



Cambridgeshire Quality Panel

New Cancer Research Hospital (CCRH) within Addenbrooke's Hospital, Cambridge.

Tuesday 27th September 2022

Virtual Meeting

Panel: Lyne Sullivan (chair), John Dales, Joel Gustafsson, Steve Platt, Oliver Smith, and Lyndsey Wilkinson.

Local Authority: Charlotte Burton (GCSP), Jonathan Brookes (GCSP), Emma Davies (GCSP) and Helen Sayers (GCSP)

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 [Cambridgeshire Quality Panel](#) provides independent, expert advice to developers and local planning authorities against the four core principles of the Charter: connectivity, character, climate, and community.

Development overview

A full planning application is to be submitted in December 2022 for a new combined cancer treatment and research hospital, on the Addenbrooke's Campus, Cambridge. An eight-storey (36.5m) building, it will accommodate 77 beds and 5 day places, with alterations to existing access arrangements and associated public realm works.

Presenting team

The scheme is promoted by The Cambridge University Hospitals NHS Foundation Trust (CUH) supported by their consultants nbbj Architects, AECOM, and GL Hearn. The presenting team was:

Ingo Braun (nbbj), Ryan Sudall (Fira), Julia Davies (nbbj), Charles Gjerson (AECOM) Colin Page (AECOM), Ben Stalham (GL Hearn), Anna Grace Blackwell (GL Hearn)

Local authority's request

Following three rounds of pre-application discussions, to consider the principle of development, urban design, landscape, sustainability, ecology, and transport, GCSP have asked the Panel to focus on matters of connectivity, public realm and edges with reference to the wider campus context, sustainable design and construction, and user experience.

Cambridgeshire Quality Panel summary

The hospital will be an important facility for cancer treatment in the region, as well as contributing to the healthcare cluster on the Addenbrooke's site. The emerging design was noted, however, further consideration of the restorative nature of the over-all design, courtyard, and landscape features is needed as well as the relationship to the wider campus.

These views are expanded upon below, and include comments made in closed session.

Connectivity – “places that are well-connected enable easy access for all to jobs and services using sustainable modes”

The alignment with Keith Day Road (KDR) is important to establish the amount of threshold space and integration with the surrounding setting. It was recognised that, whilst the road is outside of the red line boundary, the highway may change and this may happen some way in the future, however, this impacts on the limited drop off space available. Could drop off spaces be situated elsewhere to provide a better experience and avoid conflicts over this limited provision? Whilst it is noted that the wider campus aspires to promote active and public transport access, this facility will serve many people with sensitive needs and for whom car based transport is the most probable and preferable mode.

The number of parking and cycle spaces is very specific – is there a transport strategy and transport assessment for the development? The Panel would have liked to understand more about expected travel patterns to and from the site. The plans presented were too generic on wider active travel measures.

The applicant advised that work is underway to consider the alignment of KDR in further detail and this will influence the design and landscape at ground level, but as a building, there is clear guidance from neighbouring buildings, which are all in parallel.

It is important to make the transition from the strategic design of the campus plans to the on-plot design and alignment. It was suggested that there will be a lot of new trips as a result of the facility. The applicant responded that, as most of the service users are already located on the campus, then the number of new trips is small. This needs to be interrogated.

A more detailed focus on the user’s arrival, orientation and being able to identify the department is crucial in terms of creating a positive experience that goes beyond signage would be useful and specifically for vulnerable users and time of day/night when journeys are made to and from the building to access transport and even beyond.

Community – “places where people live out of choice and not necessity, creating healthy communities with a good quality of life”

The site has constraints arising from its central location within the campus, which suggest an ‘urban’ context, yet it is so close to open countryside, and the ability to see this from a window is especially important for patient, visitor, and staff well-being. The ability to maximise green infrastructure must be taken, to amplify its restorative effects.

It was suggested that the mass of the building might feel intimidating to arriving patients undergoing diagnosis or treatment and that many windows will only have a view of other buildings or walls. Every effort should be made to soften these views, rather than rely on ‘wallpaper’ treatments including wildlife images. The Panel felt it was also very important to have private, rest spaces with views and tactile, calming landscaped spaces for full time employees in a cancer centre like this. Are there spaces specifically for staff to go to?

Rather than the proposed trees at the ground floor frontage, could a single large plane tree be planted to have better impact?

Character – “Places with distinctive neighbourhoods and where people create ‘pride of place’

This is an architecture-led scheme, with landscape taking on secondary importance which is understood as it is a large building on a small site. Nonetheless, the scheme needs to be more convincing with its landscape strategy; how does what is proposed add value and depth of experience. It seems a weak vision, primarily focused on operational requirements, and should be more bespoke.

A restorative landscape is needed with better integration of spaces and there needs to be another layer to invigorate the design. Specificity to bring beauty and joy for patients and staff alike. Can all the green roofs/platforms be accessed?

The brief is an exciting opportunity, but the current design, whilst functionally resolved, lacks a restorative ethos, and the building façade appears too homogenous.

The massing is a good response in general design terms (albeit noting the point in the Community section). Will the building be of a flexible layout to allow for changing needs

over time? The applicant showed a plan of how the windows have been designed to accommodate different partition designs.

The design has a formal materiality and thought too corporate. It should be less homogeneous and more textural, expressive; playful and patient focused.

