

Case Study – Pix Brook Academy

Submission to the RTPI Awards for Planning Excellence 2021

Pix Brook Academy embraces modern methods of construction for a rapid build out, to meet the existing and future educational needs of over 1,000 students and the sustained growth within Central Bedfordshire. With sustainability at its heart, the development provides an 8,980sqm main school building with sports hall, drama studio, games areas, football pitches and athletics track. In addition, the ‘Now or Never’ pod would enable outdoor learning for a net-zero carbon classroom. The project is one of the largest and quickest builds of a facility of this size, taking just 52 weeks to construct, utilising 70% of off-site manufacturing.

Pix Brook Academy is located in Stotfold, Central Bedfordshire. In 2017, the Central Bedfordshire Council Executive Committee resolved to support the delivery of a new school at this location. The committee sought to release council land for the new school to be delivered by Central Bedfordshire Council and funded by Department for Education to meet both current and future demand. Willmott Dixon were the appointing contractor, acting on behalf of Central Bedfordshire Council whilst Bidwells supported both on the planning advisory role.

The project team undertook early engagement through pre-application discussions with the Council and refined the proposals alongside local stakeholder engagement. This engagement involved an exhibition of plans at a nearby primary school to the local public as well as events to prospective parents in conjunction with the Bedfordshire Schools Trust (BEST), which were well attended and resulted in positive feedback from parents. The outcome led to refinements to the proposals and scheme mitigation ahead of the formal submission of the planning application.

In April 2019, a full planning application was submitted for the site and within 14 weeks planning permission was obtained, enabling the site to be developed and built ready for the following term in September 2020.

As well as overseeing the project team, Bidwells took on a planning advisory role and engaged with key stakeholders throughout the project. In navigating the scheme through the planning process, Bidwells negotiated suitable planning conditions to secure the necessary planning mitigation without delaying work to commence. This enabled the avoidance of unnecessary pre-commencement conditions to enable the phased construction of the school to be delivered to programme.

The school designed by Bond Bryan architects benefits from a high-quality design with a robust and aesthetically pleasing material palette, incorporating soft and hard landscaping measures to mitigate impacts on the landscape and deliver biodiversity habitat. The facility embraces modern methods of construction to enable rapid delivery on site (52 week build programme) to meet local educational needs and facilitate the economic growth of the region. The scheme utilised offsite manufacturing, utilising over 210 component units to ensure that enabling and groundworks could take place during the delivery of the modular components. Consequently, the site was able to continue throughout the COVID-19 lockdown (adhering to government-backed Construction Leadership Council site operating procedures).

The innovation did not stop at occupation. Bidwells continues to support Willmott Dixon, as part of their ongoing post completion client care on initiatives, including their ‘Now or Never pod’ scheme, which utilises the original project team to deliver an external net



zero carbon pod and will act as a breakaway space for a small group of students. This creative project has involved designs by students to inspire designs for an autonomous off-grid solution which utilises the principles of how structures can be effectively re-used to form new sustainable products. The pod is focused on enhancing young people's knowledge and educating about sustainability, construction and technology in a way that leaves a lasting legacy from the original planning and build.

Outcomes for People and Communities

With the recognition for the need of a new secondary school on site since 2015, the site is of notable significance to the residents, future residents of Stotfold and surrounding areas of Central Bedfordshire. The school offered capacity to secondary school students and sixth forms for students aged 9 to 16 years. In 2017, the Central Bedfordshire Executive Committee report expressed a significant deficit of middle school places. The provision of the school and the swift turn around in the planning process and delivery, enabled these places for the local community to be opened up to meet a growing need in the local area. It allowed a turn around to offer places in the community within the next academic year. The development has allowed for the sustainable population growth and planned housing development in the local catchment area to meet emerging Development Plan growth within the centre of the Cambridge to Oxford Growth Arc.

The development has been built to a high specification ensuring that there is a high-quality environment for teachers, students and families living in the area. The development includes the provision of both suitable indoor and outdoor space, benefitting a range of uses for the school and the wider community. The school planned for significant sports provision, including games area, playing pitches and studio space. These facilities are beneficial to the wider community and encourages opportunities for communal facilities to be accessed outside of school hours.

