

Summer 2023

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# Millmount.



JDDK CGI of Hebburn  
Extracare main entrance

THE DISCOVERY

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Managing the invisible element in our homes that influences our quality of living – the air.

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DISCOVER  
DESIGN  
DELIVER

# A word from Millmount

Most of our clients and partners will know that the JDDK team has been based in Millmount for over 30 years now. Once home to an architect's family, and now the 'work home' of our JDDK family, the building's heritage is at the heart of our practice. Since 2009 we have been sharing news of our team and projects under Millmount News, but this edition marks a new era for our well-loved newsletter.

Alongside the key updates from our work with clients which have always featured in each edition, new content will see the JDDK team diving deeper into our areas of specialism and asking the questions that steer our practice into ways of thinking that challenge the norm. To share their findings and projections for the future with you, our team have sat down to explore new discoveries, unpick features of design, and break down methods of delivery, to bring a new content series to Millmount News.

In this first new-look edition of Millmount, we discuss the future of AI in architecture, how wellness can be enhanced through design, and a forward look at the future of hospice design. As well as new reads for you, you can sit down with the team to watch them speak about their areas of expertise and experience a glimpse of what it's like working with us at JDDK.

Never before have we opened the doors to Millmount in this way, and we're excited to welcome you inside for a closer look at what we do. Already the team is thinking about what we can share with you in our next edition, so let us know what you love and what you're curious about. In the meantime, we hope you enjoy this edition.



**Nicky Watson RIBA**  
Director

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## Vet hospital expansion welcomes first patients



DWR Veterinary Specialists has opened its extensive new facilities after a five year project to undergo a £15 million expansion of its Cambridgeshire veterinary referral hospital, to become the largest of its kind in Europe.

The state-of-the-art provision welcomes clients on the ground floor into a bright waiting room overlooking the landscape. The naturally lit reception is divided to facilitate the separation of cats and dogs – a design consideration essential for their wellbeing and that of their owners. A separate cat waiting room offers direct access to dedicated cat consulting rooms. The cat ward includes its own treatment and isolation rooms.

Upstairs on the first floor, JDDK's design considers staff as much as clients and patients, with a large teaching space for CPD seminars, and a generous welfare space complete with canteen, a staff kitchen and a quiet room. Break out spaces, staff offices, meeting rooms and further quiet rooms are provided so that staff have a choice of workplace, whether they need quiet zones or space for team collaboration.

DWR's new hospital provision built by Meldrum Construction also comprises 26 consulting rooms, an Intensive Care Unit, and therapy and diagnostic spaces, including an MRI, CT and x-ray suite. An extensive laboratory provides facilities for pathology, microbiology, blood screening and histology.

Having worked with veterinary clients for a number of years, JDDK has also delivered veterinary practices and hospitals in Edinburgh, Washington, Sedgfield and Barnsley.



**JDDK's design considers staff as much as clients and patients.**

### Planning permission secured for home near Fernhill Estate

JDDK has secured planning permission for a semi-rural site adjacent to historic city manor house, Fernhill near Durham. The iconic site offered JDDK an interesting opportunity to re-create an existing stables structure into a new bespoke house.

The new building was carefully designed to reflect the existing 82m<sup>2</sup> footprint area, matching the original scale and materials but has been enhanced with a contemporary pavilion design that

sensitively responds to the landscape surrounding Fernhill.

The compact house makes efficient use of the space available, resulting in a contemporary three-bedroom home with an open plan living, dining and kitchen space. Making the best of the enfolding landscape, the open plan space opens onto a south-facing terrace with glazed sliding doors, shaded by an oversailing roof with PV panels.



### JDDK marks 250th feasibility study with Elekta

Engaged by long-time client Elekta, JDDK has marked its 250th feasibility study with the global supplier and manufacturer of specialist cancer care equipment for Precision Radiation Medicine. The studies propose how a range of specialist diagnostic equipment could sit within existing and new medical facilities.

The milestone showcases a successful and accomplished relationship between Elekta and JDDK, whose construction knowledge and technical expertise has supported the manufacturer to establish a clear framework for proposals and projects.

JDDK has spent years building up a broad technical expertise of Elekta's product lines and their site planning requirements, which is especially comprehensive for an architecture practice and highly specialised to Elekta as a manufacturer.

Andy Rutherford, Associate Director at JDDK has led on the studies for Elekta, which were secured following a series of projects for Rutherford Cancer Centre projects in the UK. Andy explains, "The complex technical nature of these projects means that there is a constant need to refresh our knowledge in order to ensure that we fully understand any technical guidance and constraints."

Having managed Elekta projects in over 100 countries, Andy has passed his knowledge onto Elekta's design team by delivering seminars that have equipped the team to run through the study framework with an

in depth understanding of 3D modelling software including CAD and BIM. Andy says, "as a leading medical equipment supplier Elekta have a highly skilled internal and external design team, and Elekta's investment in its design teams over the years has ensured the highest standards of project design and delivery."

This collaboration between JDDK and Elekta offers a seamless and efficient process that enables Elekta to maintain its role as a leading manufacturer and supplier of radiation therapy equipment to medical facilities.

**“ Elekta's investment in its design teams over the years has ensured the highest standards of project design and delivery. ”**



### Bespoke new homes set for former sawmill site

A disused sawmill site has been granted a new lease of life as JDDK has secured planning permission to turn the structures into two new homes.

The proposals show two bespoke residential designs. The first house covers 192m<sup>2</sup> with its four bedrooms and double height hall space. The second, five bedroom house covers 320m<sup>2</sup> alongside an additional studio building of 46.5m<sup>2</sup>, and features a striking open plan living, dining and kitchen, running the full length of the property. Both properties are sustainable designs, using timber cladding and roofs that support PV panels.