The courtyard seems to be a big pit and highly enclosed on all sides, with little direct sun across most of the seasons. The internal wall and rainbow design is weak and could be much better and interesting as a view. Could there be more punch outs of floorplates to provide relaxing areas, and bring more light into the space to improve the courtyard experience? Could an alternative approach to the location of plant allow improvements to the central courtyard and improve the quality of the space?

The applicant advised that, whilst they had considered, and support many of the Panel's ideas, the layout of the floorplates was heavily guided by operational and clinic requirements and by fire safety standards.

Articulation of floors through use of colour was noted but could this be applied to different uses instead. The break-out spaces could be more delineated?

The need for a lobby space for patient rooms was queried, which was explained as needed for infection control for some wards.

The Panel recommended the consideration of other successful hospital designs and also lessons learnt from other buildings on the campus, such as the Papworth Hospital. They felt strongly that the biophilic potential of the courtyard and external setting was not a strong enough organising principle or ethos in the design. The poor direct sunlight penetration, which is only 30-40% at best in June, will leave the café with poor light, looking across at a not very interesting façade, whilst the kitchens will experience much better sunlight. This seems odd because it suggests that patients and visitors prefer a shaded setting.

The applicant acknowledged that they had undertaken a lot of work on the design and perhaps had not been able to fully articulate this in the presentation time available. They highlighted that the landscape design had been influenced by a patient experience group along forest restorative landscape design principles and that they had experience of several Macmillan designs and other buildings of up to 14 storeys high that had successful courtyards.

Climate – “Places that anticipate climate change in ways that enhance the desirability of development and minimise environmental impact”

The energy strategy was not clearly understood, although the all-electric approach is supported.

It was suggested by the Panel that ground source heat pumps may not be the right solution due to local site conditions and constraints, only giving up a likely low yield of output for what will be a high energy use site. Is it worth the expense for such little return?

A lot of the plant required takes up space that could be used for accommodation with external views. Some of the plant could be accommodated below ground with equipment which needs air flow better incorporated into the higher levels, allowing more informality in the façade design.

Are green roofs workable under PVs?

Achieving net zero carbon will be a challenge for a building of this type and use. However, the use of passive principles can achieve a lot and should be maximised.

Can the excessive heat from equipment, machinery and building be harvested to be used elsewhere?

Inevitably there will be a lot of embodied energy, as a result of the building constraints.

The façade should reflect needs for shading and glare reduction on the southwest/south-east façades, which will affect the performance as well as the experience of the building and mitigate cooling needs.

Specific recommendations

- Re-consider the arrival experience for all modes of travel and for all users of the building, being clear on the modal split strategy and needs of different users across the day/night period.
- Ensure the frontage landscape design is the best it can be, now and for articulation with KDR as that road alignment evolves.
- Ensure the overall landscape vision and strategy is stronger and more patient-focused.

- The heart of the scheme – the Courtyard – needs to work better for users in, near or over-looking it.
- Evolve materiality, remove homogeneity, and finesse the external design to be more playful and less corporate.
- Think about using colour and tactile approaches in different ways.
- Are all the green roofs/terraces accessible to all? Is there a dedicated staff only space? Do all floors have access to open space?
- Are ground source heat pumps an effective solution? Could air source pumps provide more beneficial outcomes and flexibility of location?
- Maximise use of passive solutions to manage heat and energy.
- Relocate pumps and equipment below ground where-ever possible.
- Maximise external views and natural light for people, not plant equipment.

The opportunity for ongoing engagement with the developer and design team would be welcomed as the scheme develops.

Contact details

For any queries in relation to this report, please contact the panel secretariat via growthdevelopment@cambridgeshire.gov.uk

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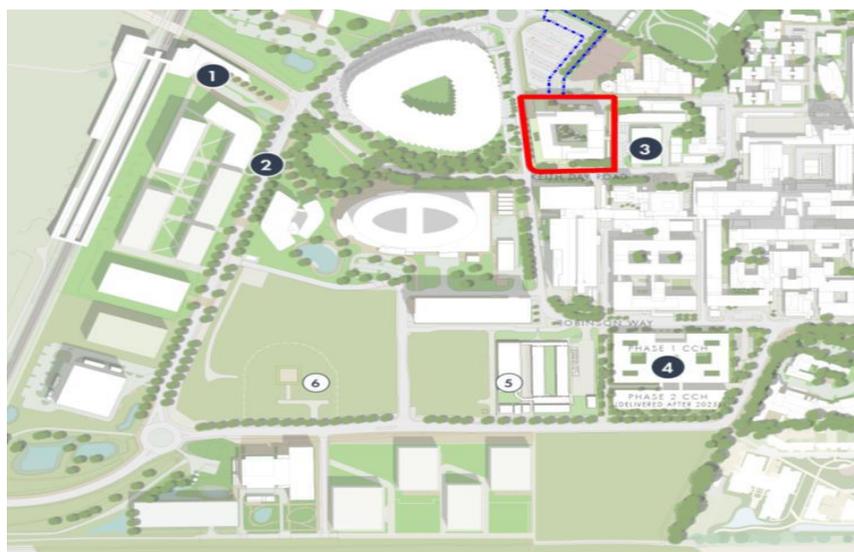
Appendix A – Background information list and plan

- Main presentation
- Local authority background note
- Applicant background note

Documents may be available on request, subject to restrictions/confidentiality.



Concept visualisation of Cambridge Cancer Research Hospital



Evolving Masterplan (2025) showing CCRH location

Images taken from Applicant's submission