

BRILLIANT BUILDINGS

MEETING THE HOUSING CHALLENGE



Rising to the challenge

Willmott Dixon is responding positively to the government's ambitious housing target by improving efficiency and maintaining its high standards of quality.



The government has recognised that we are in the midst of a 'national housing crisis' and has set a target of building 300,000 new homes a year by the mid-2020s. This presents some significant challenges, but we at Willmott Dixon are determined to help our customers respond positively to the key issues:

- A shortage of traditional skilled construction tradespeople;
- Rising costs;
- Increasing range of housing demand across a diverse range of tenures such as private and affordable rent, care, and market sale;
- Shortage of competent and financially secure companies to deliver at scale.

Overcoming these issues means working with our customers and supply chain partners to innovate and think differently. We have strategies in place to enable us to become more productive, with the better use of technology such as our unique Field View project management tool and Building Information Modelling (BIM). Together with our drive for increased pre-design and manufacture of components, significant benefits are being realised for our customers, such as with our projects at Dudley House and Aberfeldy Village. We continue to set a company-wide standard for high quality and timely delivery through our 'Building on Better' approach and remain committed to training and developing the next generation of our talented people.

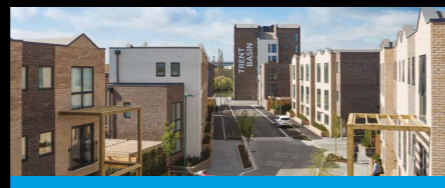
We are making our buildings more efficient to construct and therefore to maintain, ensuring a long and flexible life for all our buildings. We also learn from everything we do and capture any innovation and improvement through our groundbreaking National Product Team for the benefit of all of our customers to ensure that we make the most of modern building techniques.

Willmott Dixon is proud to support all of our customers to deliver the homes our country needs and the following pages show how, together, we are meeting the housing challenge.

Simon Leadbeater, residential director,
Willmott Dixon

Demonstrating our commitment

Meeting the housing challenge means meeting a range of housing demands, and these projects showcase the depth and breadth of our expertise.



Trent Basin, Nottingham

Our work to deliver 45 low-energy family homes in the £7-million first phase of this waterfront regeneration project is helping developer Blueprint to create a 'model community of 21st-century sustainable living'.



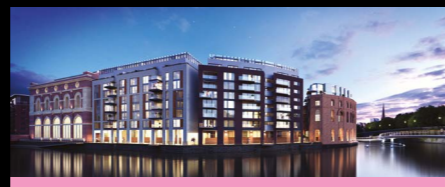
Doncaster

This £13.8-million project saw us build 120 homes across nine sites in Doncaster. The resulting range of one-bed to four-bed family homes are built to the local authority's own house type specification.



Limelight, Manchester

These 80 extra care apartments for Trafford Housing Trust form part of a landmark £20-million, mixed-use regeneration project that includes a community centre, library and church.



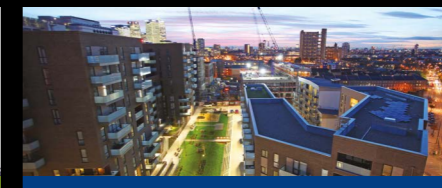
Finzels Reach, Bristol

We are helping local developer Cubex deliver this city-centre, mixed-use regeneration scheme, in which we are undertaking the design and construction of 194 build-to-rent homes in two waterfront buildings for Grainger.



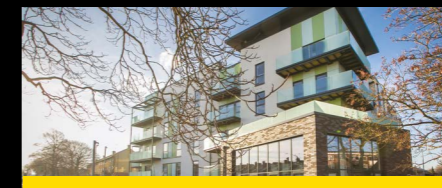
Dudley House, London

This 22-storey residential tower contains 197 intermediate rent homes and is part of a mixed-use regeneration scheme for Westminster City Council on a restricted site, including a school and leisure facilities.



Aberfeldy Village, London

The 158 market rent homes we built here for housing association Poplar HARCA are the first purpose-designed built-to-rent homes in London. They form a key part of a wider 12-year, 1,176-home estate regeneration project.



Sayer Court, Leamington Spa

Sayer Court is the first housing scheme commissioned by Warwick District Council in more than 30 years. Our Midlands residential team delivered a 76-apartment block and five bungalows for people aged over 55.



Kingsgate House, London

The seven-storey Kingsgate House in Chelsea provides 43 affordable homes. It was built using lighter, ethically sourced, cross-laminated timber and was the first major building project in the world to be PEFC-certified.