Nicky Watson, Director at JDDK explains: "It's been an interesting project to work on so far, as the new buildings needed to reflect the existing building in terms of footprint, scale and materials but provided an opportunity for a contemporary take on the designs in their rural setting."

# PROJECT UPDATES

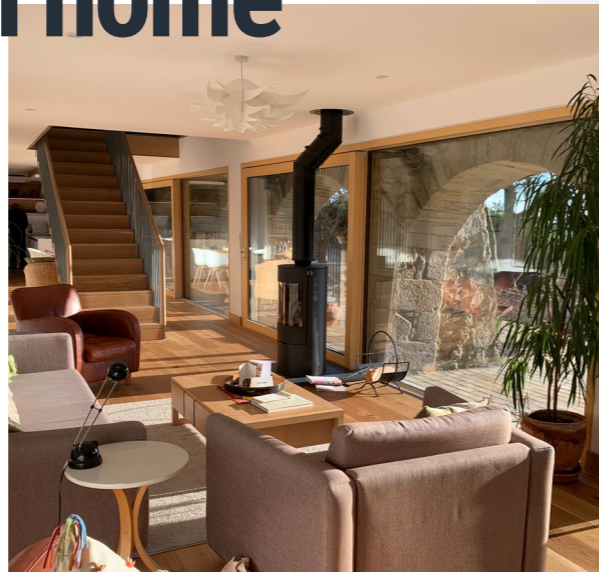
## Renovation transforms historic Hexham home

After 11 months of site work, JDDK has reached completion on a renovation project that has given new life to a 1970's barn conversion home, a few miles outside Hexham.

Originally converted and lived in by the then Head of Architecture at Newcastle University, the barn was a traditional Northumberland hemmel, with top floor grain storage and an arcaded, open fronted ground floor for fattening sheep or for lambing. In the decades since its conversion, there has been one other owner before it was purchased by the current owners in 2019.

The new owners' refurbishment has completely upgraded the home, including a rearranged staircase, a new double height entrance hall, a new west facing "snug", and an added bathroom. A new workshop and extended garage have also created a contemporary addition to the old stone building.

The thermal performance of the house has been enhanced, including triple glazed windows and sliding doors in the south facing 6 arches overlooking the Tyne Valley. There is a wood pellet boiler and PV panels.



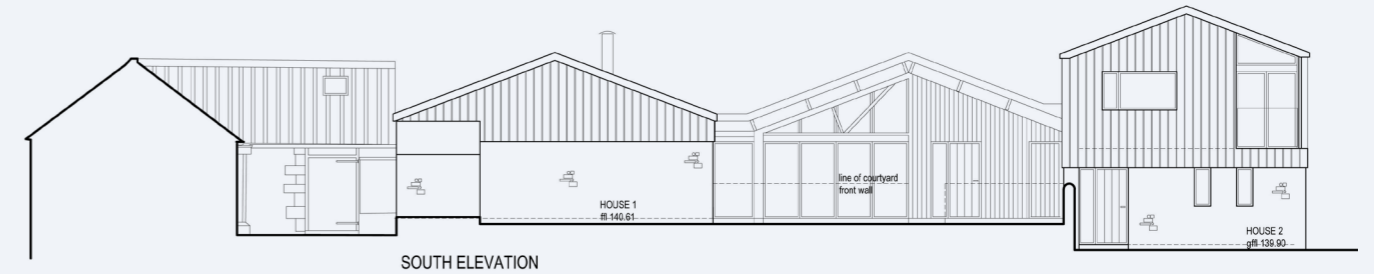
### Karbon's Hebburn Extra Care housing set for green light

Application for planning permission has been submitted for Hebburn Extra Care on behalf of housing association Karbon Homes and South Tyneside Council.

The supported housing for affordable rent will comprise of 95 apartment units, including 75 one bed homes and 20 two bed homes.

The £27 million development is designed with secured internal garden courtyards to benefit residents with dementia, as well as no dead-end corridors with view-out to help residents with wayfinding.

Mura Mullan, Director at JDDK explains: "Hebburn Extra Care is set to be a flagship project for South Tyneside Council with two further developments to follow in the coming years using the same principles and approach as this project, creating much needed supported living accommodation for residents with a care needs."



### Class Q permission granted for Northumberland barn conversions

Two new homes are set to be built near the Alnwick coast following Class Q planning permission being granted for the conversion of redundant farm buildings at South Moor Farm in Northumberland.

JDDK was appointed by Northumberland Estates in Autumn 2021 to develop design proposals for the application, which was approved in February this year, under the Class Q permitted development legislation. Class Q was introduced in 2014 as a form of permitted development designed to help ease the pressure on housing in rural areas, caused by high house prices, low wages, seasonal renting, high levels of second home ownership, and an ageing population. This type of planning permission allows the refurbishment of disused agricultural buildings into residential homes.

Four miles south of Alnwick and three and half miles from the coast, both homes are designed with bright and airy open plan living spaces that have extensive views over the Northumberland countryside, with additional lounge and home office spaces.

One of the dwellings will be a one storey, three bedroom home across 206m<sup>2</sup>. The second, two storey, three bedroom home spans 193m<sup>2</sup>, and is designed in an "upside down" style, with the living spaces on the first floor to allow for lofty ceilings with the steel structure of the original barn on show, as well as two sliding folding doors opening onto a south and east-facing covered balcony, showcasing the view of the Northumberland coast.

Project lead, Nicky Watson, explains: "Whilst Class Q legislation was created to reduce the red tape needed to convert agricultural buildings into residential homes, the existing structures must meet various requirements and the new plans still need to meet criteria around impact on highways, noise, contamination, flooding risks, as well as the external appearance of the new dwellings must be in keeping with the rural character of their setting. We were delighted to have worked with Northumberland Estates on this successful Class Q approval and the new homes will be attractive to anyone who wants to enjoy countryside living just a stone throw from the stunning Northumberland coastline."



