



Civil Engineering

Profile & Selected Projects

公司介绍和项目展示

Компания и избранные проекты

Profil und ausgewählte Projekte

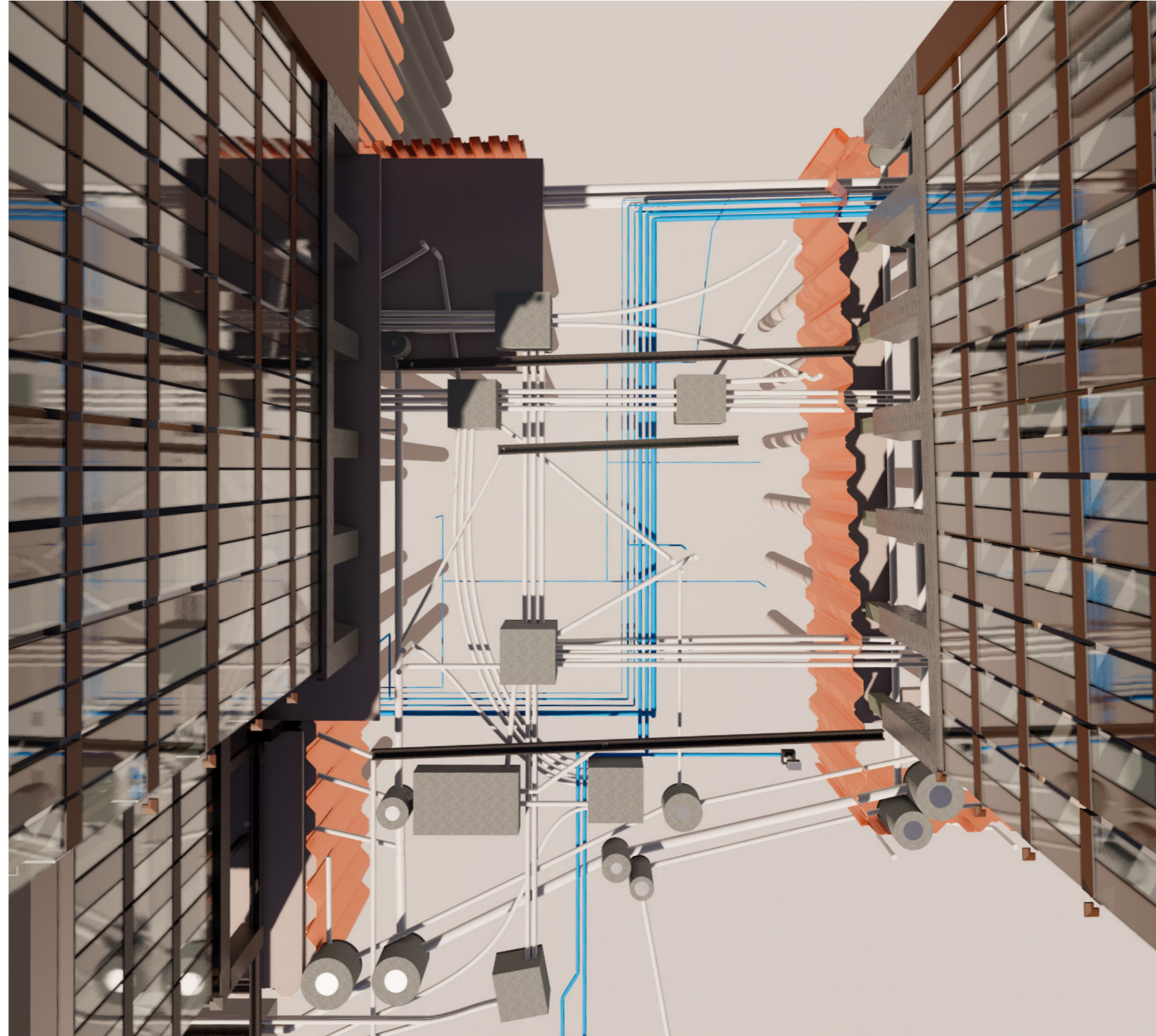
Perfil y Proyectos Seleccionados

الملف الشخصي للشركة ومشاريع مختارة

2023

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Bryden Wood

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Who we are

Unique approach, exceptional ideas

We have spent 25 years developing our unique approach – the approach that we bring to every project.

We deliver exceptional results and save our clients money, time, resources and frustration by applying our time, technology and the full breadth and depth of our integrated expertise to:

- understand our clients' value drivers;
- interrogate and clarify the brief, and;
- agree the best possible outcomes – before designing the best way to achieve them.

We take nothing for granted. We will always pursue the solution that adds most value, even if that means something quite different from the solution initially envisaged.

The exceptional quality of our ideas comes from the chemistry of people, disciplines and innovative thinking that we bring.

The application of technology and data

Everything we do is supported by the creative and rigorous application of technology and data. We model every aspect of every project, which means predictable outcomes, accuracy in programme and cost, and transparency of risk. It allows us to see, at every step, what improvements we can make, where we can drive value and efficiency, and provide evidence when we deliver.

Working with us

We believe in collaboration and sharing expertise and ideas – yours and ours. We like to question and challenge – ourselves and our clients. We work in an open, integrated and cross-disciplinary way with energy and rigour. It's not always easy, and it's not to everyone's tastes, but most people find it refreshing, fun and highly effective.

