

Gateway building options note - Proposed amendment to RIBA stage 2 concept design

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Purpose of note

1. This note sets out the fire engineering and insurance advice received regarding the green wall approach for the building and outlines the implications for the design. The note sets out the circumstances to inform a decision regarding whether or not to amend the design approach for the project to take account of circumstances and the advice received.

Background

2. In October 2021 Cabinet approved the RIBA stage 2 design for the building which was five storeys and had green walls on most elevations. Cabinet delegated authority to the Deputy Chief Executive – Transformation and Operations to approve the RIBA stage 3 design and enter into a compliant procurement exercise with the intention that once the design had been finalised and build costs confirmed, Cabinet would take a further decision regarding entering into a contract to deliver the building.

Green walls, building regulations and insurance

3. As part of the work to finalise the design an issue was identified by our advisors regarding potential Building Regulations non-compliance with the green wall design. For sustainability reasons and to increase resilience of these features the design incorporated a Ground Grown Shrub (GGS) system, where climbing shrubs are planted at ground level and grown up the outside of the building supported by stainless steel wires. These concerns related to External Fire Spread (one building to the next) and the resistance to fire spread of external walls (up and around the same building). The issue being that while the stainless-steel support wires and brackets are non-combustible, the plants themselves are not, and it is not possible to obtain fire certification for the plants as they are so variable.
4. Other types of green wall systems are available and some have been tested and are compliant with Building Regulations. These containerised ‘modular’ systems are essentially plastic crates on the side of the building filled with plants and maintained by

automated watering and nutrient systems. These systems are less resilient and significantly more expensive to install and maintain than the GGS approach. The large amounts of plastic incorporated in them makes them unattractive from a sustainability perspective. Also, there are structural implications for the design as these structures are intended to replace the outer layer of facing bricks.

5. The main problem with these systems however is that while they are compliant with Building Regulations, the council's insurance underwriters have experienced these systems catching fire and causing considerable damage. Whilst they did not explicitly state that they would refuse to insure buildings with these systems in place, they confirmed that they consider that these systems add to the fire loading of the building and have advised that they consider them to be 'negative risk features'.
6. In recent years the fire safety of taller buildings has rightly come under increased scrutiny and more stringent regulations apply for buildings over 18m high. The height of the proposed five storey building is 20.68m, calculated from the average heights of the top of the gable and the bottom of the eaves. If the building was reduced by 3.75m to four-storeys (with a comparable design), the reduction would result in an average height of 16.93m, meaning the building would be below the 18m criteria that limits the requirement for specific provisions for fire performance of the external walls.
7. To seek to find a way forward officers commissioned a fire engineer to review the available green wall options and advise on their compliance or otherwise with Building Regulations for a variety of scenarios for a five and a four-storey building. The scenarios were:
 - A - GGS climbing green wall proposals as set out on the attached elevations.
 - B - GGS climbing green wall proposals as set out on the attached elevations but with reduced extent on the eastern boundary (Soha site).
 - C - Switch to modular green wall system with extent as shown on the attached elevations.
 - D - Switch to modular green wall system as set out on the attached elevations but with reduced extent on the eastern boundary (Soha site).
8. In summary, the report concluded that the GGS system was only compliant with Building Regulations for a four-storey building. Modular systems were compliant with Building Regulations for both four storey and five storey buildings (but as above, were an increased risk factor for insurance underwriting and were actively discouraged).

Financial model update

9. The financial risk associated with this project has increased significantly over the last year and two key points to note are:
 - The rise in borrowing costs has meant that the cost of financing this project has increased.
 - Inflation on build costs means that the budget envelope may be under pressure.

10. Officers have continued to update the financial modelling for this project over the last year to reflect changes in both the external economic environment and to the building design and will continue to do so. However a final assessment of the financial viability of the project will not be possible until the tenders are received.

The Homes England position

11. Homes England originally part-funded the Council's purchase of the site in March 2013 and a funding agreement was entered into. In accordance with that agreement, officers are working through the implications of the proposed scheme with Homes England.