### Walled garden café set to be Bamburgh hidden gem

JDDK is working with the Armstrong family of Bamburgh and Cragside Estates to build a café within a walled garden at the heart of Bamburgh village. With completion expected as early as December 2023, the café will be a welcome addition to Bamburgh's year-round tourist trade.

Working from an existing approved planning application from David and Jane Darcy Architects, the café will feature a large outdoor terraced seating area and a garden with adventure playground in a historic walled garden setting.


Ahead of construction work starting this summer, Nicky Hodgson, Associate Director at JDDK, said: "This is a hidden gem of a project that will boost tourist trade by sitting hand in hand with Bamburgh Castle at the other end of the village."

The café is set to have sustainable fittings including PV on the roof, high performance glazing and air source heat pumps and has been designed using bio-based materials such as oak trusses and larch cladding.

# Retrofitting for better quality living



Adam is an accredited TRUSTMARK retrofit coordinator

 **Adam explains how and why we measure air quality**

[Watch now](#)

 **By Adam Vaughan,**  
Director

## There's an invisible element in our homes that influences our quality of living – the air.

The air we breathe has a big impact on our quality of sleep, respiratory health, and the cleanliness of our homes. To enhance these factors in people's day to day lives, we're using architecture and design to improve the air quality in homes across the region.

### Damage in the wind

Indoor air quality (IAQ) is a relatively new consideration for our homes and health, with increased air pollution in cities and synthetic materials used all over our homes. The impact of poor air quality can also be compounded and poor air quality can be made worse when we make improvements to our homes, such as new windows, that can seal in poor quality air.

Good ventilation supports general health and wellbeing, while thermal improvements carry both health and financial benefits, and today we have a much better awareness of our air quality. We can see this at a citywide scale with the introduction of low emission zones to reduce particulate pollution and in the reworking of building regulations to optimise ventilation.

### Collaboration with the community

There is work now being done to bring old housing stock into the modern day and create better living for all. Retrofitting can make existing buildings more comfortable and enjoyable, as well as healthier to live in. Social housing providers are proactively looking to avoid damp and mould problems that are so frequently seen on the news, and the Government has recognised the need and opportunity with the Social Housing Decarbonisation Fund (SHDF).

Newcastle City Council (NCC) is one of the local authorities to have secured Wave 1 funding, working with Your Homes Newcastle (YHN) to engage us in the opportunity for us to create more robust living spaces. While SHDF projects are running across the UK, NCC and YHN have taken a unique approach by also engaging Northumbria University to do some environmental monitoring of the dwellings. Colin White, Senior Housing Renewal Officer at NCC invited Lindsay Bramwell, Senior Research Associate, and Jane Entwistle Professor of Environmental Chemistry and Health from Northumbria University to join the project, adding extensive expertise from their background in environmental health to help us gain as much insight from Wave 1 as possible.

windows to create damp and mould, making ventilation a key element of these retrofit projects. We see peaks in humidity when there is cooking, washing drying or people moving about a lot and then drops overnight or during working hours.

Ventilation gives occupiers the means to maintain healthy air conditions by bringing fresh air in and removing moist, polluted air, but certain elements are in their control. Occupiers were advised on how they can alleviate the pressure on their homes with tips such as keeping trickle vents open, keeping ventilation fans on and avoiding burning candles and smoking indoors.

Jane Entwistle explains, "Tackling climate change by reducing household energy use, together with improving indoor air quality offers a significant opportunity to improve residents' health and wellbeing. This collaborative project, between architects, the local authority and the residents themselves, is an exciting opportunity to provide the evidence base needed to deliver on both of these agendas and to provide the evidence base needed to ensure retrofit works targeted at improving the energy efficiency of homes also realises the opportunity to improve residents' health and wellbeing."

### Better air for now and the future

While the retrofitting work is ongoing and we prepare for the monitoring stage later this year, we hope to see initial results indicate that the improvements have been effective and improved air quality for occupiers. Colin White explains: "This project aims to establish processes to assess the actual impact of the retrofit works has on the home environment and the information gathered will help inform future design and delivery. This will allow Newcastle to maximise the reduction in energy demand, make improvements to the home environment and have a positive impact on the health of the residents."

Wave 2 will retrofit 80 properties, including 30 duo-slabs and 50 Victorian terraces – properties that present more challenges given their age. Northumbria University researchers will also be continuing with their monitoring throughout future phases of retrofitting work. With this retrofitting process applied to homes across the UK, we should see a country-wide improvement in sleep quality, comfort, health, and happiness – factors that will contribute to an overall improvement in our collective quality of life.

### Revitalising old homes

Earlier this year, our combined team visited the occupants of the bungalows to talk them through the upcoming changes and present the 'baseline' monitoring info and stress the importance of the new ventilation systems in controlling indoor pollution.

Wave 1 of funding allowed us to retrofit 80 bungalows with new windows, doors, solar panels, and loft insulation for older people to live independently in Walker. For the 180 duo-slab houses that were built in the 1930s, we completed external retrofitting, by applying external wall insulation. 30 of the bungalows' IAQ were sampled beforehand as baseline monitoring, including 10 each from Monkchester Green, Kingston Green and Welbeck Green in Walker, using specialised equipment from Northumbria University to test for temperature, humidity, CO2, and PM2.5. Further testing will be carried out later this summer, to understand how the completed works have transformed the IAQ.

There are two principal concerns around IAQ that we are combatting. First is combustion of fossil fuels and gas, in the forms of fires, log burners, and cooking, particularly on gas powered cookers. Second is condensation from humidity, which occurs when humidity from breathing, bathing, and cooking cools and condenses on walls and



Explaining the retrofitting to bungalow residents

# Hope for the future

Realising the future of hospice design for young people, their families, and their carers.