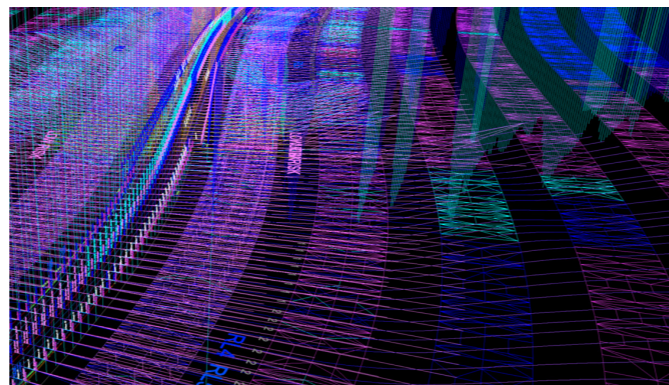
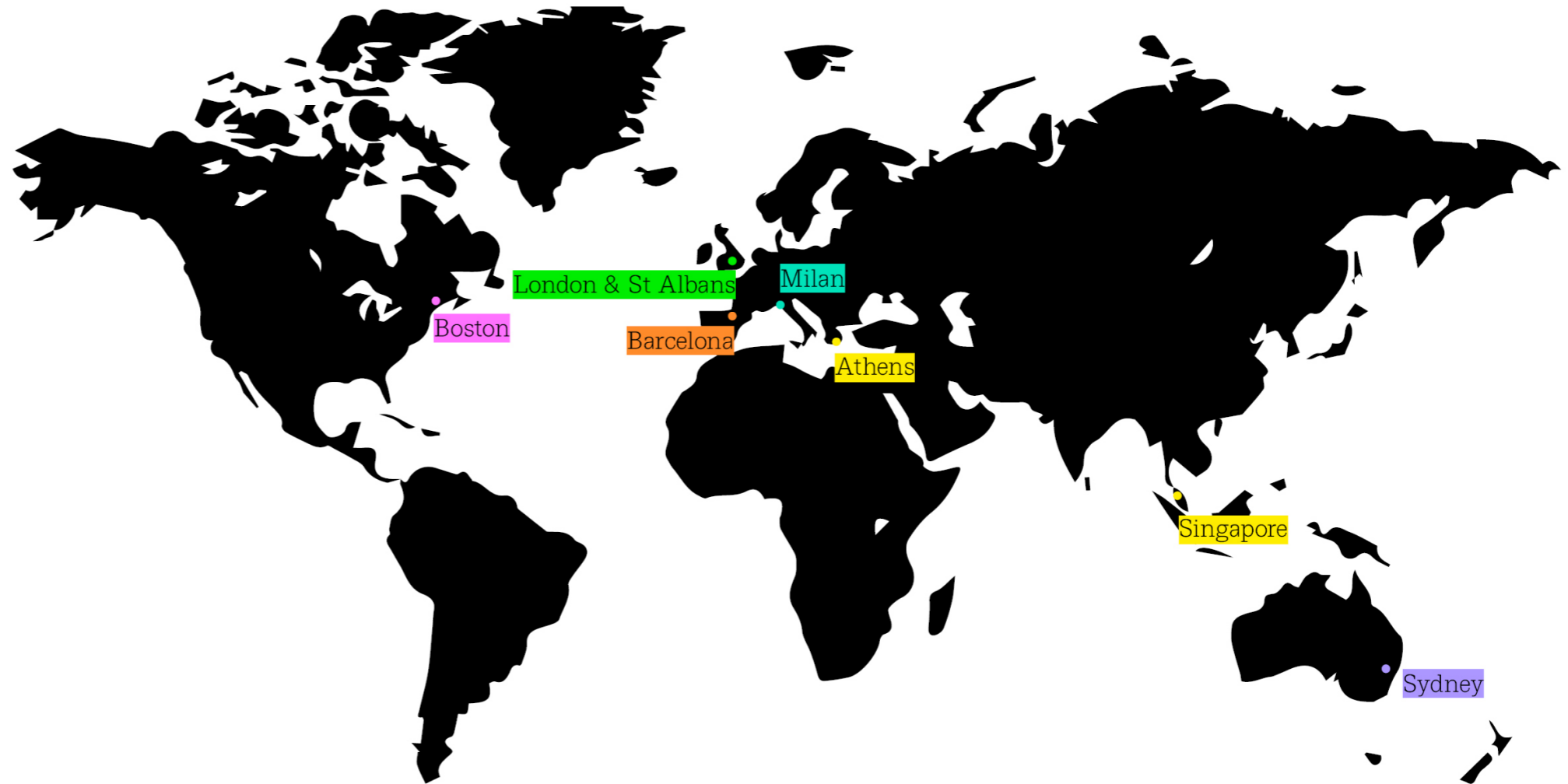
From strategy to delivery. Proven results

The range and depth of our people's expertise means we can take projects from inception to completion – or add value at any point along the way. We work conceptually and on high-level strategy, as well as on minute detail and the practicalities of delivery and project completion.

We are creative thinkers and solution finders who get things done.

Whatever the scale and sector, we apply the same approach to every project – because it's been proven.

Proven to deliver better outcomes for your business, and a better built environment for all of us.



Civil Engineering Overview

The Challenge

As civil engineering largely oversees systems in the ground these are the design areas that are built first, and so are immediately on the critical path, and have the highest degree of uncertainty. It is therefore critical to project success to have an efficient and carefully considered civil design to avoid delaying proceeding building work, and to ensure the correct due diligence and logical assumptions are made to avoid encountering unexpected constraints before it's too late.

Our Experience

Bryden Wood has extensive experience solving civil engineering related problems and delivering designs that consistently stand out for their effectiveness, innovation and environmental consideration.

The huge range of projects and sectors Bryden Wood has been involved in means that our design approach has been applied, tested and rigorously perfected against the vast number of challenges that can be encountered in the building construction industry - from residential projects with strict drainage authority and flooding considerations; to data centres with dense and complex utility requirements.

