

The Greater Cambridge Design Review Panel



Pre-application re: PPA/22/00056

**Former Waste Water Treatment Facility, Cambridge Road, Hauxton,
Cambridgeshire, CB22 5HT**

Thursday 11 May 2023, Hybrid meeting

Confidential

The [Cambridgeshire Quality Charter for Growth](#) sets out the core principles for the level of quality to be expected in new development across Cambridgeshire. The [Greater Cambridge Design Review Panel](#) provides independent, expert advice to developers and local planning authorities against the four core principles of the Charter: connectivity, character, climate, and community.

Attendees

Panel Members:

Maggie Baddeley (Chair) - Planner and Chartered Surveyor
David Knight (Character, Connectivity) - Director at Cake Engineering
Leo Hammond (Character, Urban Design/Architecture) - Head of Design, London Borough of Newham
Helen Goodwin (Character, Community) - Head of Programmes, Design South East
Paul Bourgeois (Character, Climate) - Industrial Lead at Anglia Ruskin University
Steve McCoy (Character, Landscape)
Ian Johnson (Character, Conservation) – Manager for Heritage and Planning Compliance, Bedford Borough Council

Applicant & Design Team:

Rob Sadler – Foundation Capital Ventures (FCV)
Jason Matthews - FCV
Philip Allmendinger - FCV
Simon Green – Bidwells (Project Manager)
Jennie Hainsworth – Bidwells (Planning)
Chris Jones – BCR Infinity (Architect)
Monica Austin – BCR Infinity
Andrew Dowding – LDA (Landscape)
Susan Irwine – LDA
Elliot Page – KMC (Transport)
Kirsten Elder – Scotch Partnerships (Engineers)

LPA Officers:

Bonnie Kwok – Principal Urban Designer / Design Review Panel Manager
Katie Roberts – Executive Assistant / Panel Support Officer
Katie Christodoulides – Principal Planner
Susan Smith – Principal Conservation Officer
Bana Elzein – Principal Landscape Architect

Observer(s):

Emily Jacob - Landscape Architect
Rebecca Smith (Planning Team Leader)
Phil McIntosh (Planning Team Leader)

Declarations of Interest

The applicant's architect Chris Jones is a member of the Greater Cambridge Design Review Panel.

Previous Panel Reviews

None

Scheme Description

Demolition of existing structures and redevelopment to provide research and development (R and D) floorspace.

Site context

The proposed site is located fully outside of the Hauxton Village Development Framework and in the open countryside and Cambridge Green Belt. The site is heavily contaminated, having provided waste water treatment works that served the former Bayer Crop Science industrial premises on the eastern side of Cambridge Road; it is designated as contaminated land under Part IIA of the Environmental Protection Act 1990.

The site lies for the most part within Flood Zone 1, with the northern part of site being within Flood Zones 2 and 3; the River Cam runs close to the northern boundary of the site. The Bridleway Harston (116/1) runs south of the site in an east to west direction and connects Hauxton and Harston to Haslingfield.

Planning history

Outline planning permission was granted (for application reference S/2184/16/OL) on 29 January 2021, for the demolition of structures, remediation and redevelopment for up to 32 dwellings with new areas of open space, associated infrastructure and other associated works.

It should be noted that an approved parameter plan allows for a maximum of 2.5 storeys at a height of 9.3 metres above finished floor level, with a 10% tolerance.

Summary

The Panel endorses the level of ambition in the reviewed project; it is very clear that the applicant team is seeking to interweave the four 'C's' into the proposals for 'Discovery Park'. There are many positive elements of the proposal identified by the Panel: extending the Trumpington country park and nature reserve southwards over

the River Cam to give access to/ from it to the villages to the south and the development proposal is welcomed. The primacy of active travel and connectivity aims are likewise wholly supported, as the site needs to be well-connected.

The former water treatment works provide an exceptional opportunity, not just in terms of their redevelopment but also in their regeneration providing for the community. In particular, the Panel supports the idea of opening up the site to benefit the wider public. Integrating the Melbourn Greenway is vitally important to creating an integrated place; any design element that can also help to integrate the scheme with Hauxton village would also be welcome.