**By Stuart Franklin,**  
Associate Director

The importance of UK hospice care and its place within our society cannot be underestimated. This area of specialism has long been a core pillar of our practice work, with an approach that has always been simple, but one that differentiates us when realising this vital piece of our communities.

Our design approach in hospice care puts patients, their families and the people caring for them at the heart of the development. This is never more important than in the case of young adults requiring hospice care provision – often referred to as holistic care.

Holistic care is an enormous responsibility, whatever stage in life a patient may be at. Even during the best of times, the transition into young adulthood can be incredibly complex and the impact that the wider environment and physical space can have on this experience for a young person is immeasurable.

When considering the future of hospice design for young people, we know it will need to flex, adapt and change to suit the needs of upcoming generations. Our approach has always been about designing with these young people in mind and bringing that 'holistic approach' full circle – keeping them at the forefront of every decision we make, throughout the entire build process.

## Factoring emotion into design

We are dealing with teenagers and young adults who want not only a say in how their space is used, but privacy, dignity and independence within that space, which translates differently depending on the individual and their specific needs and, in some instances, can present unforeseen challenges.

It is vital that we always consider the bigger picture, in societal terms, of giving young adults hope. One poignant finding from our years of work in this space has been the importance of consulting with users from the very start of a project and throughout its journey. Hospices are user-centric buildings so getting in the minds of the people who will be using and living in them will always help us find the best solution together.



Thorpe Hall Hospice

## Creating the perfect space for young people

The hospices of today need to be truly flexible spaces, leading into and flowing from one another. Exploring ways we can encourage inclusivity and, in some instances, independent living, as seen through JDDK's supportive living schemes at Wellbeck Close and Buddle Road, Newcastle. An Integrational approach to working with young adults, is also important to our approach and wider considerations.

People understand design more than ever before, particularly this younger age group, so elevated and sophisticated design which is contemporary and understated is essential. Designing a home-from-home environment rather than a typically institutionalised 'hospital' space is a key part of our process and one which has consistently transpired out of our early conversations with patients in the early design stages. This can be anything from disguising a hoist sling in a bathroom or hiding other necessary care equipment or settings in a subtle way.

In addition, future proofing buildings, for example with service walls to incorporate current or future services, ensuring patients have access to functionality to allow them to control their own environment with regards to lighting, heating and ventilation, along with outward looking and spacious vistas are just some of the many elements taken into consideration. Indeed, we find outdoor space and layout to be a critical factor in young adult hospice design, as, if approached correctly, it can reap so many positive benefits for patients and their visitors. Ensuring sustainability is also at the heart of everything we do – from the materials used through to the build process, as this is an area we find is close to a lot of young people's hearts, too.



Thorpe Hall Hospice garden

“  
Our approach has always been about designing with these young people in mind and bringing that 'holistic approach' full circle – keeping them at the forefront of every decision we make, throughout the entire build process.

### Giving young people their say

In our experience, youngsters, whatever their background are used to not having a say in things which directly impact them, so giving them a voice is part of our approach and work culture, it can be hugely positive and empowering for them at this stage in their journey.

From the outset, we always make sure to get a thorough 'brief' from the patient, alongside hospice staff and their families – everyone gets involved.

A big part of our role is to tease answers out of users, encouraging them to think outside of the box to ultimately help them shape a better quality of life for themselves. Giving these young adults their own social space is the crux of what we are trying to achieve. We incorporate all the different things they should expect as part of this transition from childhood into early adulthood, including space to entertain, have a drink and welcome friends for a chat. These are all the basic things we would expect as adults but in a familiar environment which takes transitional considerations into account, such as proximity to their previous hospice location. We listen throughout to flex and change the design as needed, meaning every build is as unique as its inhabitants.

### The future of hospice design

Developments in medication and health technology are advancing like never before and subsequently life expectancy is increasing amongst both the old and the young. We expect to see a significant increase in the demand for hospice provision for younger patients because of this and a greater emphasis put on these spaces as social hubs providing community connections, for those both directly and indirectly impacted by young adults requiring hospice care. Whilst health conditions can continue to be managed and treated, the social needs associated with holistic care will need to catch up, such as considering the wellbeing and mental health provisions for patients and providing respite resources for carers.

It's also important to remember that admission into one of these spaces doesn't always signify 'the end' and in many instances they are there to get better. Not only are hospices providing a huge beacon of hope, they also encourage further ties with local communities in a number of ways, which can be of huge benefit for young patients. At JDDK we have seen notable success when hospices have collaborated with organisations to facilitate gainful employment or work experience for patients.

We know that talking and listening are critical throughout this entire design process, and that it cannot be underestimated what a huge step it is for the patient when transitioning from a children's hospice to a space specifically geared towards a young adult's environment. We need to continue having these conversations, as our work in this field develops and there is huge scope for advancements and community benefits to aid society and the people at the heart of this essential provision.



Watch Mura and Stuart discuss the future of hospice design

Watch now



St Oswald's Hospice



St Oswald's Hospice young people



St Oswald's outpatients suite

# A piece of nature for peace of mind



**By Alison Thornton-Sykes,**  
Principal Architect

## It's no secret that being connected to nature is the key to maintaining wellbeing and promoting strong mental health.

Decades of industrialisation have further removed humans from nature, surrounding them in a built environment that can limit access to green spaces and natural daylight.

One of a human being's base needs is connection with nature and during the pandemic collective attention was drawn to our disconnect, as people in cities and rural towns alike spent more time than ever indoors and time spent outside became a moment to cherish. Concerns around climate change heighten our need to be in an environment that makes you

feel more connected to the earth while we all work to save our natural world.