Pix Brook Academy School contributes to a strong sense of place and community value for the town created through high quality design. As part of the design and associated access, safety of the area was planned for, particularly the arrival of school drop-off and pick up points. The design of the school plans for inclusive and accessible areas for all. The development included a new access road as well as car, coach and cycle parking spaces. It enables a range of travel routes and accommodates several modes of transport including improved and new public rights of way to encourage cycling and walking.

The project team has created a scheme which has brought substantial investment into the local economy through the creation of a number of highly skilled construction jobs as well as providing 150 educational staffing positions on site.

The 'Now or Never' pod proposal builds upon the positive outcomes for the local community, particularly students. It provides for an additional flexible workspace for eight to ten students year-round. The pod has wider benefits for students who have been learning about sustainability and construction from the offset. This follows on from the early engagement with the school and will continue to build upon their knowledge and skills of current students and future generations. The 'Now or Never' pod incorporates regular feedback from the school to ensure the pod is designed and built for their needs.

Planning Contribution

Willmott Dixon and the wider project team initially worked with the Council alongside other stakeholders, to establish a clear vision for Pix Brook Academy. Bidwells project

managed the consultant team to develop and realise the vision, whilst playing a key role in the masterplanning process and attending various design meetings. Through this process, Bidwells provided advice in relation to matters such as setting, landscape impact, scale and connectivity.

The process which led to the planning application being submitted and approved was complex due to the necessary speed to deliver the scheme, alongside consideration of the comments from consultees and engagements with parents who had a significant interest in the proposal. Bidwells engaged with officers on key issues including highways, character of the area and landscaping. Bidwells' planners advised and guided on:

- Pre-application meetings with Officers and stakeholders;
- Public Exhibition;
- Supporting planning documentation which included a Planning Statement incorporating a Statement of Community Involvement.

The proposal for Pix Brook Academy involved extensive partnership working. Bidwells worked closely alongside the wider project team and Willmott Dixon to deliver a suitable proposal of this site. The project team worked closely with Central Bedfordshire Council and Department for Education to understand the key potential issues for the site and how to overcome these. Bidwells has supplemented the original planning application for the school through assistance in the implementation and delivery of the site and negotiated the detail of the planning conditions to enable the early commencement of the enabling works for the construction of the school. As such Bidwells facilitated full planning permission for the site within 14 weeks.

Subsequently, Bidwells are planning advisors for the 'Now or Never' pod, working on researching appropriate development within Permitted Development rights to enable a swift implementation on site. The project team for the pod worked to the legislation and criteria with Bidwells liaising with Central Bedfordshire Council on the principle of development without comprising the original planning permission.

Outcomes for climate action

Designing for sustainability was integral to all aspects of design for Pix Brook Academy. The building uses materials from sustainable sources, produced using benign methods where practicable. Where it was appropriate, materials were sourced locally to reduce transport energy use. The structure of the main school block consisted of an offsite modular light weight construction, reducing the waste produced and vehicular movements involved. Actions were taken by the project team to improve resource efficiency and avoid waste carbon and materials including operational carbon reducing actions. This fed into the design decisions and construction methods to reduce waste. The design which incorporated robustness and longevity provides for the provision of solar glazing to control solar gain through sensitive elevations and hybrid natural ventilation into classrooms to maintain temperatures and CO₂ concentration levels. Disposal of waste incorporates waste management for recycling and appropriate means of disposal.

The environmental strategy for the site included the sustainable transport measures, in which vehicular movement on the site is minimised. The construction of the site planned

for a reuse of existing topsoil and responsible specification of hard landscape materials, including sustainably sourced paving.

At the heart of the 'Now or Never' pod project is sustainability, both providing and teaching the younger generation the future skills required in the current climate. The proposal is focused on educating students on the concepts of sustainable construction, climate change and adapting technology in a way that leaves a lasting legacy. The designing and building of the net-zero pod will positively contribute to the use of green energy and provides a step forward to mitigate against climate change.