Our Approach

Bryden Wood's holistic approach to design means that the Civil Engineering Department is integrated within the context of the wider company - which includes architecture, structural engineering and Mechanical & Electrical engineering - this provides a thorough understanding of the complete picture of a project and a deep appreciation for the importance of design interfaces.

As a team we are committed to perfecting our design approach to guarantee design effectiveness, minimise environmental impacts and maximise resource sustainability. Innovation is fundamental to this philosophy and we use detailed BIM compliant models to visualise the coordination of all below-ground assets to ensure correct spatial arrangements and prevent delays during construction.



Civil Engineering Capabilities

Assessment of Environmental Impacts

Bryden Wood perform assessments to understand the full environmental context of a project and work with regulatory bodies to mitigate constraints to the proposed development.

- Assessment of all environmental systems, notably this includes:
 - Existing infrastructure including utility diversions and easements
 - Hydrological, flooding and hydrogeological (including **Flood Risk Assessments**)
 - Topographical
 - Ecological and arboricultural
 - Geological and geotechnical
- Geo-environmental and hazardous substances
- UXO and in-ground hazards
- Archaeological and heritage
- Transport
- Reducing uncertainty by performing studies and scoping investigative surveys
- Managing the impact of the environment on, and from, the development
- Engaging with environmental bodies and statutory authorities; and production of required documents including **Environmental Impact Assessments/ Statements**

Below-Ground Drainage Design

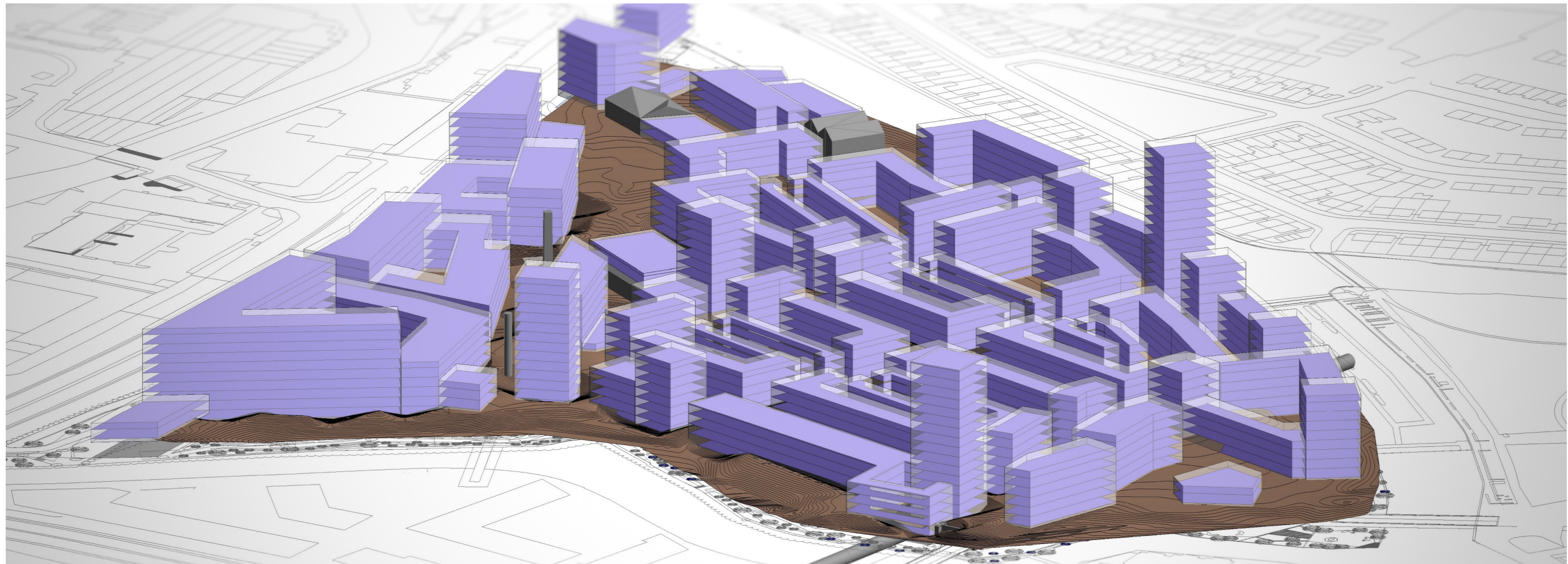
Bryden Wood produce drainage designs which appropriately manage surface water and foul water discharges with minimal below-ground infrastructure and a strong focus on sustainable systems.