Cat Lane, Birmingham

Local residents complimented our project team on their considerate approach to building these 12 three and four-bedroom family homes in a wider series of projects for Birmingham Municipal Housing Trust.



Ashton Rise, Bristol

Also in Bristol, we are working as Bristol City Council's partner on its plans to develop 133 homes – 53 of them to be let as council housing – on the site of disused allotments and a former children's home in Ashton Vale.



George Eliot Halls, Royal Holloway, University of London

This new model for student accommodation provides homes for 621 students in 56 individual townhouse-style properties that provide a 'home from home' for students.



Beechwood, Newcastle-Under-Lyme

Beechwood is a 65-home, extra care scheme in Newcastle-under-Lyme for Wrekin Housing Trust's ShireLiving. It will provide one and two-bedroom apartments along with amenities including restaurant, lounges and gardens.



For further information on our range of residential projects of all tenures, please visit our website: www.willmott-dixon.co.uk

1. Increasing productivity

Increasing productivity is an ideal means of ensuring more homes are built. But the growing shortage of skilled tradespeople and rising prices means that delivering top-quality homes within budget is easier said than done. So how is Willmott Dixon approaching this challenge? The project to construct 194 build-to-rent homes with Cubex at Finzels Reach in Bristol provides some answers.

“Ensuring we are as productive as possible is paramount to achieving top quality,” says John Boughton, deputy managing director in the South West for Willmott Dixon. “What has allowed this is the strength of our working relationship with Cubex, as well as our use of technology and the focus of our people to work with our supply chain.”

He champions the use of technology such as the unique Field View project management tool, which was developed by Willmott Dixon. It allows feedback from site inspections to be relayed automatically to the relevant supplier or operative and acted on immediately. Boughton explains: “The use of Field View means any issues are captured and rectified as soon as possible. It is very effective at ensuring a more efficient project and, ultimately, a better building.”

Another issue that can undermine the best-laid project plans is a shortage of skilled workers. This is a pan-industry concern, but an important part of the Willmott Dixon response has been its investment in training the next generation of skilled construction workers. For instance, at the mixed-use Limelight project in Trafford, Willmott Dixon worked hard with its customer Trafford Housing Trust and community partners to provide 98 weeks of on-site training to local people; 29 new job opportunities; and CSCS cards for 18 ex-military or ex-offenders, in partnership with employment charity Clean Start.

In East London, the shortage of skilled labour was an issue Willmott Dixon had overcome when building Pear Tree Way at Greenwich Millennium Village (see cover image). Steve Kitchen, Willmott Dixon operations director, says these lessons work well on the nearby 1,176-home Aberfeldy Village project. “People are a finite resource, so we ensure we deliver an environment that is as attractive to work in as possible for our supply chain. This means providing a clear run rate and a safe place to work. If supply chain partners enjoy working with you, they come back and do a good job – it’s as simple as that.”

Opposite and below: Finzels Reach in Bristol is a major build-to-rent development that Willmott Dixon is building for local developer Cubex, on behalf of Grainger.



Finzels Reach, Bristol

Need to know:

Overview: Design and construction of 194 build-to-rent homes in two buildings on a mixed-use regeneration site in the heart of Bristol.

Key challenge: John Boughton, director of operations, Willmott Dixon: “Altering our site-management approach to deliver community access and help create the sense of place desired by Cubex on a tight waterfront regeneration site.”

Value: £32 million

Customer: Cubex

Completion: Early 2019



“FINZELS REACH IS OUR FIRST INVESTMENT IN BRISTOL AND IT IS A REALLY IMPORTANT INVESTMENT FOR US. IT IS MY FAVOURITE SCHEME AND I THINK IT IS GOING TO BE ABSOLUTELY BRILLIANT”

HELEN GORDON, CHIEF EXECUTIVE, GRAINGER



“THE QUALITY WE ARE DELIVERING HERE IS SECOND TO NONE. ENSURING WE ARE AS PRODUCTIVE AS POSSIBLE IS PARAMOUNT”

JOHN BOUGHTON, WILLMOTT DIXON DEPUTY MANAGING DIRECTOR IN THE SOUTH WEST

The customer says...

Gavin Bridge, director of Cubex: “The real challenge in the South West is finding contractors with experience of delivering residential projects at scale.

“Willmott Dixon has been very open and constructive in how we can work together. They have many of the skills we need locally and have brought people in from elsewhere in the business when needed. I’m really pleased with how this has worked out.

“We wanted people visiting the area to feel as welcome as possible. It would be easy to put

up hoarding around everything and shut people out, but we wanted to avoid that as much as possible. Willmott Dixon has embraced this and helped us deliver on the place we want to begin creating. Willmott Dixon is very forward-looking and is using technology and specialists to ensure we get the high-quality finish we need.