At present however, the proposals are disconnected both from the site's Green Belt and Hauxton village contexts. While the emerging scheme's masterplan, landscape and design are considered by the Panel to be much better than some other development proposals for life sciences, there is a clear potential for a 'softer' approach to be taken. The findings of the awaited landscape and visual impact, and heritage impact assessments should assist in this regard: if the degree of harm cannot be quantified, the levels of public benefits that are needed to outweigh that harm cannot be quantified.

It is currently proposed that a set of parameters (including height) would form part of an outline application; the proposed main access would be an unreserved matter. Additional illustrative material would be submitted alongside. In the Panel's view, an outline planning application in these terms ought not to be acceptable to the Local Planning Authority (LPA); its determination on the basis of the extent of illustrative material proposed would not provide sufficient certainty for delivery. A particular challenge for the LPA would be how to assess the outline application in relation to the National Planning Policy Framework (NPPF) for heritage assets. In the Panel's view, the application on submission needs to cover context, and to fix the footprint, the details of the landscape buffer, building heights and density. For these reasons, the Panel suggests that the submission of a full application should be preferred, or alternatively, a hybrid (part full, part outline) application considered.

If an outline application were to be pursued, it should be accompanied on submission by a design code, in order to be able to seek to convince the LPA of a commitment to the landscape, design and sustainability aspects of the reviewed scheme. As it would be better to put forward that detail now - otherwise there is too much risk for the Council and for the project – a full application is concluded by the Panel as being the most appropriate route for the applicant to take.

For all of the above reasons, a follow-up design review is recommended, prior to application submission.

Detailed comments

Character

While the applicant team's presentation successfully sets the site in the wider Cambridge and historical context, identifying a series of constraints and the spatial and qualitative principles of the scheme, the analysis and therefore the emerging proposal do not relate well to the more local, Hauxton history. A sequence of historical maps and photographs shows the changing scale of the village setting (as part of a more extensive cluster of villages), the historic field structure and the early/20th century patterns of local employment (relating first to Hauxton Mill and a public house, then to the Bayer Crop Science agrochemical factory). There has been a stated focus on the site's landscape setting but without a landscape and visual impact assessment (LVIA) or heritage impact assessment, neither can be commented on in detail by the Panel. Although the Panel can only say so much about heritage impact at this point, the site's proposed development with buildings that are taller than the existing structures may have an impact on the settings of the Grade II-listed Hauxton Watermill (vacant), the watermill bridge and Old Mill House (commercial). The Panel notes however that each of these listed buildings and the bridge are relatively enclosed and that the Cambridge Road has an obvious severance effect.

Green Belt

From the site visit and the applicant team's presentation, the Panel agrees that the proposal constitutes inappropriate development in the Green Belt. FCV, as an experienced developer of innovation space, together with the applicant team, have provided their views on the NPPF's 'very special circumstances' (VSC). They describe the emerging VSC and public benefits here as being: land decontamination and remediation (by Bridgemere); improving the visual amenity of the site; community benefits, including the improved sports facilities and country park offer; the opportunities for sustainable transport links; and the creation of local jobs (described as 'a key offer'). The Panel's overarching view is that the VSC here would appear to relate to the economic, environmental and architectural qualities of the project.

Landscape and views

The Panel has been informed that early pre-app conversations have been based on an analysis of four views - one being from the vacant site on the east of the A10 Cambridge Road – and several wire frame views have been presented. The design team intends now to work with urban design and landscape officers to agree verified views and then test them. But without this analysis and in the absence of an LVIA (under preparation), it is difficult for the Panel to comment on views - particularly

without accurate photomontages. In the abstract, there is a Panel perception that the proposed buildings will be quite tall, and visible. Their scale and height are an issue. In further progressing the proposals, consideration will need to be given to if/ how buildings pierce the skyline (see for example the Department of Chemistry building, Cambridge, with its distinctive chimneys).

