

PROPERTY

TECHNOLOGY & INNOVATION

OUR OBJECTIVES

Technology plays an important role in all our lives, and for the most part, makes them easier: opening up opportunities that might not otherwise be there; allowing us to better understand our assets; and providing better experiences for our customers.

We recognise however that ownership of and access to personal data is an increasingly important consideration for people; that the storage and processing of data isn't without environmental cost; and that equipment lifecycles can be relatively short compared with other products, so we are also focused on understanding and addressing these issues.

SMART INFRASTRUCTURE

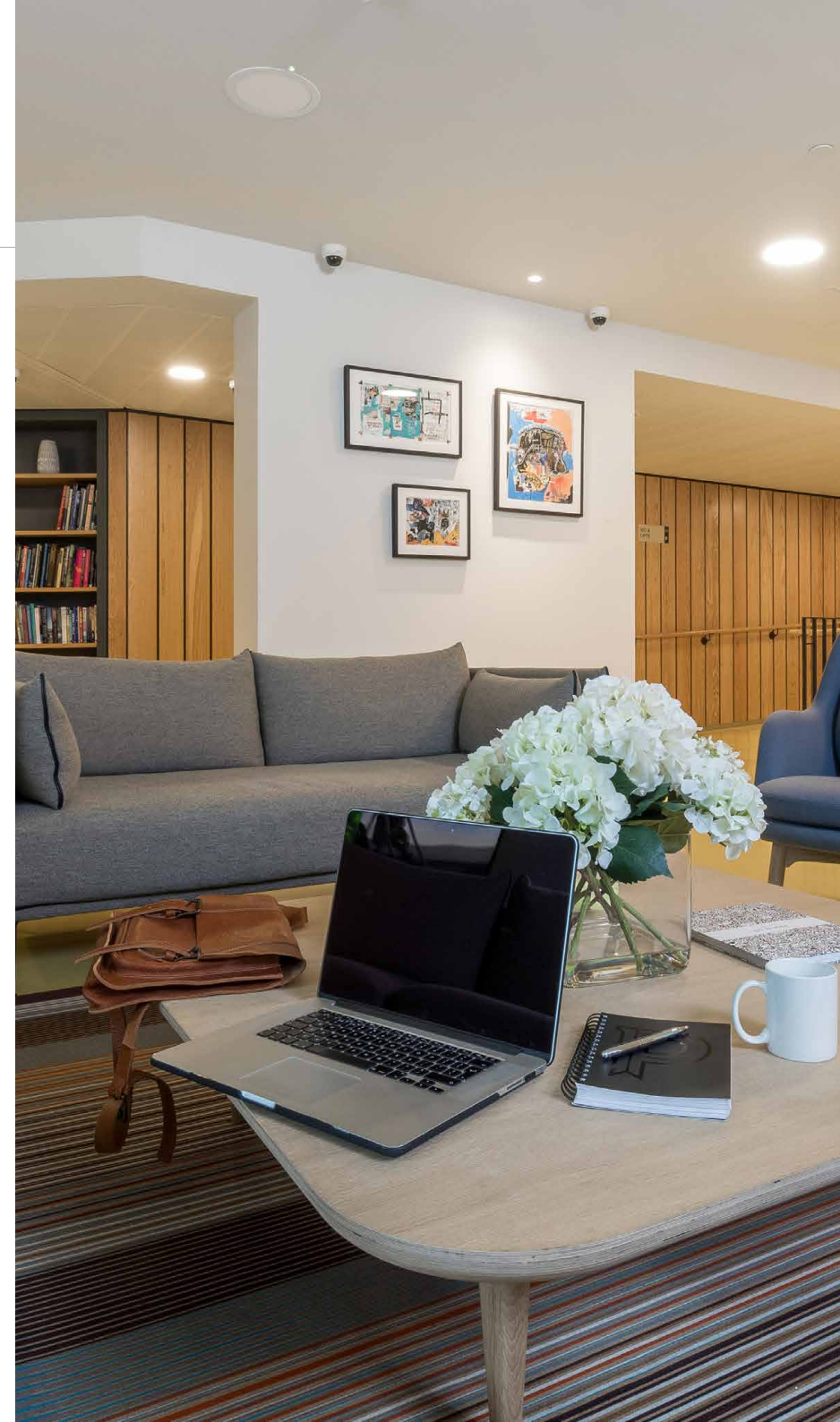
Objective: To apply a data driven approach and identify appropriate technological solutions to support better sustainability outcomes and encourage more sustainable behaviours across our different business functions.