“I really like Willmott Dixon’s culture and approach. They take pride in their engagement with their supply chain and the importance of having respect.”

2. Engineering value for customers

The use of standard components as a crucial element in improving speed and reliability is long-established in other industries such as automotive and electronics. This approach is less prevalent in the construction sector, but across Willmott Dixon projects this is changing.

Stuart Kerr, Willmott Dixon operations director, says the recently completed project to build 120 homes across nine sites for Doncaster Council shows the benefits standard products and processes can bring.

"Although the project was across multiple sites we still had to ensure a consistency of finish. Using the unique Willmott Dixon Yellow Book of standard elements ensured we gave Doncaster Council reliable prices, and a

palette of materials and products that allowed us to respond to any variations as they arose."

Kerr adds: "The Yellow Book approach ensured certainty and speeded things up. It gave consistency of quality and ensured we were well prepared for later phases."

This approach certainly chimed with that of Doncaster Council as it had already worked with its own in-house architects to produce eight 'standard' house types that it wanted to use.

Charlotte Johnson, housing programme manager at Doncaster Council, says: "We wanted to build to an excellent quality and needed a contractor to help us deliver this. Our key aim was to build homes that looked like housing for sale and that people wanted to live in.

I think we've definitely achieved that!" (see opposite page).

Steve Cook is product improvement and innovation manager in Willmott Dixon's sector-leading National Product Team (see page 9). He says the potential of a standard approach in the housing sector is enormous: "On large projects, if you don't think things through, like bathrooms at a central level, you can end up with hardly any repeats and therefore no benefits from standardised components and processes."

He adds: "It is the same with something like concrete columns. These can often vary, but the message to our designers is they all need to be the same so we can maximise the opportunity to do components off-site."

Below: New homes at Trent Basin in Nottingham.
Opposite: Willmott Dixon has built more than 100 new homes in Doncaster that cater for all tenures.



Doncaster

Need to know:

Overview: 120 homes across nine sites in Doncaster. Range of one-bedroom to four-bedroom family homes that are council-owned and let through its arm's-length management organisation St Leger Homes.

Key challenge: Stuart Kerr, operations director: "Providing much-needed family homes and working to eight house types specified by Doncaster Council."

Value: £13.8 million

Customer: Doncaster Council (procured through Scape Group's Major Works framework)

Completion: 2017



Trent Basin

Need to know:

Overview: 45 low-energy family homes in a waterfront regeneration project, with later phases commissioned by Blueprint.

Key challenge: Stuart Kerr, operations director, Willmott Dixon: "Trent Basin is an old commercial area and so we have worked closely with Blueprint to help create a new residential district."

Value: £7 million

Customer: Blueprint and Nottingham City Council

Completion: December 2016

The customer says...

Peter Conboy, project director at Blueprint:

"Trent Basin is Blueprint's biggest project. The main challenge is getting the design element of the design and build contract right. We have to create something special that really catches people's eye so they choose to live there."

"We worked closely with Willmott Dixon on this and are really happy with what we have achieved."

"We would ultimately like to make full use of modern building techniques. We are talking with Willmott Dixon on this with a view to implementing this on phase four from 2019. We are looking at three standard 'chassis' for most houses there, with standard components like staircases and bathroom pods."

"These standard types will then have more bespoke elements added as needed - different elevations and fenestration for instance."



"THE USE OF THE YELLOW BOOK APPROACH ENSURED CERTAINTY, CONSISTENCY OF QUALITY AND THAT WE WERE WELL PREPARED FOR LATER PHASES"
STUART KERR,
WILLMOTT DIXON
OPERATIONS DIRECTOR



The customer says...

Charlotte Johnson, housing programme manager, Doncaster Council:

"Our in-house architect had developed our own eight house types that are modern and a decent size. We wanted to build to an excellent quality and needed a contractor to help us deliver this. Our key aim was to build homes that looked like housing

for sale and that people wanted to live in. I think we've definitely achieved that!"

"The response from tenants has been really good. Some of the homes are four-bedrooms and house seven people - that's seven people's lives we are changing for the better through these homes."

"When issues have arisen, Willmott Dixon has always

suggested a positive way forward, as opposed to just saying 'this is what we will do'. They always wanted our input and ideas. As a result I have had full involvement in the project and that is exactly how it should be."

"I am absolutely happy with the Willmott Dixon relationship, how it has progressed and with the homes we have built."