The applicant team has referred to how discussions are underway with Jesus College and the Environment Agency, with regard not only to extending the Melbourn Greenway south westwards through the site but also north-eastwards, to link to the County Council's proposed South West Travel Hub. The link northwards falls outside of the applicant's ownership however, and with reference to the regrading that would be necessary for its facilitation, the Panel has considerable concerns regarding how the new site levels (including post-remediation) would work overall, and how the flood plain will be affected by this aspect of the proposed development in particular.

Despite the design team stating that the landscape is 'driving this new place', an unavoidable constraint is imposed by the need to remediate all of the contaminated, previously developed land on-site. The Panel notes that the contamination 'clean-up' will require a 2m excavation for removal of structures and their foundations, the soil to be washed through and then a 1m capping layer added. The proposal is then to 'replenish and enhance vegetation'; most of the trees (for the most part, category B) that are proposed for removal are here, in the centre of the site. The Panel notes that this is a necessity but has concerns for exactly how a 20% biodiversity net gain will be achieved, with the removal of so many trees - not only through the necessary remediation but also elsewhere on-site.

The Panel therefore suggests that if the design team does want to create a special place, regard should also be paid to creating a development that is inviting to all. While the previously developed land is being defined by its dereliction and graffiti, there is some element of character that could be imprinted on/ come through in the landscape. There is industrial heritage here that is/ was part of the place and remains in people's memories; it is clearly in evidence. The Panel therefore suggests the design team considering whether anything can be kept as tangible heritage in the new landscape, e.g. elements that could be seen on the cycle route as part of a less formal approach. References for this approach include how within Battersea Power Station and its riverside park, fragments of machinery have been installed, and at Landschaftspark Duisburg-Nord in Germany, the post-industrial park has extensively retained significant historic structures.

Currently, the global landscape precedents that are being cited are hard and formal, being urban and 'clean' in character. This Green Belt countryside area is different therefore the design team is urged to think about precedents that are truer, in being informal, 'soft' and rural'. 'Hard' is not of this place, as underlined by the applicant

team in referring to its extensive wildlife - and how, for example, the site could be used for hedgehog release in the future.

Masterplanning

The Panel perceives the proposal to have largely been a site planning exercise so far, with the applicant team working on a quantum of floorspace to create a campus. But campuses are institutional, and this development instead needs to create a feeling that belongs in this particular location. The proposed layout has been completely driven by life sciences and not by it becoming part of Hauxton. The Panel sees a clear opportunity for this development to be a different kind of place, with small 'sheds' rather than 'barns', that would speak the language of the smaller and less monolithic buildings in the village, i.e. expressing the scale of operation of small-scale start-up life sciences organisations in the form of the buildings.

The design team refers to the key design principles as being green and blue infrastructure and the Panel endorses the intention to bring the Trumpington Meadows open space down into the site. But there is a missed opportunity of it not connecting to Hauxton itself; without a clear link, it is uncertain how the Hauxton local community will feel about using Discovery Park as a route for accessing the country park.

From a masterplanning perspective, the existing sports field is a good starting point but as currently conceived, the masterplan shows a very large car park immediately adjacent and then at the western edge of the sports ground, there is a three-storey building (no. 2, at 4.5m per storey). The Panel is not convinced that as a consequence, an appropriate setting is being created for the village. The absence of an LVIA is an issue in this context, as it comes back to the capacity of site and then the size of car parking area. Without that assessment, it is not possible for the Panel to comment in any detail on masterplanning for footprint or height. By way of comparison and in terms of application parameters, the Panel has been advised by the applicant team that the footprint of the extant outline permission for up to 32 new homes would be less than one third of the proposed R and D buildings (of around 24,155 sqm net (27,870sqm gr.)).