The commercial office market update

12. Market analysis by the council's property team indicates that it is always difficult to forecast future demand, take-up, supply and rental levels and this is particularly so in uncertain times, such as being experienced at the moment. However, rents are likely to fall, demand likely to weaken, and sub-standard accommodation is likely to be more hard hit than Grade A space (considered to be new accommodation, well located in an established office location, with on-site parking and to a high specification).
13. In terms of Didcot, despite the town having a railway station, it is not generally seen as a recognised office location and has a limited supply. Occupiers tend to go to Milton Park, Harwell and Abingdon where there is some supply. Consequently it seems unlikely that rents in Didcot would be higher than Abingdon (currently estimated to be at £25.68 per sq ft).
14. Where commercial office space does not meet occupier requirements, i.e. good levels of car parking and good quality, high specification accommodation, this will reduce rental levels, increase void periods and impact rent free incentives.

Cost pressures in the construction sector

15. Since the approval of the budget envelope in September 2021 the Office for National Statistics (ONS) report new work construction cost inflation to be 11.8% for the 12 months up to September 2022.
16. Arcadis, property and construction consultants, have published a construction Market View for winter 2022 which projects the future inflationary environment as set out below in **Table Two**.

Table Two: Past and future inflation market projections by sector

	Regional Building Construction TPI	London Building Construction TPI
2021	5% (5%)	6% (6%)
2022	10% (10%)	10% (10%)
2023	2% (2-3%)	2% (2-3%)
2024	3% (3%)	3% (3%)
2025	3% (3%)	3% (3%)

17. The current programme shows the expected tender date of Q1 2024 and a mid-point for construction of Q1 2025, so 20 - 23% building inflation between 2021 and 2025. Ridge's stage 3 cost plan assumed base price point of Q1 2022. Ridge included an inflation allowance of £1.75m or around 8% in their stage 3 costing. This now looks low compared to the figures above and could continue to rise.

Implications for wider Didcot Gateway masterplan

18. Officers have reviewed the potential implications associated with changing to a four-storey building within the wider context of the Didcot Gateway masterplan. It is considered that there would be a greater impact on the design of this area if there were to be a building without green walls, particularly in the context of the Garden Town, than the impact of reducing the building by one storey.
19. Whilst reducing the building height changes the immediate relationship with adjacent buildings proposed in the masterplan, the impact is anticipated to be negligible across the whole area, particularly within the context of residential two-storey buildings adjacent to the Gateway site.
20. Furthermore, the masterplan itself is not yet finalised and could be updated to reflect any updated building design that comes forward for planning permission, subject to agreement with the other masterplan parties and the alignment of respective timelines.

Programme implications

21. The programme for the current design indicates submission of a planning application in the next few weeks however, to allow the design work to be undertaken, there would be a delay in submitting the planning application if the redesign is undertaken now. It is likely for this option that a planning application would be submitted over the summer of 2023.

Options

22. Taking account of the above circumstances the following options are available:

- **Option 1: Continue with the current building five storey design without green walls and redesign to a four storey building later if tenders are unaffordable**
 - The programme could be potentially longer (than the current five storey option) by up to 11 months, due to the need to instruct a redesign down to four storeys (or an otherwise smaller cheaper building) at a later date if tender pricing is higher than the current budget envelope allows.
- **Option 2: Stop work on the five storey design and instruct Ridge to redesign the building to four storeys**
 - This option extends the current design phase to allow for the redesign work to take place (Ridge estimate that the additional design work should be completed in about 10 weeks). However, it allows a simpler and more straightforward procurement route (as we would not need to take time to negotiate nor potentially redesign) and construction should be shorter. Overall this route should save three months compared to the current programme for a five storey design.
 - The costs are more likely to be affordable within the approved budget envelope, managing down the risk of further delays.
 - Allows the delivery of the green wall option agreed within the concept design.

Conclusion and recommendation

23. From a commercial perspective the most positive return on the financial investment is obtained by continuing with a five storey building. However, taking account of the likely construction cost of the current design, the fact that the preferred green wall options expressed by members cannot be delivered with this design, it is the collective view of the officer project team that moving to a four storey design now is the best option for the delivery of the building. Moving to this option would also further mitigate risk of breaching the overage and would lead to a more streamlined procurement process.