3. Learn lessons and innovate



“Our job is to inspire and innovate,” says Steve Cook, Willmott Dixon’s National Product Team product improvement and innovation manager (see opposite). A crucial aspect of this work is learning lessons and improving processes and products accordingly.

Nowhere is this more important in the housing sector than in fire safety. Mark Chamberlain, Willmott Dixon operations director, says the tragedy at Grenfell Tower prompted his team on the 22-storey Dudley House project in central London to immediately review and update their approach.

“We were confident our designs were all compliant with fire-safety regulations, but we double-checked anyway. The designs

were fine, but we went a stage further and ensured the façade and insulation is non-combustible and that the cavity barriers and inspection procedures are at an exemplary standard.”

Checking and reviewing is a common thread through all Willmott Dixon projects.

On Aberfeldy Village in East London, the team holds regular ‘red box’ design reviews where areas for improvement are marked in red on a plan and addressed for the next phase. For instance, explains Willmott Dixon’s Steve Kitchen, the team altered the sequencing on phase two and switched to using a mast-climbing platform, rather than scaffolding, to avoid delays.

Another practice familiar to all projects in this publication is, as Willmott Dixon’s John Boughton says, “putting ourselves in the customer’s shoes”. “Attention to detail is a key issue for our customer, Cubex. As a result we have thought ahead wherever we can about how the building and properties in it may be used.

“For instance, we have installed additional waterproofing below the bathrooms on every third floor. We have also over-specified on door handles and light fixtures.”

On Trent Basin in Nottingham, the company has installed duct work to allow for the installation of a fuel cell to power the homes in the waterfront community at a later date.

The customer says...

Paul Choat, head of construction, Westminster City Council:

“We are creating exemplar affordable housing that breaks the mould of traditional council housing schemes. For Westminster it is vital that our projects have a positive impact on the community.

“Willmott Dixon has recognised and responded to this, with a number of initiatives which have seen residents securing jobs and accessing construction-related training.

“Late in the design phase, the rain-screen solution and the fire-safety elements of the building were



“OUR JOB IS TO INSPIRE AND INNOVATE – TO REALLY HELP THE BUSINESS TO DELIVER TOP-QUALITY BUILDINGS”

STEVE COOK, PRODUCT IMPROVEMENT AND INNOVATION MANAGER, NATIONAL PRODUCT TEAM

Left: The 22-storey Dudley House is one of Westminster City Council’s biggest residential projects.

Opposite: The mixed-use Dudley House also includes a school, retail and leisure facilities within a confined building footprint.

Steve Cook, National Product Team

“Over the next 10 years we will see more change in our industry than we have in the past 60 years,” says Steve Cook, product improvement and innovation manager on the National Product Team. “Much of this change will come from digital innovation and the need to respond to the skills shortage – for us this is all about a focus on productivity. To ensure we harness this, Willmott Dixon has established the National Product Team of 15 people. Our job is to inspire and innovate – to really

help the business to deliver top-quality buildings. This all stems from following the ‘Building on Better’ approach.

“We need to become quicker and more efficient. One means of doing this is increasing our use of standard components where appropriate. Our customers benefit from greater durability and cost efficiencies and we become more like creators and manufacturers of homes.

“To ensure we deliver great buildings every time our aim is

to work with fewer suppliers, but for longer and with a stronger relationship. Our team has worked hard with our supply chain on developing components and processes. The Yellow Book we have produced as a result is shared with all our supply chain, customers and their designers. If we didn’t exist as a central team to capture learning from projects then it wouldn’t happen and we wouldn’t be giving ourselves the best chance of delivering our aim of perfect buildings every time.”

Dudley House, London

Need to know:

Overview: 22-storey residential tower with 197 intermediate rent homes as part of a mixed-use regeneration project on a restricted site in Paddington Basin.

Key challenge: Mark Chamberlain, operations director, Willmott Dixon: “The site is adjacent to the A40, so acoustic detailing has been very important – especially when managing the ventilation.”

Value: £85 million

Customer: Westminster City Council

Completion: May 2019



4. Modern techniques

“When you mention off-site to people they think of a lorry with a modular unit on the back,” says Willmott Dixon innovation guru Steve Cook. “What we mean by this at Willmott Dixon is different elements of a building manufactured off-site.”

This chimes with the 2016 ‘Modernise or Die’ Farmer Review of the construction sector, which called for the housing sector of all tenures to be the industry-wide pilot for the use of pre-manufactured approaches. So how is this working in practice?

Willmott Dixon already uses a range of off-site structural materials that, depending on the site, can speed up construction and improve the final build in terms of durability and flexibility. For instance, the use of a light-weight steel frame (LWSF)

solution on Limelight in Trafford saved the customer, Trafford Housing Trust, time and money as well as providing greater flexibility in the internal space (see opposite). LWSF was also used at Trent Basin in Nottingham for Blueprint.