As regards masterplanning for connectivity, the Panel endorses the intention to provide new routes that are effectively embedded in what is to be an employment site. However, the sequence and design objectives specifically of site entry from the A10 are questioned, noting the design team's references to it being a key point of arrival, it having formal geometries and a new series of trees lining the route. A formal, boulevard approach to the main site access road is not appropriate in the Panel's view. Instead, something more rural that can be likened to what is seen in surrounding villages should be considered.

Architecture

Recognising that this is a Green Belt site with the masterplanning intention of picking up on woodland along the river and strengthening western boundary planting to mitigate views from the west, the Panel advises that an alternative approach should be taken to screening the development. Instead, one of celebrating the architecture should be taken; in the Panel's way of thinking, it can be acceptable to see a building rising above the landscape. Being hidden is not necessarily the right approach to Green Belt development. If development is not to be hidden, the architecture has to be exceptional, with fully integrated sustainability elements.

The design team refers extensively to bringing the Green Belt landscape into the scheme, yet the layout is quite hard and the proposed buildings are very close together. Noting that the applicant team describes being at the stage of early design thinking, the Panel appreciates the explanation given of evolution to date. In summary, the first feasibility study was for a very geometric response, followed by looking at how it could be fragmented. Various further iterations then included a technical evaluation of footprints after early pre-apps, and how the buildings could be subdivided, adapted and future proofed while staying within the previously developed land zone as much as possible (including the area of existing bunds). Retaining the same footprint from pre-app 1, the design team has tested/ revised spaces between the buildings, and their sub-division and internal layouts for a different arrangement of suites, served by series of cores. A series of six 24m-wide buildings has resulted (the optimum dimension for offices/ dry labs/ wet labs), being described by the design team as embedded in the landscape. Building no.1 (the southernmost block, at two and three storeys) is 'T'-shaped to respond to an historic field boundary and intended to create a 'wonderful' arrival space. Blocks nos. 2 and 3 are parallel, three-storey north east/ south west-aligned buildings to the north east. According to the design team, the scheme then 'relaxes, with three 'structures' i.e. buildings (blocks nos. 5 and 6 being two-storey, and the northernmost block no. 4 is two- and three-storey), with 'fingers of green space between, to soften them'.

To be able to concur with the design team's descriptive language, the Panel considers that coming into the heart of the proposal, there should be much more extensive green landscaping, including more trees.

In terms of the buildings themselves, the Panel agrees that they can make 'a real contribution'. However, while understanding the 'barn' concept, the Panel's view is that this is out-of-scale with Hauxton. The design team refers to building nos. 1, 2 and 3 in terms of being closest to the site entrance and having a warm palette of materials, shutters/ screens changing the nature of their facades and brown zinc roof forms that would be very expressive. But a 'cliff edge' of buildings in terms of their predominantly three-storey bulk and massing is created on coming into the site. Instead, the Panel suggests that scale could be built up, utilising green roofs and

walls. Creating a series of buildings fitting within the landscape could significantly help the overall design.

Accepting otherwise that the design team is probably still at an early stage with the architecture, and noting the suggestion that architectural elements could be developed during reserved matters, e.g. to link with Hauxton Watermill, the Panel is concerned that the global precedents shown are hard and formal – as with the proposed landscaping, they are too urban and ‘clean’. Instead, it is suggested that the architecture should meet and moderate with existing development in Hauxton. The architecture of the village should influence the development, in light of the design team’s current precedents not being suitable. There may be scope to consider the historic use of water on the site to influence the architecture of the development, e.g. with roofs that express its collection. Water could connect the proposed buildings with the landscape, by becoming a feature in the heart of the development. Water can also form part of a natural cooling strategy.

The Panel cannot comment in any detail on an intended lighting strategy – one that would reflect night-time needs (including for the site to be safe for users in the winter months and at all times, while not having an impact on foraging moths and bats) – other than noting that lighting could also have an impact on the character of the landscape and the settings of heritage assets.

Climate

Sustainability

While the design team states that sustainability runs through everything that they are proposing to bring forward on-site, the Panel suggests that the scheme could do more to bring forward a truly sustainable development in operation, as well as construction. The Panel’s comments are however limited by technical work still being underway; the principle is agreed that because an environmental impact assessment will be required and due to the VSC case that has to be made, this work has to be well-resolved e.g. with regard to surface water drainage and addressing flood risk.

