangs for shading.
- The homes are highly insulated and use very little energy for heating.
- They are more expensive to build which can take them out of reach as affordable housing.
- Passivhaus principles and technology play a key role in achieving zero carbon for the future.
- This is a fabric first approach - the energy efficiency is built into the property itself not just features added on to the building - like PV panels on the roof.
- Homes can be passivhaus or partial passivhaus - depends on design and scheme.
- Larger, simple designs perform better than smaller or more complicated shapes.
- The buildings aim to use design to achieve the most energy efficient outcomes, for example, south facing windows, airtight building, can and should open windows, pre-heating in-coming fresh air, mechanical ventilation.
- There is a standard that is just below full passivhaus known as AECB standard. This is also providing additional energy efficiency measures.
- As technology and systems are more widely available costs will reduce over time.

Costs:

- It is vitally important that affordable homes should not be precluded from providing additional energy efficiency measures due to cost and as such local authorities can consider how it can enable affordable energy efficient homes in its area.
- Research suggests that the mean value in Hampshire for a standard build is approximately £1,300m2. (This varies according to the type and number of homes provided and someone building a large site will be able to build more cheaply because of economies of scale). By comparison, costs to build to Passivhaus standards are in the region of £1,465m2.
- Costs will reduce going forward as methods of construction, materials and technology improve and become more mainstream
- It is important to note that currently, due to shortages in materials and labour, development costs are higher than previously for all developments.

Potential Site:

A site has been identified that will provide 14 affordable homes, all of which it is proposed could be constructed to passivhaus or AECB standard (both of which are very energy efficient and low-carbon homes).

There has been a pre-app application for the proposal, (Ref: 20/02938/PREAPP), but the full planning application has not yet been submitted.

Hastoe Housing Association is proposing to develop the 14 affordable homes which will comprise of 3 shared ownership homes and 11 for rent. They are intending to apply for Homes England funding to enable them to provide the lower-level social rents to ensure that the properties will be as affordable as possible in the longer-term. As such, if they also applied to Homes England for funding for passivhaus standard the grant rate will be very high, and Homes England is unlikely to fund the full costs.

Hastoe is a rural housing specialist, and they tailor each scheme to fit within its unique local setting and circumstances. They would like to apply to Hart Council for top-up funding to enable them to provide social rented homes (funded by Homes England) and passivhaus standard (to be funded by Hart District Council) on a bespoke site in the district.

No. units	Tenure	HDC funding required per unit (in addition to Homes England Funding)	Total Required from HDC
11	Rented	£10k	£110k
3	Shared ownership	£7k	£21k
Total: 14 homes			
Overall funding required			£131k

It is anticipated that Hastoe will complete the Council's funding application form for their scheme.

This site provides an exciting opportunity for Hart to be involved in the development of a passivhaus affordable housing development. Hastoe are aware that Hart would like to have the opportunity to learn from the energy efficiency features and the development of these homes. Going forward, there could be the opportunity to monitor the cost of bills, review how the residents find living with the passivhaus design features, and this information can be used to help inform planning policy and other Council policies going forward. This would help the Council in working towards achieving its actions in the Climate Change Action Plan.

Glossary of frequently used terms:

- **Carbon neutral** means that any CO₂ released into the atmosphere from a company's activities is balanced by an equivalent amount being removed.
- **Climate positive** means that activity goes beyond achieving net-zero carbon emissions to create an environmental benefit by removing additional carbon dioxide from the atmosphere.
- **Carbon negative** means the same thing as "climate positive."
- **Carbon positive** is how organisations describe climate positive and carbon negative. It's mainly a marketing term, and understandably confusing—we generally avoid it.
- **Climate Neutral** refers to reducing all GHG to the point of zero while eliminating all other negative environmental impacts that an organisation may cause.
- **Net-Zero carbon emissions** mean that an activity releases net-zero carbon emissions into the atmosphere.
- **Net-Zero emissions** balance the whole amount of greenhouse gas (GHG) released and the amount removed from the atmosphere.
- **Embodied carbon** is the carbon dioxide emissions associated with making a building that comes from extraction, transportation and manufacturing of raw building materials is a significant part of a building's life cycle. Embodied carbon will be responsible for almost half of total new construction emissions between now and 2050.
- **Zero carbon building** - built-into the building's construction and use.
- **Passivhaus** - a building with an airtight envelope. It literally means "passive house". It is a voluntary standard for energy efficiency in a building, which includes highly energy efficient design which reduces the building's ecological footprint and provides very low-energy buildings that need very little fuel.
- **The Future Buildings Standard** - a government consultation carried out from 18 Jan 2021 to 13 April 2021. The outcomes of the consultation are due to be published. It sets out proposals for a Future Buildings Standard, which

provides a pathway to highly efficient non-domestic buildings which are zero carbon ready, better for the environment and fit for the future.

- **AECB standard** - this standard is aimed at those wishing to create high-performance, low-carbon buildings using widely available technology.
- **NPPF** - National Planning Policy Framework.
- **PV panels** - also known as solar panels, capture the sun's energy and convert it into electricity.
- **Mechanical ventilation** - is used to control indoor air quality, excess humidity and odours.