This growing priority has led us to see an increase in project briefs that centre around integrating nature into the built environment, and a sector where this is most prevalent is in visitor centres. By their nature, visitor centres need to complement the landscape in which they are set, allowing visitors to feel connected to parks and forests even when they are indoors.

## Design for wellbeing in practice

### RSPB Saltholme Nature Reserve

After working on visitor centres for over 15 years, I have seen briefs evolve to offer us new opportunities to create inviting spaces that mirror the natural landscape and give visitors a memorable experience. RSPB Saltholme was one of the first visitor centre projects that we worked on with a wellbeing influence. It opened in 2009 and the brief was based on a sustainability agenda, which naturally influenced the wellness experience for visitors.

We focussed on biophilic design and creating structures that reflected nature and organic forms. The building concept was around the open wings of a bird, giving a sense of lift and movement that influences a sense of wellbeing, alongside the materials used. A natural palette of materials like timber were used externally and within the interior to remind visitors about the nature reserve setting even when indoors.

Nature tends to evolve because it's having a practical response to its environment, and we designed the building to mirror practical aspects of nature. The big over sailing roofs provide solar shading on the South side of the building, avoiding overheating in Summer while large areas of glazing maximise the light and views all year round.

All these elements feed into our architecture and contribute to a sensitive response to the environment by being informed by what's already there.



RSPB Saltholme is an important nature reserve, located close to a large urban population, and is an extremely important area for migratory birds. Together with our partner organisation, the Teesside Environmental Trust, we were concerned about any building in such an environmentally sensitive area, so chose the JDDK design because it was not only a visually striking building and had clearly answered the brief, but it also included very practical sustainable systems. It's a superb building at the very centre of this exciting project.

RSPB Saltholme Nature  
Reserve & Visitor Centre

**Kevin Bayes,**  
RSPB Saltholme Project Manager

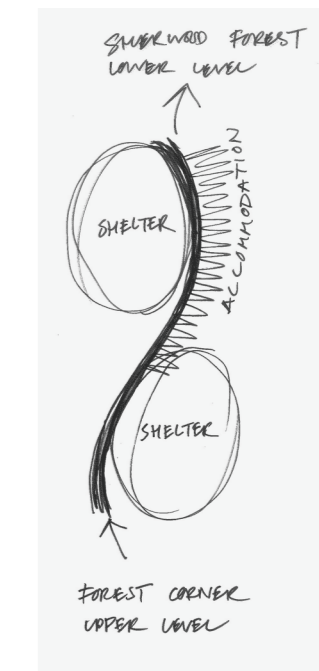
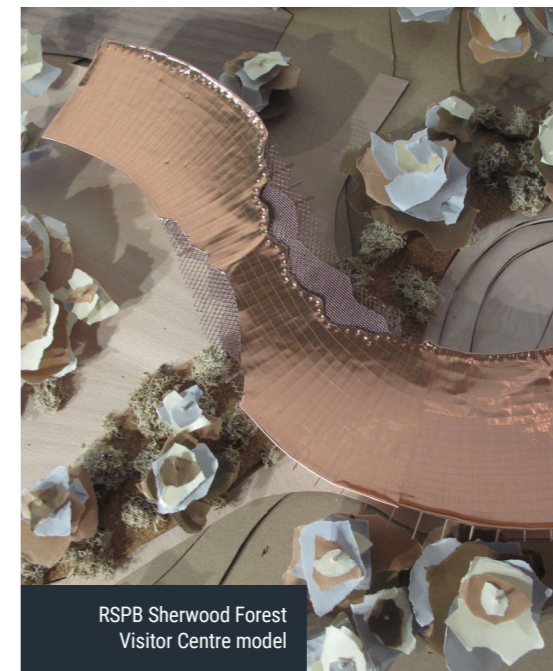


## Design for wellbeing in practice

### RSPB Sherwood Forest Visitor Centre

Our recent design for the visitor centre in Sherwood Forest was an exciting opportunity to reflect the legendary forest and the trees that sheltered Robin Hood. We were selected for the project following the award-winning Saltholme by the RSPB-led consortium, which included the RSPB, the Sherwood Forest Trust, The Woodland Trust and Thoresby Estate working together with Nottinghamshire County Council.

An organic palette of materials uses larch and cedar shingles to create the curved and twisted form, created by staggered roof beams and undulates through the forest to give visitors a feeling of moving freely through the space, in the same way they would in a forest. The linear format pulls visitors through the welcoming area, leading them into the main building with retail and recreation facilities and finally through to wilderness zones to give visitors a real sense of the ancient forest environment. In the final stages of the journey, visitors exit the Centre down through a 5m level change into the double height café space and out to the exterior amphitheatre which is sheltered by the overhanging canopy, another functional shading element.



RSPB Sherwood Forest Visitor Centre

RSPB Sherwood Forest Visitor Centre model

We were tasked with providing a visitor centre which would be a modern gateway to the ancient forest, and feel that the completed building matches this brief perfectly. JDDK designed a centre befitting of this legendary forest, and produced a building which sits beautifully in this landscape, of which we are extremely proud.

**Ross Frazer,**  
RSPB Project Manager

### Approaching your brief

Wellness has crept into design briefs and competitions over the last five years, and in particular visitor centres briefs are considering how design can use nature to enhance wellbeing.

Many recent briefs for visitor centres emphasise use of biophilic design, incorporating the materials that appear in the natural space. Some of our clients' briefs specify a particular wellness framework, such as the WELL Building Standard, a system for measuring, certifying, and monitoring features of the built environment that impact human health and wellbeing, through air, water, nourishment, light, fitness, comfort, and mind.

Visual views of nature reaching out across the landscape often influence a build structure. When we're designing a visitor centre, we take a bespoke approach that centres around that specific site. We analyse the site and look at orientation of where the sun path runs, where there are existing trees or natural features that we want to accentuate, and where the important views are both out of where the building will be, but also back towards the building as well.