DIGITAL ETHICS

Objective: To be a trusted data partner by embedding best practice in our use of personal data and through the identification and enforcement of digital ethics standards across our business and digital supply chain.

SUSTAINABLE TECHNOLOGY

Objective: To ensure a sustainable technology life-cycle through the consideration of key sustainability issues in the procurement, in-use and end-of-life stages of any technology solutions we adopt.



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SMART INFRASTRUCTURE

Our objective is to apply a data driven approach and identify appropriate technological solutions to support better sustainability outcomes and encourage more sustainable behaviours across our different business functions.

The tech team, led by Chief Technology Officer, Jim Eaton-Terry continues to drive change, add value and make improvements to the businesses.

SMART NETWORKS

Our investments in physical and cloud-based infrastructure are future-proofing our developments and will allow us to take advantage of new technologies as and when they materialise.

Wembley Park's Fibre to the Home (FTTH) infrastructure provides up to 1Gbps connectivity across the estate. This underpins many of our site-wide technology initiatives and has allowed us to rollout a converged fibre optic network, providing superfast broadband to our residents, businesses and visitors through the provision of superfast broadband, delivered at greater efficiencies.

Full fibre-to-the-premises (FTTP) has significant advantages over the more commonly utilised fibre-to-the-cabinet (FTTC). FTTC overlays fibre to new, parallel-built street cabinets, leaving the original copper in place between the cabinet and the end-user. The network can be easily upgraded without replacing cables and is easily manipulated to ramp speeds up and down in accordance with customer demands.

A Gigabit Passive Optical Network (GPON) is now fully integrated into our ICT brief for North East Lands and for all future Quintain buildings at Wembley Park.

This will allow us to futureproof our network asset further. Glide are our turnkey partner who will help us design, procure, set to work and support any future networks. Glide have fully adopted our design for NE02/03.

GPON's simple architecture is flexible, scalable, high-bandwidth and multi-service. It will reduce the number of active switches on site, which will reduce the operational power consumption of the network by an estimated 20%. As well as deploying GPON into our new buildings we will also be retrofitting GPON to existing assets when the current hardware comes up for renewal.

In addition to the significant reduction in life-cycle emissions compared with a copper network, and the improved speeds offered to our end-users, the most significant advantage is the potential this offers in the future; FTTP is the only viable infrastructure that can support the vast expansion of tech-enabled solutions that we need to create truly smart cities.

SMART NETWORKS

We have invested heavily in technology that can collect multiple types of data across our buildings – the challenge now is in communicating that data in a way that is accessible and actionable.

In 2020 we consolidated our utility data into a single data warehouse, allowing us to monitor performance of the telemetry and track trends across the estate. Accurate mean consumption can now be calculated for all our unit types (Studio, 1bed, 2bed, 3bed, 4bed).

We now know the Average Daily Utility Consumption for meters in all apartments, occupied and unoccupied.

We have developed a reporting tool and rules engine built on Power Business Intelligence (BI). The data from the reports is sent to our facilities management team at Quintain Living as a PDF for them to review and identify any unusual water usage within unoccupied units.

This helps us target the response to issues relating to waste within hours, see case study.

CASE STUDY

To help Quintain operate more sustainable homes, our Senior Project Manager/Data Insight Lead has built a data reporting tool that is so innovative for the industry it has been shortlisted for an EG Award.

The tool measures the utilities consumption of every home within our Build to Rent portfolio, allowing us to make objective decisions against two key goals; reducing material and carbon consumption at construction, and optimising the consumption of resources during operation.

The tool processes apartment utility meter readings once every 15 minutes and sets this data against the unique context of each home in question. This includes its size, if it is occupied by a resident and its orientation so sunlight can be considered. A daily report is populated, with areas of concern highlighted for our operational teams to action – such as a light left on in a vacant home.