The Panel supports targeting BREEAM ‘outstanding’ and recommends committing to this highest category as soon as possible, rather than submitting an application at ‘excellent’, otherwise the project will not be an innovator in this space, without doing more from the outset. Noting that there may be technical issues with expressing water in masterplanning the scheme, the design team should provide for rainwater harvesting and its reuse (e.g. for flushing toilets) as part of the BREEAM assessment, particularly as R and D activities have a high level of water usage. Any such measures would help promote the development against competitors; it is recommended that the applicant team looks at similar building types at that highest

standard e.g. for University College London and the Crystal. Cambridge University's civil engineering building is a clear exemplar that is of relevance here too.

The applicant team refers to 'wanting to be net zero carbon ready' and how 'even though the application will be in outline', they are looking at beyond Part L to 2025, and at LETI re. fabric performance. The Panel supports the design team looking at mass timber, noting their reference to an awareness of specific life science needs and instead, its possible use for the community building. The stated intention to incorporate mass timber as far as possible in other buildings is endorsed.

The development would be fully electric, with slow and rapid electric vehicle charging in addition. The Panel therefore suggests that given that the development will be a high energy user, generation on-site should be maximised, with solar PV arrays on all suitable buildings. There is enough roof space to be self-sufficient, and therefore the development would not need to provide solar PV roofing in the car parking area (noting that solar roofing of around a third of parking spaces is proposed in the South West Travel Hub). Adding a site-wide battery storage system should also be considered.

The upper storeys of the proposed buildings are described as being for plant and some accommodation, with 'plant balconies' at the rear for the screened provision of air source heat pumps (unusually being likened mechanically to the nearby watermill's machinery). The applicant team states too that ground source heat pumps (GSHPs) are being looked at, although they may not be viable. The Panel notes the cost involved and the presence of other constraints (these being the water table and the proposed capping layer) but nonetheless urges the team to take the clear opportunity for GSHP provision that is created by the contamination removal works disturbing the ground anyway.

A further consideration would be setting a radius for local businesses to contribute to the construction and delivery of the project, in addition to providing for SME businesses on-site that could further support the local economy. Planning to offer local communities waste construction materials for re-purposing would also be worthwhile.

Overall, the Panel concludes that taken together, these sustainability-related objectives and requirements in all likelihood cannot be adequately specified and delivered via an outline planning application. Effectively, they require a greater level of detail e.g. for BREEAM that ought to be included in a full application.

Connectivity

In seeking to create a new destination, integrating the Melbourn Greenway is vital. The Panel considers that there is still substantial work to be done in this regard. Within the site, there is clearly potential for conflict between users, particularly as the design team may have underestimated the numbers of commuters passing through, despite referring to the Greenway as being designed on-site as a commuter route, and it being sensitively surfaced. The Greenway's range and extent of use could be a driving force for modifying the project's design; a more detailed assessment will be likely to change the form of the plan beneficially, particularly in terms of addressing many of the Panel's masterplanning and landscape-related comments.

Taking the applicant team's assessment of the number of people working in the proposed development (using Cambridgeshire's standard of one employee per 28 sqm), a total of some 1,000 results. Assuming 70% will be on-site in any one day, the Panel agrees that the existing junction of the site access with the A10 cannot accommodate the traffic likely to be generated by the proposal. The revised access arrangements that were approved via the residential outline planning permission are to be further modified, with the new proposed arrangement being for all crossings to be straight across, with an all-red phase. The Greenway will pass across too. The Panel is very concerned that not only will the traffic impacts of a single entry on a very busy road (especially with an all-red sequence in rush hour) be unacceptable, but also further afield. The applicant team's wider modelling work is understood to be underway and needs to provide full reassurance in both regards.