People are drawn to places that bring them closer to nature and it is proven that people are happier or work better if surrounded by an environment that is comfortable and stimulating, while also bringing them peace and joy.

**Alison Thornton-Sykes**  
Principal Architect

### Building wellbeing into your brief

Whatever project you have in mind, approaching your brief with wellbeing in mind is important to consider, even if it is just a subsection that invites architects to explore the integration of nature. In our building services we often examine opportunities and constraints as a starting point within the site. Constraints might include where services are, the location of a gas main, a cluster of trees to be enhanced, or a listed building to preserve. Mental health and wellness should be a firm item on the opportunities plan, so that the wellbeing of a building users is integrated into the design early on. Ask your architect how optimum enjoyment of a space can be achieved.

We have seen briefs include various subsections about views, nature, activities or the application of framework standards, but the best briefs have these considerations addressed formally at the start of the process. This helps us as architects build these factors into a design organically, sparking ideas around opportunities early on, rather than retrospectively considering wellness as a box ticking exercise.

### Government-backed wellbeing

Demand for the integration of nature into projects is changing at a policy level as well. There is new legislation coming in November 2023 around the biodiversity net gain, that requires a 10% improvement on a site to secure planning permission. We'll have to demonstrate a 10% improvement in biodiversity net gain which will positively impact the rate of decline for wildlife habitats in the UK. The government has implemented this structure to ensure that if biodiversity is lost on a site, then this must be increased elsewhere. We welcome this change as a practice, as it will encourage briefs to consider how we can work with the nature that is there, rather than cause damage to the natural landscape.

### Enhancing existing buildings

Design for wellbeing is not reserved for new builds. Briefs for refurbishment projects such as office refits often ask to introduce green walls or increase daylight. While the shape of the building might be restricted, there are ways to get more light in such as letting light in through a roof or opening windows up for improved views. Palettes of materials can also be changed to break down the barrier from inside to outside. These options offer exciting opportunities for many different organisations that have staff or the public coming in by offering them a new and improved environment to enjoy.

People are drawn to places that bring them closer to nature, and spaces that make visitors happy encourage them to come back, whether these are customers who make repeat visits or staff members who come into the office more often following the shift to hybrid working. It is proven that people are happier or work better if surrounded by an environment that is comfortable and stimulating, while also bringing them peace and joy.



RSPB Saltholme Nature Reserve & Visitor Centre



Hear Alison discuss the briefing process for visitor centres and how wellbeing impacts visitors and staff

Watch now



RSPB Saltholme Nature Reserve & Visitor Centre



JDDK CGI of Hebburn Extracare South Courtyard

# WHAT'S TOPICAL

## Emotional VS Artificial Intelligence in architecture

By Gavin Wu, Architect

Artificial Intelligence (AI) has dominated the headlines in recent months after Elon Musk and other tech industry figures signed a letter calling for a pause in the development of AI until its ramifications are better understood.

This call to put the brakes on coming from the architects of AI themselves, has added a sense of urgency to an already noisy conversation in most industries of what impact AI will have on jobs and workplaces.

The rapid development of AI has seen it go from undertaking simple automated tasks to demonstrating creative competencies within the last year. This 'creativity' that AI can now generate is something that we have been exploring at JDDK to see how it can add value for our clients and what it means for the future of architecture. Myself and Adam Vaughan, Director here at JDDK, have been experimenting with two types of openAI powered software – DALL-E and Stable Diffusion – to generate images that correspond to two of our projects – past and present – Hebburn Extracare and The Sil.

### AI as an architect's ally

With further tech development, I can see that AI software could be used as a tool to help with productivity. Whether it is design optimisation, assessing embodied carbon, refining and analysing floor plans, or complying with building regulation and writing specifications - these are all time-consuming activities when done manually. The automation of some of these activities would help keep fees down for our clients. Already there is Finch3D, an AI tool specifically for architects that optimises space

planning, massing and design by generating iterations of plans allowing you to look at the pros and cons of each, which is useful at the early stage of design.

About a decade ago, Government initiative 'BIM4Regs' was introduced for automated checking of building regulations similar to the features of Singapore's CORENET e-plan check and Solibri from Finland, where a pilot project was also completed in partnership with NBS and Butler & Young - it would be fantastic to see updates to this great tool in coming years. A BIM plug-in that gathers updated requirements from building regulations as well as guidance for healthcare facilities could also be used to pick up on any compliance issues before they progress to the next stage and therefore become more costly to unpick. There would be potential cost savings for clients if these were used within the right context.

After prompting the AI programs and firing questions to ChatGPT, it made suggestions with steps or list of items for considerations. An architect has to balance many competing priorities in a project, such as policy or regulatory requirements coupled with the client brief. It takes time to pull all the elements together through research, because you cannot retain everything in your head. AI is a useful additional source of information to prompt you on things you may have not considered as we tend to be efficient in finding solutions to problems first than exploring on a broader aspect, as with all time constrained projects.

“The magic of an architect's role is working in collaboration with a client to really understand the design that meets their needs.”

Gavin Wu, Architect

AI generated render of Hebburn Extracare South Courtyard

### Artificial Intelligence (AI)

Edit the detailed description:

Hospice flat dementia balcony courtyard garden sensory plants brick walls render walls

Generate



# WHAT'S TOPICAL

## Where AI lets us down

Although the capabilities of AI have come on leaps and bounds in recent times – whether it's the auto transcribe of Teams meetings, ChatGPT, and now these image generation software tools – from my experience so far there are frequent factual errors. All outputs have needed to be thoroughly reviewed and edited by an experienced professional.

DALL-E for example produced some convincing looking imagery but when you take a closer look its technically flawed, and bordering on nonsense from a design perspective. As with all software it requires you to know what detailed parameters to input, and there was a lot of input for limited results.