The tool has proven to help us reduce the consumption of electricity, hot/cold water and heating within our vacant and occupied apartments, making a meaningful impact on costs and unnecessary use of resources. The system has even highlighted issues in occupied homes such as toilet cisterns continually flushing, often before the problem is reported to us by residents.

The success of this tool in identifying unusual consumption of utilities is testament to how crucial technology like this is to the wider industry.

The next step for our team is to use this unprecedented source of operational data within the design and construction of our future buildings – obtaining the performance we need whilst minimising our impact on the environment.



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The Power BI dashboard allows us to compare consumption datasets against occupancy and other attributes of our estate. In doing so we start to gain deeper insight into the way our buildings behave versus how they were designed. The learning from this data will be used to support the design process of future buildings, allowing us to design leaner and build better in the future.

In 2020 we launched a portal to enable our residential customers at Quintain Living to monitor their energy, heat and water consumption. This coincides with a move away from a bundled utility charge, enabling us to pass individual savings in utility consumption on to customers. Once this process is fully embedded, we will begin exploring opportunities to use our data to nudge our residents to conserve resources and adopt more sustainable lifestyles.

INNOVATION

Our employees, tenants and residents are full of ideas and are often best-placed to truly understand what the problems are that need solving. Our job is to help them find a pathway to turn those ideas into reality.

Within the technology team we are establishing a framework to embed innovation, resilience, security, ethics and sustainability in all our design decisions. We have identified three key innovation priorities to support the business over the next two years:

- Developing great experiences to make Wembley Park, London's most appealing place to live, work & visit
- Maturing our operational businesses to support the UK's largest Build to Rent development as efficiently and sustainably as possible
- Consolidating Wembley Park infrastructure to minimise disruptive, expensive and wasteful maintenance activity.

We have invested heavily in technology that can collect multiple types of data across our buildings – the challenge now is in communicating that data in a way that is accessible and actionable.



CASE STUDY: WIREScore GOLD

WiredScore is the digital connectivity rating scheme for real estate. In the reporting year Gold certification was achieved on all occupied Quintain Living managed buildings.

**WiredScore
GOLD**

WiredScore measures:



External Infrastructure

External infrastructure plans, e.g ducts into the building



Telecom Room

Telecommunications room layout and services drawing



Building Infrastructure

Internal infrastructure e.g Riser Plans and locations



Apartment Infrastructure

Equipment and cabling layout in the apartment



Services

What service offering there is going to be for residents



Monitoring

Landlord engagement with ISPs and renters on the performance and experience

Asset	Score	Certification Level
Landsby West	81/100	Gold
Collyer	80/100	Gold
Lismer	77/100	Gold
Thompson	79/100	Gold
Harris	77/100	Gold
Seath	77/100	Gold
Jackson	80/100	Gold
Varley	77/100	Gold
Beton	80/100	Gold
Alameda	77/100	Gold
Ferum	78/100	Gold
Landsby East	81/100	Gold
Ferrum2	77/100	Gold
Alto	79/100	Gold
Emerald	77/100	Gold

“WiredScore Gold ensures that a building has the connectivity capacity for virtually any tenant. Any building achieving Gold is seriously impressive and has a proven ability to keep-up with the digital demands of today's tenants.”

WiredScore

Warren McMeeking, IT Manager “We are extremely proud of the progress we have made and for our Gold achievements. The ESG commitments we can achieve knowing the robust tech infrastructure we have in place means we can consider our residents needs in a rapidly evolving environment, we can ensure they have access to all online amenities and provide transparency on critical infrastructure that residents need to make sustainable decisions.”

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DIGITAL ETHICS & SUSTAINABLE TECHNOLOGY

Our objectives are to be a trusted data partner by embedding best practice in our use of personal data and through the identification and enforcement of digital ethics standards across our business and digital supply chain; and to ensure a sustainable technology life-cycle through the consideration of key sustainability issues in the procurement, in-use and end-of-life stages of any technology solutions we adopt.

In 2020 we formalised our data governance policies to ensure we act as responsible custodians of data and continue to meet our legal obligations.