Once on-site, the alignment of the modified access unfortunately necessitates the removal of a number of existing trees; the Panel notes the team's acknowledgement of the time taken for proposed replacement trees to grow. But then both the location and scale of on-site parking provision are strongly questioned by the Panel. The applicant team states that they are working to achieve parking provision on-site for 45% of people driving to work. 370 spaces are therefore proposed, based on 'the commercial reality' that on-site parking should be provided (i.e. competitors will have on-plot parking.) Other options for the location of the car park are noted by the Panel as having been considered and discounted. For example, option C in the south western corner of the site encroaches into the wider countryside and would introduce light and noise. While provision could be split between options A and C, shared use with the sports facilities means that parking spaces are better sited nearer the sports pitches. There is scope to redesign option A's parking layout to enhance the setting of the southernmost, 'T'-shaped building (no. 1). This option for siting of the car parking also keeps the access road and access to the community hub clear for cyclists (and pedestrians), with the heart of the site being car-free. The Panel nonetheless concludes that a large area of car parking is being created and while understanding the basis for assuming 45% car travel, suggests the phasing of car parking provision throughout the development's lifespan. It should begin with a

smaller car park and then ultimately phase spaces out, and reintroduce lost biodiversity in tandem. Taking this alternative approach might help address the Panel's perception that this is a car-based scheme. As a matter of detail, it is unclear from the review itself whether black top surfacing and car park screening would be proposed, or permeable paving ('subject to maintenance'). The Panel suggests considering car parking design and use of materials similar to the public parking provided at the Newt, near Bruton in Somerset.

There is also the significant park and ride car park that is being proposed in the South West Transport Hub that is to be operational in 2026 to the north east of the site that ought to be taken into account, in terms of potential usage by Park users. But the Panel is aware that any direct links beyond the northern site boundary to the proposed Hub rely on land owned by Jesus College (the College also owns land immediately to the south of the site); it is understood that discussions have been held and the College has endorsed the principle of the linking proposals. The Panel is of the view that these linkage routes are essential to the project and in return for investing significantly in proposed bridges across the Cam, they can help bring more people into the site to support business occupiers. By giving better access, the site will be at the centre of a web of cycle routes that will make the site more attractive as well as create connectivity. The Panel notes that planning permission will be required for the bridge(s) and links that are on land beyond the currently shown ownership boundary; their inclusion as part of a planning submission for the site proposals as presented is considered absolutely necessary, as the project is seen to rely on having this northern cycle/ pedestrian access route in place.

With regard to servicing, and despite the intention that it is integrated with the landscape via a route to the rear of buildings and that does not pass all around the site, the Panel is not convinced that it will not have an impact on that landscape.

Community

The population of Hauxton amounted to some 1300 residents in the 2011 Census; it will have increased since then, with homes having been built on the former Bayer site on the eastern side of Cambridge Road. The proposed R and D development is not however an extension of Hauxton as currently conceived and the Panel observes that this creates a problem with understanding place. The concept of 'campus' is problematic, as it is very different to a village extension; consideration needs to be given to what this site means to the village. The Bayer factory clearly had a link to Hauxton and before that, the village was linked to the Hauxton Watermill and Old Mill House i.e. places of employment and living. This combination of uses suggests that there could be accommodation on-site at Discovery Park, perhaps catering for small start-ups and where people are encouraged to live and work.

The Panel is of the view that there will be a social element to the proposed employment. It is proposed that the development will focus on start-ups and grow-

ons; the design team should therefore look at the University's West Hub in West Cambridge, that provides shared space and facilities for similar stage businesses. The Panel supports the pledge here, to provide a workspace in one building as a training space for school leavers wanting to enter into the R and D industry. It is a great initiative for encouraging young scientists.

While the cricket pitch is currently where people meet, and the applicant team has spoken of the proposed 'crossovers' with the R and D proposal, they will be in use at different times. In spite of efforts to the contrary, there is no clear heart to the development; the Panel therefore suggests trying to integrate the Greenway and the cricket pitch, bringing them into the 'heart' of the proposal.