Our profession is about people's experience of buildings and spaces and how they interact with them. The influence of computer-generated design and glossy magazines over the last 20-30 years has changed that slightly and resulted in a lot of architecture focusing on one or two 'sexy' shots to show on social media, that focusses on an image instead of capturing the spatial experience of the actual architecture. Given that this AI software is effectively an image generator rather than a design generator, this could intensify this trend and make the focus on aesthetics even worse.

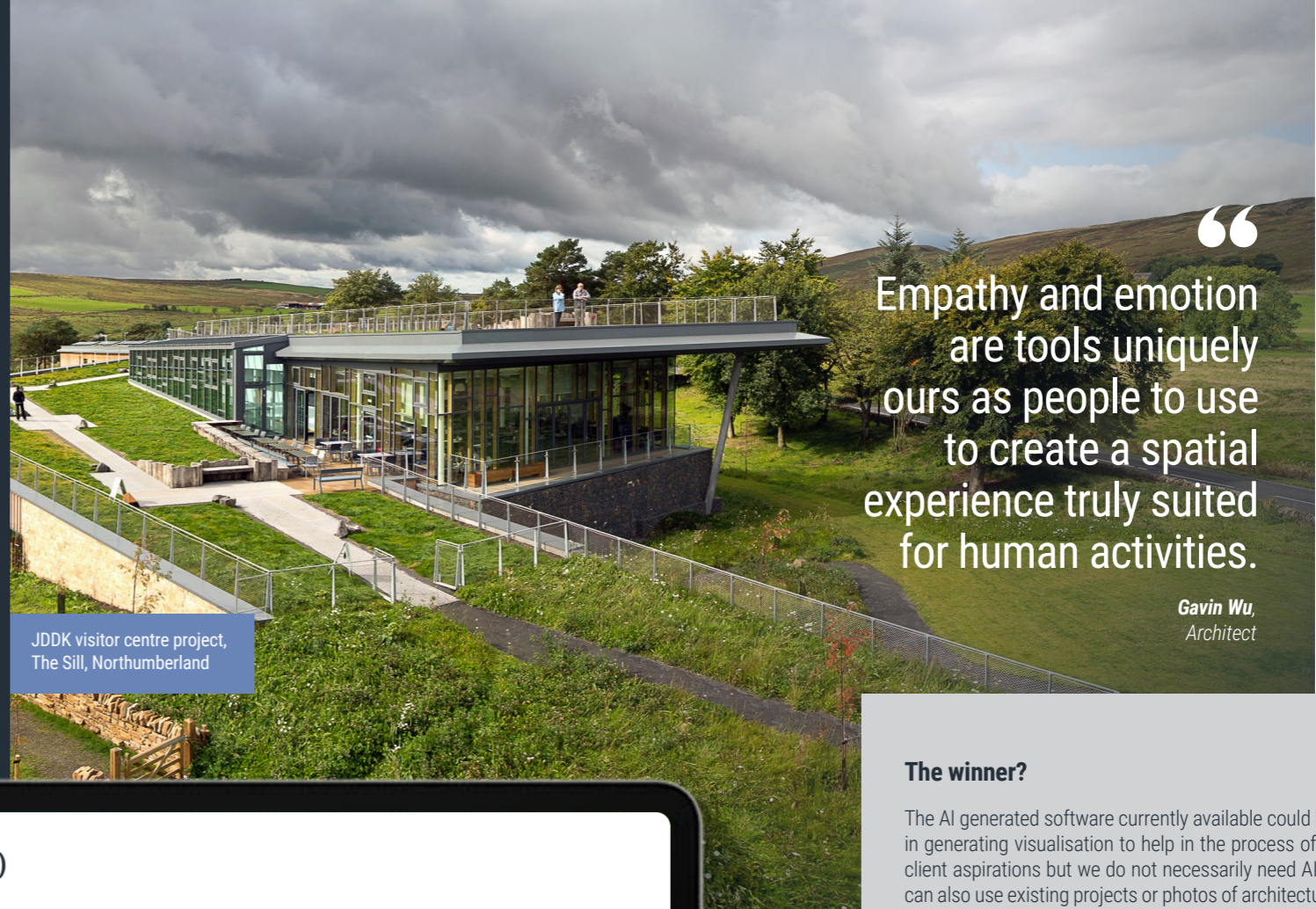
Client communication is also key to successful responses to architecture briefs, as the understanding of a clients' preference and style dictates the output. Everything must be considered through the client lens, this is not something you can obtain directly from AI without input from Architects and fellow designers. For example, AI generated floor plans might work within the physical constraints of the floor area but the flow of the circulation and users' experiences transitioning through spaces could be lacking considerably without an architect considering the intangible elements of design.

## Pros

- ✓ Assessing policy and regulation requirements
- ✓ Quick fire imaging for mood boards
- ✓ Idea support and stimulation

## Cons

- ✗ Unaware of human needs in a project
- ✗ No technical understanding of buildings
- ✗ Needs people to sense and fact check



“Empathy and emotion are tools uniquely ours as people to use to create a spatial experience truly suited for human activities.”

Gavin Wu,  
Architect

## Artificial Intelligence (AI)

Edit the detailed description:

Visitor centre Northumberland Hexham ramped sloped rising landscape with glass cafe under the viewing platform birds

Generate



## The winner?

The AI generated software currently available could be a useful tool in generating visualisation to help in the process of understanding client aspirations but we do not necessarily need AI to do that. We can also use existing projects or photos of architecture from across the world (that has already been built) as we have done for decades. The magic of an architect's role is working in collaboration with a client to really understand the design that meets their needs.