As we evolve our technology function, we will be developing and implementing a digital ethics framework to ensure that our supply chain are aware of the standards we expect them to achieve when supplying digital goods and services to our business.

PROTECTING PRIVACY

With increasing amounts of data collected, we hold ourselves to a high standard when it comes to ensuring that it is protected and remains private.

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At the most basic level, we comply fully with the requirements of the General Data Protection Regulations (GDPR) and we require our supply chain to demonstrate their compliance with the same. Our basic data hygiene measures involve a quarterly review of data ownership and strategy, as well as an internal structure to manage and report on risks to personal data.

Our increasing use of digital technologies to drive improvements in the performance of our buildings and improve customer experience both within our buildings, and across the wider estate, mean that we

are the custodians of an ever-increasing quantity of data. Single pieces of data on their own don't necessarily present any privacy concerns, but when connected to other forms of data we hold about individuals, could become intrusive. We are mindful of this, and aggregate data to avoid any privacy intrusions. Over the coming year, we will be reinforcing our approach with additional best practice measures and will report on our progress in due course.

DATA STORAGE

The storage of an ever-increasing quantity of data requires enormous amounts of energy to provide power and cooling to data centres across the globe.

Initially, we operated multiple servers operating at each of our sites, each with their own power and cooling needs. In 2015, we expanded our data centre at Wembley Park and migrated all of our servers to a single location to improve efficiency and data security. We are now migrating all on-premise IT systems to cloud alternatives to further optimise our efficiency and energy performance. A project due for completion in Q3 2022.

The growing use of Internet-as-a-Service (IaaS) allows computing resources to be shared across many organisations, which in turn enables higher efficiency and resource utilisation levels. In reviewing potential cloud providers, we will be factoring in the following efficiency considerations:

- Server utilisation factor: How much of the total processing capacity is effectively utilised by the server
- Power Usage Effectiveness (PUE): The efficiency of the facility housing the server
- Electricity emission factor: The GHG emissions associated with the electricity used to power the data centre, which could be located anywhere in the world.

One of the outputs of this project will be the measurement and publication of the actual energy and emissions savings made by making the switch.

ETHICAL PROCUREMENT

Governance issues are important when procuring our digital goods and services in order to maintain digital security, protect the environment, reduce GHG emissions and avoid potential harmful practices across the globe.

Our digital supply chain includes those who provide physical electrical goods and electronic components, as well as those who process or store data on our behalf.

In addition to ensuring this element of our supply chain meets all legal obligations with respect to GDPR, in 2021, we continued to embed ethical principles in our digital sourcing, including ESG policies in our selection criteria. We will be introducing a Digital Ethics Framework that sets out additional best practice procurement criteria.

This will supplement the questions we already ask our supply chain in relation to their IT policies that include whether or not the company:

- have identified staff responsible for Information Security;
- have a current, management approved and published, IT Security Policy;
- provides access to data or services via an online platform and if so, whether the company undergoes independent external penetration tests; and
- has a backup strategy which incorporates, includes or involves a documented and tested disaster recovery programme.

We are also developing sustainability metrics to support our decision-making process when procuring new technology to address the impacts our product selection has on resources and GHG emissions, helping to identify the most sustainable technology solution for a given situation.

This will be supplemented by a Sustainable Asset Lifecycle Policy that will address ESG issues at all stages of a product life-cycle.

The production of certain electronic components relies on rare earth metals that are often found in areas of conflict, or countries where there is a high-risk of child labour and modern slavery; in developing our framework, we will be carrying out a risk assessment to fully understand our exposure in relation to procuring electronic equipment that may have originated from such locations.

Rapidly evolving technologies can have significant societal benefits, and some technological solutions may help us to reduce our impacts on the environment, but replacement cycles can be very short compared to other products, with obsolescence and redundancy often built in. We currently recycle our electronic goods using a company that has a zero waste to landfill policy and works with an IT-based charity to recycle unwanted IT equipment and as part of our policy development, we will be investigating options for extending the useful life of digital equipment. We will also be exploring options for supporting the residents, tenants and public at Wembley Park to do the same. As part of our hardware lifecycle, we are initiating a programme to pass end of life equipment to staff in exchange for a charitable donation.