Maintenance and management

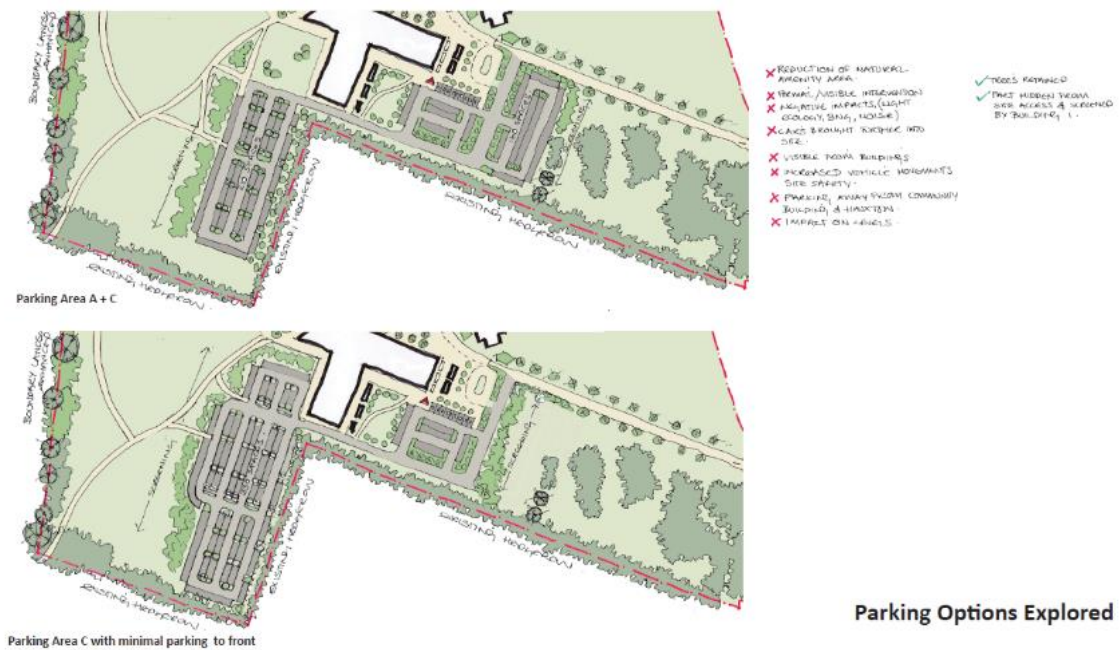
FCV will retain ownership post-delivery and aims for the management to be 'right on day one'; current thinking is that the development would not be gated and instead, individual buildings would have their own security. Digital methods, for example, would be used. In any event, the development is unlikely to ever be empty, with experiments running at weekends and changed patterns of working hours generally. The spaces between the buildings are designed to be public but the Panel agrees with the design team's acknowledgement that as currently designed, they would probably only feel more comfortable passing through the centre of the site.

Community engagement

Community engagement has been undertaken with the Parish Council (workshops and a recent presentation) and sports groups. The Panel notes how the applicant team has met with these local stakeholders to understand the existing sports provision and the background to the residential planning permission's provision of additional facilities, to see how the facilities FCV wants to provide on the Park can be integrated. It is understood that the applicant aims to focus on the community building that is intended to provide all of the sports facilities needed (including replacing existing toilets, a first-floor community café/ bar, a cycle repair area and team changing rooms). To overcome current problems regarding car parking, club users would share the development's proposed parking. The Panel agrees with the intention not to duplicate existing community facilities in the village (comprising a village hall, recreation ground and playground).



Proposed Layout Plan including building heights – extracted from the applicant’s DRP presentation document 11.05.2023



Proposed Parking Options – extracted from the applicant’s DRP presentation document 11.05.2023

Disclaimer

The above comments represent the views of the Greater Cambridge Design Review Panel and are made without prejudice to the determination of any planning application should one be submitted. Furthermore, the views expressed will not bind

the decision of Elected Members, should a planning application be submitted, nor prejudice the formal decision-making process of the council.