The pod will be an autonomous off-grid renewable solution which utilises the principles of how structures can effectively be reduced, re-used and recycled to form new products. The choice of materials chosen reflect a conscious decision to use re-established and more sustainable materials. The pod will involve fitting out an existing single-storey site cabin, which will comprise of sustainable external composite cladding, recycled insulation and a solar array placed on the roof of the pod. The structure will focus on a fabric-first approach to ensure maximum air tightness, ventilation and energy efficiency. The solar photo voltaic (PV) panels situated on the roof will positively contribute to the provision of green energy generated for the pod.

The foundation of the pod will be constructed in a way that does not leave a lasting detriment on the existing soil and ground conditions in the way that is known with traditional concrete foundations.

Outcomes for sustainable development

The provision of the school provided a substantial contribution to meeting the identified need and delivered significant social benefits within the local area. The scheme has taken a holistic approach to growth and development promoting a balance of economic, social and environmental objectives, and in doing so embodies a number of the UN's Sustainable Development Goals. The service provided on site meets the short term and long term goals, providing access to education and jobs for the wider community.

From an economic perspective, the scheme has supported the local economy and created construction and educational jobs for younger people. Employment opportunities are provided on site making Stotfold a place where people can live and interact, whilst enhancing the links to the surrounding area. This is in line with Sustainable Development Goal 8 –'Decent Work and Economic Growth'.

In terms of social goals, the scheme is supportive of Goal 11 'Sustainable and Communities'. The scheme builds upon an existing community in Stotfold and creates a place which can establish long term growth and prosperity for future generations. The scheme has also focused on mobility with good pedestrian and cycle links. The site is located near the existing Right of Way network, Byway 18, the proposal for the school incorporated an enhancement to link the school and the Byway to allow users to access the site from the north.

The rise of social benefits and employment opportunities in support of Goal 11 is supported by the community use of new sports facilities. Access to the facilities outside of school hours benefits the wider community and delivers favourable sustainable development for the scheme. Paragraph 7 and 8 of the NPPF highlights the role

sustainable development has to play in providing local services that reflect the community's need. The school delivered substantial social, environmental and economic considerations in line with sustainable development as set out in Paragraph 8 of the NPPF. The new education facilities were brought forward commensurately with residential and economic development to ensure growth is sustainable.

The scheme is supportive of Goal 4 'Quality Education' as the scheme ensures inclusive and equitable education opportunities for the wider community. The provision of the school enables future sustainable growth and accommodates future students and their education as a priority.

Environmentally, the rural character of the site was planned for and the proposed landscaping for the site was implemented to respect the ecology setting and support the biodiversity of the site. The scheme incorporates a range of sustainable measures as a means of addressing the impacts of climate change, and in doing so supports sustainable development goals 7 and 13. The 'Now or Never' pod proposals go on to support Goal 7 'Affordable and Clean Energy' further, providing sustainable energy and teaching to all, particularly the students of the school. As an example, the development includes renewable energy technology in the form of PV panels and efficient building techniques.

Community Engagement

Willmott Dixon and the wider project team engaged with the local community. In April 2019, a public exhibition was held with high attendance by the public. The discussions with attendees were largely positive throughout the exhibition. Feedback was received through various comment slips and supplemented by questionnaire responses following the event. The positive and constructive responses were captured in a Statement of Community Involvement and concerns raised by the community and stakeholders were addressed as part of the planning considerations in the planning statement.

A further exhibition was held in April 2019, for parents who had enrolled their children at Pix Brook Academy when it is completed. The exhibition engaged parents on the latest plans and drawings and involved discussion with the project team to address their queries. Overall, the meeting was very positive and well received by the parents. The feedback confirmed that the exhibition and the proposals gave the parents further confidence in the project and they advised they looked forward to their new school being built.

Bidwells liaised with the technical consultees as part of the planning application process to respond to queries and submitted additional information and amendments to receive a positive recommendation within a 12-week determination period. Bidwells participated at planning committee in support of the scheme, answering questions from councillors and the public and eventually obtaining a resolution to grant planning permission.

For this to be a long-term sustainable development plan, the emphasis needs to be placed on educating the next generation of students in schools. Throughout the design and construction of the pod, the students at Pixbrook Academy will be able to learn about the different components behind sustainable materials, renewable forms of energy and also net-zero carbon design. As part of the project, we have involved the staff and students in the elements they would like to see included as part of the pod. This involves



regularly gathering feedback from the school to ensure the pod is designed and built for their needs and requirements.