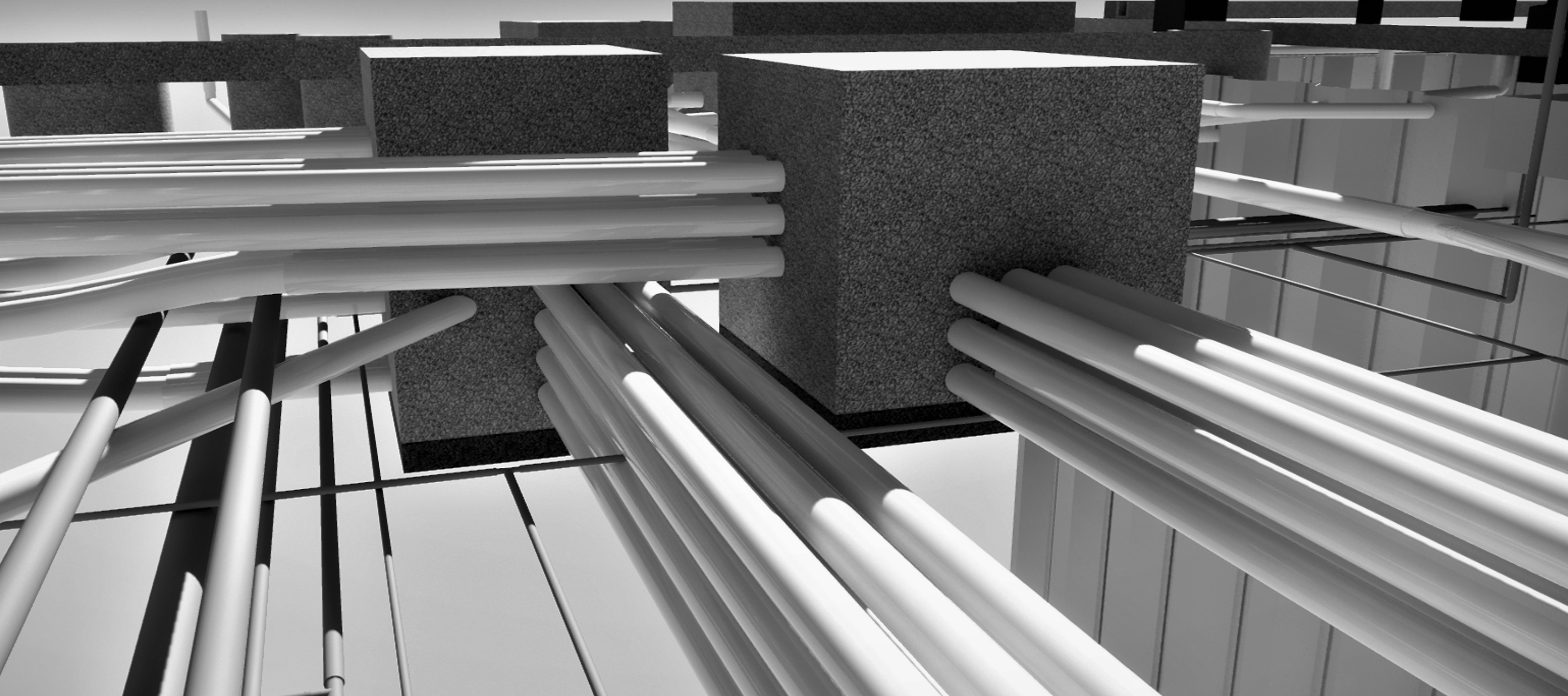
- Complex hydraulic modelling using MicroDrainage
- Application of **Sustainable Drainage Systems (SuDS)** to present environmentally sensitive proposals
- Engaging with statutory drainage authorities and producing **adoption (S104) and connection (S106) applications**
- Engaging with statutory flooding authorities and producing **Drainage Strategies and Flood Risk Assessments** for planning

External Works and Groundworks

Bryden Wood produce external works designs that consider the hardstanding material selection and levels for access and drainage requirements. Bryden Wood also produce groundworks designs that quantify material excavations and consider cut and fill balancing to minimise dug material movements to and from site.

- Detailed surface levels design for suitable access and drainage requirements
- Hardstanding material selection and build-up analysis, **including for public roads**
- Formation levels designs and detailed excavation modelling and material quantifications
- Modelled cut and fill balancing to minimise excavated material disposal and virgin material imports





Below-Ground Utility Design

Bryden Wood produce utility designs that enables suitable supply and distribution around the site, and facilities easy maintenance when in-use. With substantial experience working in the data centre sector, which have a considerable requirement for below-ground utilities, Bryden Wood is fully aware and able to design the most complex of utility arrangements.

- Assessment of capacity and impacts on the wider network
- Design of interfaces with off-site statutory networks
- Producing designs compliant with statutory utility providers

Transport

Bryden Wood consider the pedestrian and vehicular transportation and access requirements for a project including existing infrastructure upgrade works and development logistics.

- Swept path analysis for site validation
- Engaging with statutory transport authorities and producing **works in the highway (S278) applications and Transport Assessments for planning**

BIM

We use advanced collaborative BIM compliant modelling to thoroughly test and optimise designs well in advance of physical works - delivering solutions that explicitly visualise a proposal, accurately represent its behaviour, and enable cumulative learning.

Industrialised Construction

We apply the principles of DfMA to infrastructure projects, developing systemised solutions with standardised 'kits of parts' that maximise off-site factory fabrication and simplify on-site assembly.

Automation

We build bespoke software solutions to automate design processes to both improve the scope of optioneering, reduce human errors, and significantly reduce design time.

Selected Projects

Commercial:

The Forge - London

Client: Land Securities

Construction value: £64 million

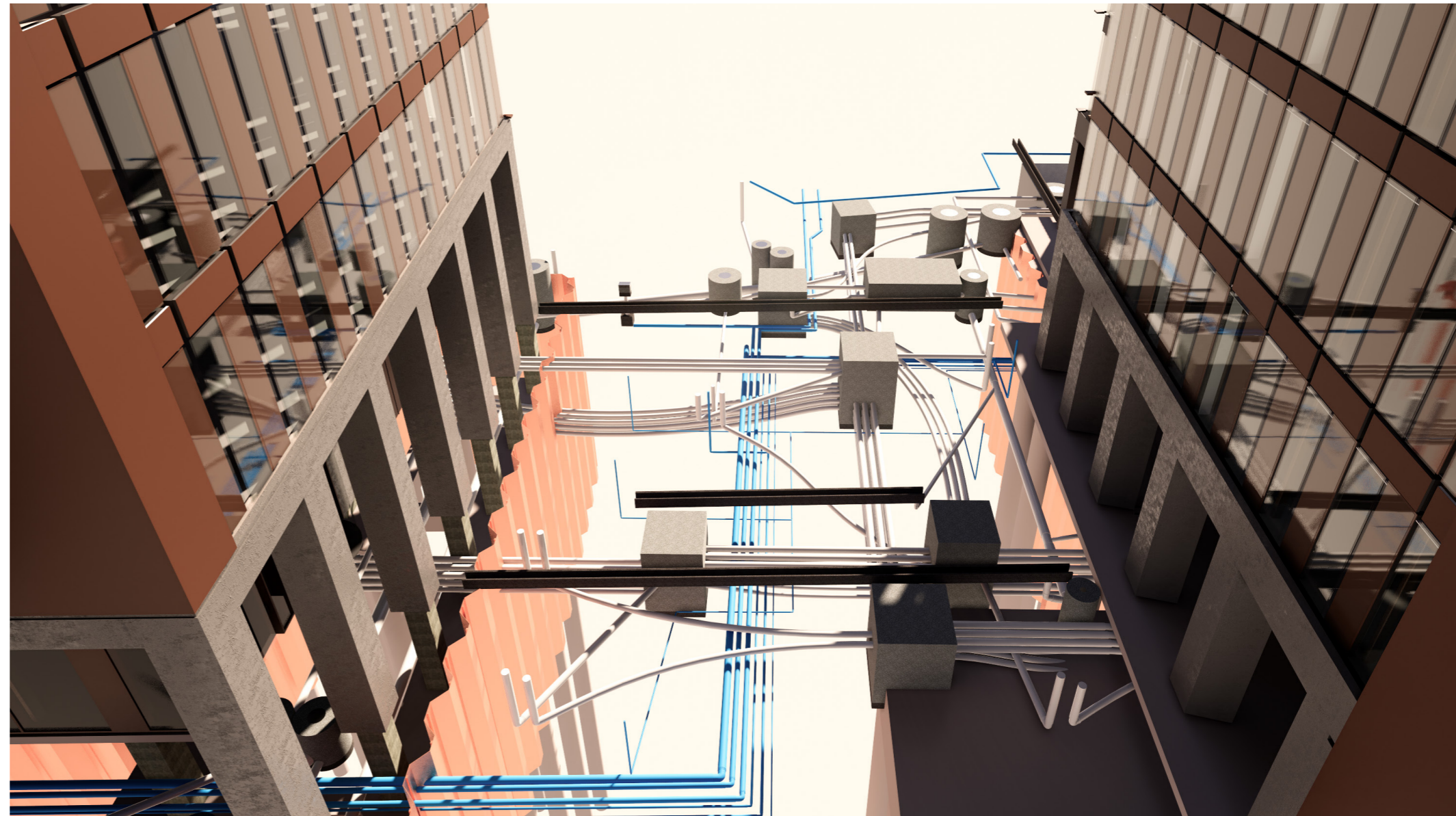
Status: BW design complete, construction currently underway

How we added Value

- BIM compliant modelling of all below ground utilities, drainage, substructure and existing obstructions allowed for thorough coordination, **minimising on-site installation time.**
- Proactive scoping of additional site surveys and contact with stakeholders allowed a number of environmental risks (including public and private utility diversions) to be identified early in the design process. Client decisions were therefore well informed with sufficient time to successfully manage and de-risk the uncertainties, **unlocking the in-ground works and allowing the earliest possible start on site.**

Project Overview

The development consists of two office buildings of nine and ten storeys in the heavily urbanised environment of Southwark. The site is restricted by buildings on all sides, below ground utilities that require diversions with easements, below ground obstructions from previous developments and a UKPN basement substation.