Other situations demand alternative solutions: Cook says Willmott Dixon used cross-laminated timber on the Kingsgate House project in London “as it is a solid load-bearing structural support that’s lighter-weight and meant we were able to use the existing foundations”. On another occasion, the use of pre-cast concrete columns produced significant savings at Aberfeldy Village in East London.

Yet it is in other elements of its buildings that the benefits of modern techniques are

really being felt. Cook says: “At Aberfeldy Village and also Dudley House in Westminster we are working with our partner Kane on the boiler manifold. Five years ago we’d have built this with welders on site. Now, through the use of BIM 3D design, we can reliably outsource this to Kane and know that it will work and fit perfectly when it arrives on site.”

Other innovative products and approaches Willmott Dixon is using include Bamtech roll-mat reinforcement that is being used at Aberfeldy Village to speed up concrete floor pours, and the Geebric brick-slip system at Finzels Reach. The use of Stairmaster permanent shuttered staircases with pre-assembled handrails is also increasing. Cook says: “This reduces waste as it allows us to use leftover concrete.”

The customer says...

— **Neal Hunt, director of development, Poplar HARCA:**

“With Aberfeldy Village we wanted to completely transform the estate and really improve people’s lives and livelihoods – that was our long-term vision.

“Aberfeldy Village was one of the first purpose-designed build-to-rent schemes in London. We did this as we wanted to ensure a mix of incomes and we could see with the advent of the new Crossrail line that the demand would be there.

“We have a very good relationship with Willmott Dixon and have built real trust with them. We are very pleased with the finished homes.”

Aberfeldy Village, London

Need to know:

Overview: 1,176 mixed-tenure homes, plus shops, healthcare and community facilities created over 12 years on an estate regeneration project in East London.

Key challenge:

Steve Kitchen, operations director, Willmott Dixon: “Delivering the accelerated initial construction programme with a mix of private and affordable tenures, amid the shortage of skilled construction workers in London. We ensured our site was the most appealing to trades operatives.”

Value: £250 million

Customer:

Joint venture between Poplar HARCA and Be Living (part-owned by Willmott Dixon) with support from M&G Investments

Completion: February 2020



Right: Limelight in Old Trafford has provided a mix of extra care homes within a mixed-use community.

Opposite: Aberfeldy Village in East London is a long-term regeneration project providing more than 1,000 homes for sale alongside affordable and private rent.

The customer says...

— **Graeme Scott, development director, Trafford Housing Trust:**

“Limelight is central to the Old Trafford masterplan that aims to create a step-change in a deprived area of the city.

“Willmott Dixon made a positive impact in several ways. First, they helped us get the most out of the internal space, when we were unsure on the best approach until quite late on. Willmott Dixon always supported us and worked as true partners here.

“Also, Willmott Dixon brought a light-weight steel frame solution to a difficult project, due to the tight timeframes involved. It was not a technique we had used before but Willmott Dixon set out the reasons for using it very clearly and we trusted them.

“Ultimately it was a good decision as the building is fantastic and we are really pleased with it – Willmott Dixon has done a brilliant job.”

“WE HAVE A VERY GOOD RELATIONSHIP WITH WILLMOTT DIXON AND HAVE BUILT REAL TRUST WITH THEM. WE ARE VERY PLEASED WITH THE FINISHED HOMES”

NEAL HUNT, DIRECTOR OF DEVELOPMENT, POPLAR HARCA

Limelight, Manchester

Need to know:

Overview: 80 extra care apartments as part of a wider mixed-use regeneration project that delivered a community centre, library and church.

Key challenge: Siobhan Ryder, new business and marketing manager: “As this project aimed to bring together health, housing and wellbeing provision under one roof, there was a wide range of stakeholders we had to engage with. Beginning this as early as possible was crucial to the success of the project.”

Value: £20 million

Customer: Trafford Housing Trust (procured through Homes England)

Completion: November 2017

BRILLIANT BUILDINGS

MEETING THE HOUSING CHALLENGE

Willmott Dixon is a privately-owned contracting and interior fit-out group. Founded in 1852, we are family-run and dedicated to leaving a positive legacy in our communities and environment. Being a large company means we can create a huge and lasting positive impact on our society. This is not only done through what we build and maintain; it's achieved through the fantastic efforts of our people who make a major contribution to enhancing their local communities.

www.willmottdixon.co.uk
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WILLMOTT DIXON

SINCE 1852