Follow a disruptive year, young people's education has been greatly impacted due to the COVID-19 pandemic. As such, Willmott Dixon are striving to provide something different and innovative in which students can enjoy. They continue to engage with the school, when they expressed the need for a sustainable and environmentally friendly teaching aid to educate students. The 'Now or Never' pod project takes a hands-on approach and has engaged with the students in the design process, taking on their ideas into the pod itself. The students will be able to learn via a number of workshops on renewable energy, building design and sustainable technology to name a few.

Leading Practice

This development is considered to be significant for accommodating future growth in Central Bedfordshire. Full planning permission was received for the school within 14 weeks following a positive recommendation from the case officer. The quality of work was maintained whilst undergoing the timely submission process, which in hindsight should have been allowed more time to be pulled together. As a consequence of this, limitation within the original submission had to be addressed through post submission amendments with light turn arounds. This was not the ideal situation and involved having to attend two committee meetings to reconsider the design options on access arrangements and avoid the unnecessary loss of street trees in particular. The project team had to produce a large amount of detailed information on construction management and the process to gain foresight in order to avoid any unnecessary pre-commencement conditions.

Bidwells negotiated the details of planning conditions to enable early commencement and enabling works for the construction of the school. This accommodated a quick turnaround to provide spaces for 1,260 pupils aged 9-16 years and amounted to a hugely critical education capacity boost in an area of recognised historic and immediate need. The scheme has incorporated elements of sustainable and high-quality design which was put at the heart of the design process and has been respected in terms of the final scheme.

Due to the established need for school places, the project had to be planned and executed for it to be built in time for the start of the next school year. From the early engagement with stakeholders to planning committee, the wider project team worked to the deadline and exhibited good practice across the professions. Full planning permission was achieved on site in August 2019 and Bidwells negotiated suitable wording of the planning conditions to enable the phased construction of the school. This ensured the timescales for the project were met and the school was built and open for the school term in September 2020. The scheme is an example of how to support the community through wider use of the buildings. It has established a role and increases the viability of its surroundings. Without the school coming forward, it would be unlikely that housing in the surrounding sites in Stotfold would come forward.

New ways of working have been presented within the scope of the 'Now or Never' pod. While engagement with the community has always been a priority, the school and students have been involved widely in the process. This way of working puts young people's voices at the centre of the project and inspiring the next generation through workshops and the design process so that they engage with sustainability and construction principles. This could inform good planning in the future, Willmott Dixon

have expressed that planning for a difference does not stop with one school and those individuals. The long-term vision for the pod is for many schools to benefit in a similar project.

Does the scheme or project have particular significance to the region?

Central Bedfordshire Council are proposing significant growth in their emerging Local Plan. The Local Plan proposes delivery of 39,350 new homes and states it will deliver a minimum of approximately 24,000 new jobs over the plan period by growing key employment locations and sectors. Development of the Pix Brook Academy supports this sustainable growth and future development opportunities will be able to come forward and support for families in enabling school places and quality education delivery.

The site is well located within the Oxford to Cambridge Arc, in Bedfordshire and aligns with the questions set out by the Government as part of the growth arc which seek to deliver a high-quality, well-connected and sustainable communities. The Pix Brook Academy scheme aligns with achieving this vision in facilitating education within a sustainable community.

There is planned growth in the catchment area, a site located in the adjacent settlement of Arlesey is coming forward to develop mixed use strategic housing under an allocation for approximately 2000 homes.

Given the length of time that the Local Plan has been under Examination in Public, there are a number of development sites that have progressed through planning and have or are being delivered locally.

The Pix Brook Academy has therefore facilitated and enabled schemes to come forward in enabling capacity for students within the wider catchment area.

The supported growth and successful implementation of the scheme facilitates education provision for the surrounding area, enabling sustainable growth for the region.

As touched upon in the previous question, following completion of the 'Now or Never' pod concept at the Pix Brook Academy in Stotfold, Willmott Dixon are seeking to engage with other schools in Bedfordshire and the surrounding area. This would provide a benefit to the region on the long-term benefit of educating young people can provide for a sustainable future.