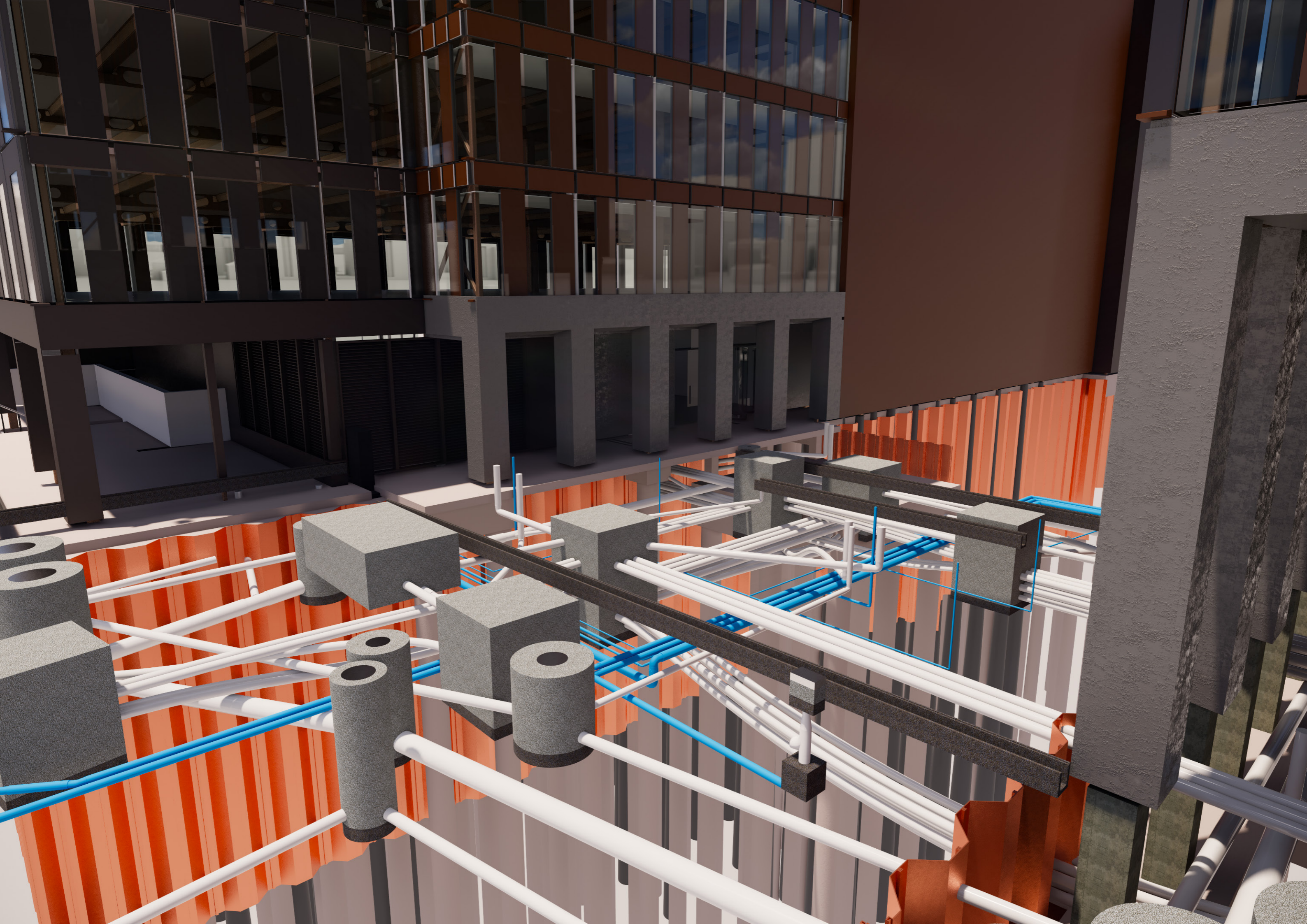
Appointment

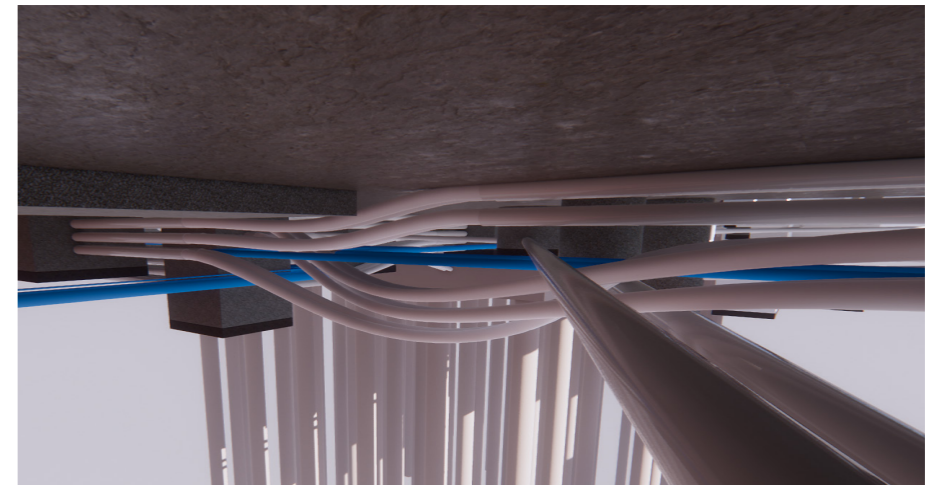
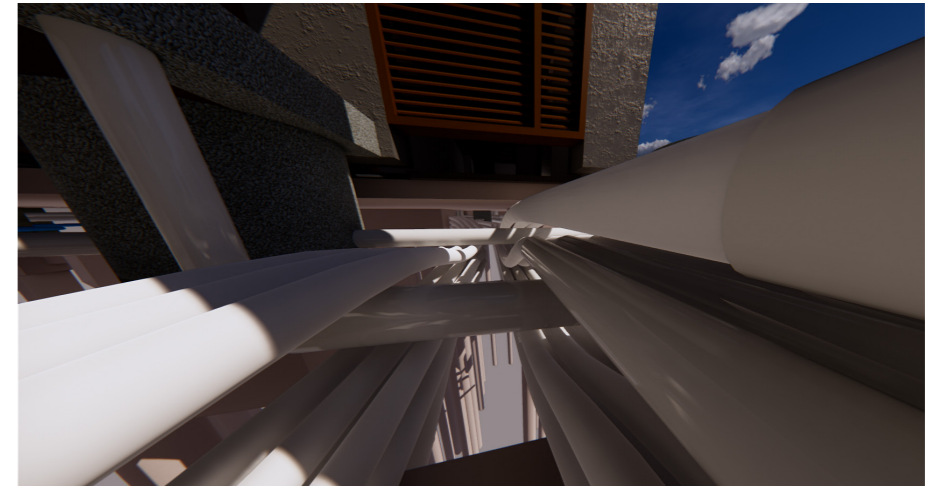
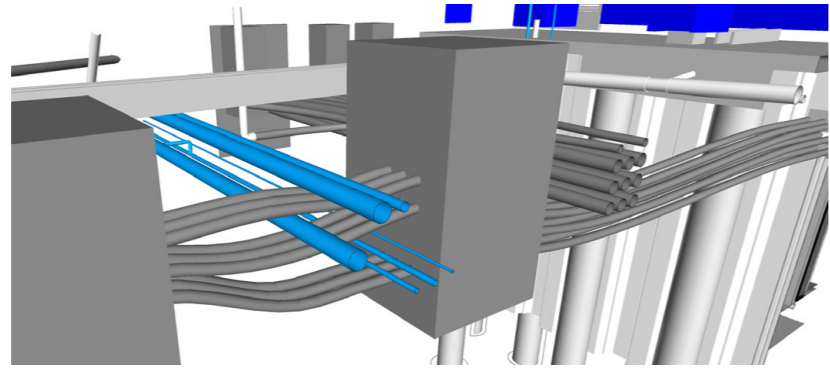
RIBA Stage 2 to 5