In some circumstances, DALL-E and Stable Diffusion could be useful for generating images for a mood board at the concept stage, but the output is only as good as the parameters that are entered, and the building will still have to be technically designed and crafted.

An architect spends much more time than they would on paperwork and sadly a limited amount of time designing, so if AI can automate time-consuming tasks this will hopefully allow us to spend more time on design – where we most add value.

Over the last couple of decades architects have moved from designing on drawing boards to incorporating CAD and now BIM. Adapting to AI will be the next step but like all software I think it will be used as a tool, with outputs only as good as the person using it.

"A tool is but the extension of a man's hand, and a machine is but a complex tool." As the extract of the quote from Henry Ward Beecher, I believe AI is still just a tool, albeit a complex and intelligent tool. The big question is what would the world look like if we had a sentient AI?

Ultimately, if we ever reached a point where AI could replace the relationship between an architect and their client, AI's capabilities will have grown out of our control anyway. Empathy and emotion are tools uniquely ours as people to use to create a spatial experience truly suited for human activities.



## Fundraising

### Bake the world a better place for ABS

This May our team brought their creativity to the kitchen to take part in a bake sale to raise funds for Architects Benevolent Society (ABS). ABS are a charity close to our hearts, offering confidential advice, support and financial assistance to help those in need within the architectural community and their families.

"Bake the world a better place" was a great opportunity to raise funds for this essential charity, as well as giving everyone a chance to live their 'Bake Off' dream. Along with the other North East Ambassadors we have also organised a midsummer pub quiz for Thursday 22nd June at the Tyne Bar beer garden to further support the cause.

Through fundraising for ABS, we can help those in need of support to rebuild their lives, when redundancy, financial hardship, poor health or other crises hit. ABS also partners with Anxiety UK to provide fast track referrals for wellbeing assessments and therapeutic support including CBT, hypnotherapy and counselling. Often people can get this support within two weeks of reaching out to the charity.

We would like to say a big thank you to everyone who participated and donated to the event and are delighted to have raised a total of £202, which will all go towards essential aid for those in our community who need it most.



## Research

### Embodied carbon focus grows

The consideration around the volume of embodied carbon in building projects is gaining momentum. To support our clients in this from design stage, we've invested in new software.

One Click LCA helps us to calculate the overall impact of a building (per square meter). We can understand the difference in environmental impact between alternative construction methods, allowing us to make informed design choices at an early stage.



**We are working towards meeting the RIBA 2030 Climate Challenge's goal of conducting a whole life carbon analysis on each and every project. With the addition of One Click, we have started to incorporate this as part of some flagship projects, as we develop our process and demand grows.**

**Adam Vaughan,**  
Director

## Education

### On site with RIBA Future Architects

Getting on site is one of the best ways to give architectural students an insight into practice and enhance their learning experience, so we gave four students a live view of one of our projects as part of our work with the RIBA Future Architects mentoring scheme.

Each academic year, around 1,000 mentees and 500 mentors take part in the scheme, and Samantha Dixon, Oliver Hopwood and Gavin Wu are currently representing JDDK within this scheme by mentoring four students across Newcastle and Northumbria Universities. The mentoring sessions have included a mix of presentations, office tours and site visits, all designed to give students an insight into the working life of a qualified architect.

Earlier this year we took the students for a site tour at Magdalene Court, a new development for the St Mary Magdalene and Holy Jesus Trust. The development included several three-bedroom family homes and an apartment block with a number of one-bedroom apartment units for the elderly in Spital Tongues, Newcastle.

We have been involved in the mentoring scheme since its pilot in 2015 and the team are extremely passionate about inspiring the next generation of architectural talent. Several of our mentees have



returned to JDDK for summer placements, to further strengthen their industry experience.

For architectural students, their experience at university is mainly conceptual, so being able to get an insight of what it's like to work in practice is invaluable to them. The students particularly enjoy getting out to building sites and seeing drawings come to life, as this is something they rarely get the opportunity to do at university.

We are planning to have the students revisit the site prior to project completion, expected in July. This will show the students how progress is made on site and give a satisfying update to their construction site experience.

## Volunteering

### Cleaning up Cowgate for the Great British Spring Clean

Since 2018, the JDDK team has taken part in the Great British Spring Clean, and in March we took to the streets again to pick up litter within the Cowgate area which surrounds our office.

The initiative was back for its eighth year and so we joined the nation's biggest mass-action environmental campaign, standing alongside the #LitterHeroes across the UK who responded in droves to show their pride in their communities and public spaces.

We would like to thank our own #LitterHeroes Gavin, Karen, Sam, Stuart, Adam, Russell, Leexin and Nicky who all took part in the event and supported in the clean up of the local community.

Taking place from 17th March to 2nd April, this year's theme was selected after Keep Britain Tidy found that more than 8.5 million adults in the UK have taken part in litter-picking at least once in the past six months.

Our volunteers cleaned the area from the JDDK office all the way along Ponteland Road, helping to contribute to the #LitterHeroes pledge to pick more than 400,000 bags of litter.

We were delighted to receive a message of thanks from the event's organisers who were very appreciative of the team's efforts.





DISCOVER  
DESIGN  
DELIVER



**Nicky Watson RIBA**  
Director  
E: [nickyw@jddk.co.uk](mailto:nickyw@jddk.co.uk)



**Kevin Turnbull**  
Director  
E: [kevint@jddk.co.uk](mailto:kevint@jddk.co.uk)



**Adam Vaughan**  
Director  
E: [adamv@jddk.co.uk](mailto:adamv@jddk.co.uk)



**Mura Mullan**  
Director  
E: [muram@jddk.co.uk](mailto:muram@jddk.co.uk)

**JDDK.co.uk**

T: 0191 286 0811  
@jddkarchitects

**JDDK Architects**

Millmount, Ponteland Road,  
Newcastle upon Tyne NE5 3AL