Environmental impacts;
Below-ground drainage
Below-ground utilities
External Works
Groundworks

Lead designer
Architecture
Structural engineering
MEP engineering







Aviation:

Pier 1 and Baggage Terminal - Gatwick Airport

Client: Gatwick Airport Limited

Our partners: Vinci

Construction value: £180 million

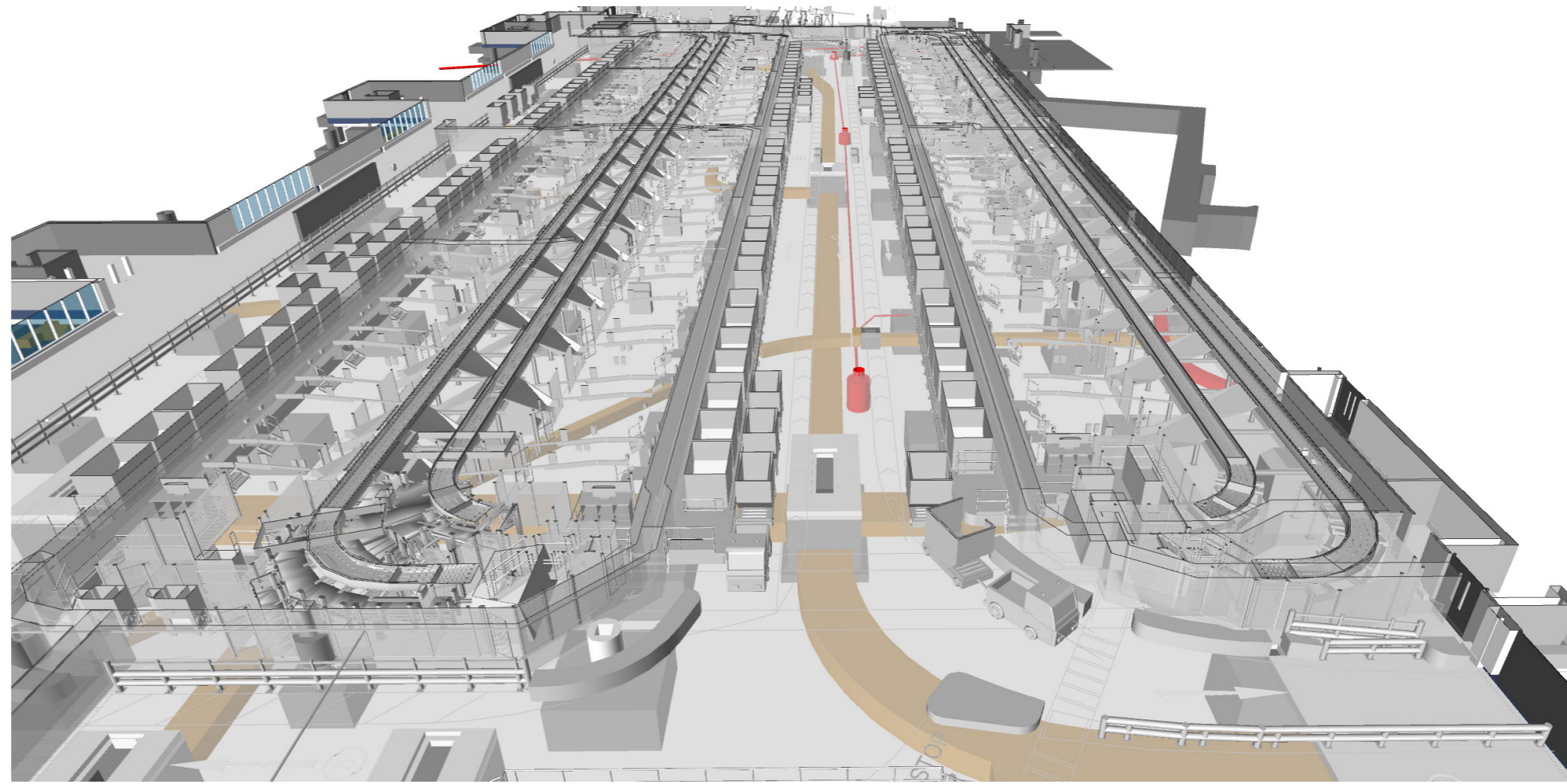
Status: Construction completed 2016, currently in use

How we added Value

- Detailed 3d modelling of the baggage equipment's extensive below-ground HV power supply network allowed for **optimal coordination with the congested building foundation arrangement.**
- A compliant design was provided that fully satisfied the strict airport stakeholder requirements including UK Border Force and UKPNs, and managed the challenging airside-landside interfaces.

Project Overview

A major extension of the South Terminal comprising a new 10,000m² pier building, 5 aircraft stands, a new baggage handling facility for the entire terminal and airfield and apron expansion works. This was the largest single development since the change of ownership in 2009.



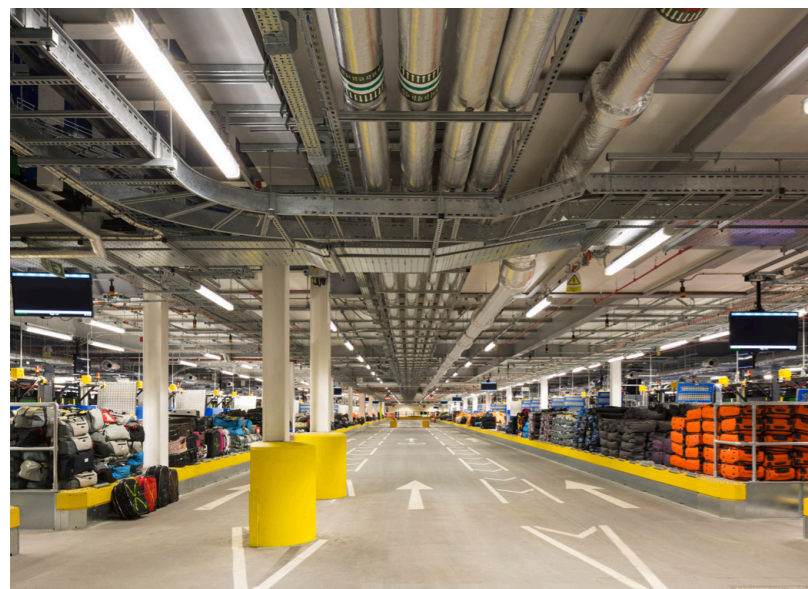
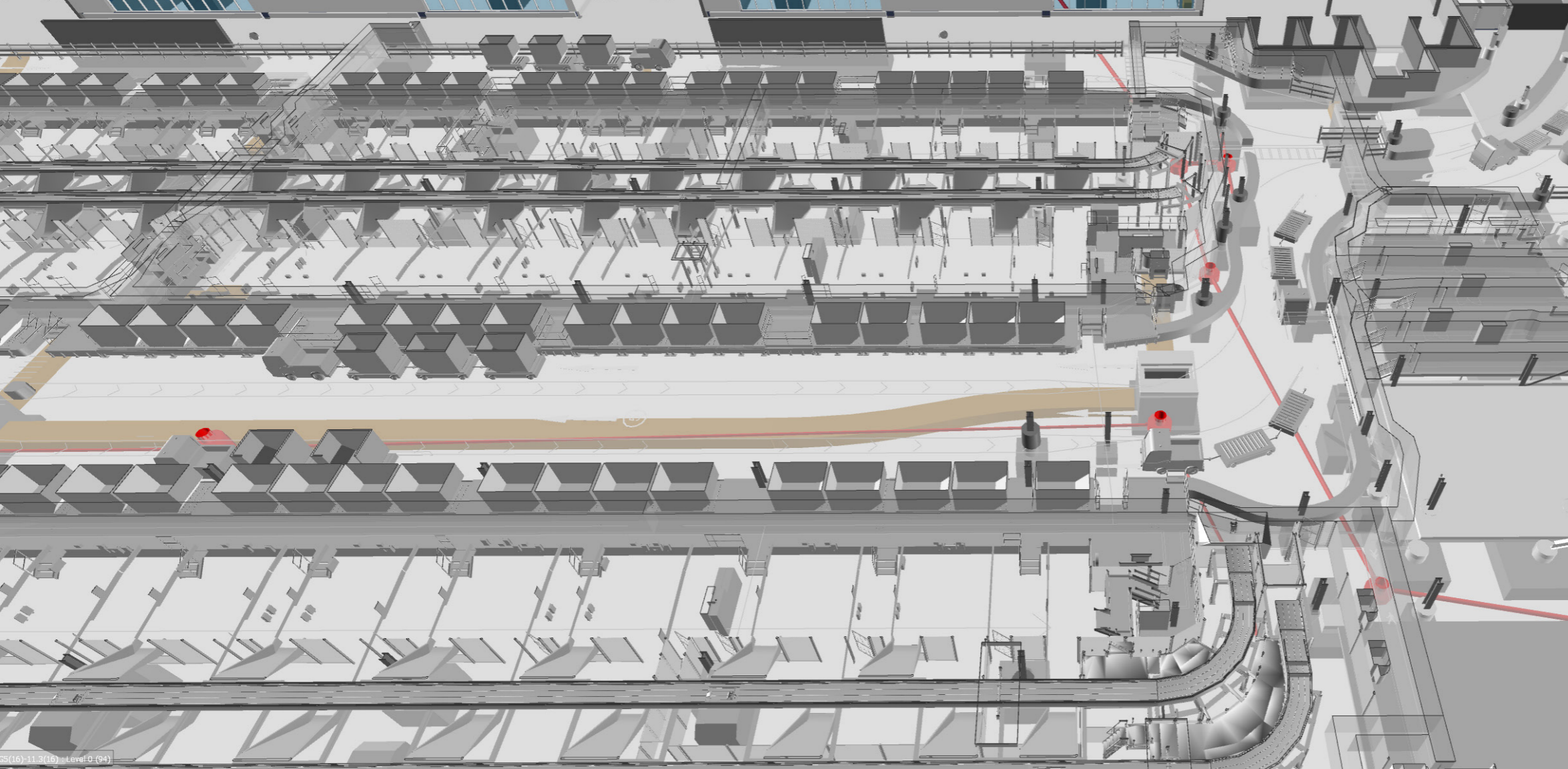
Appointment

RIBA Stage 3 to 6

Environmental impacts;
Below-ground drainage
Below-ground utilities
External Works
Groundworks
Transport

Lead designer
Architecture
Structural engineering
MEP engineering





Healthcare:

Circle Health Hospital - Birmingham

Client: Circle Health Properties Ltd

Construction value: £40 million

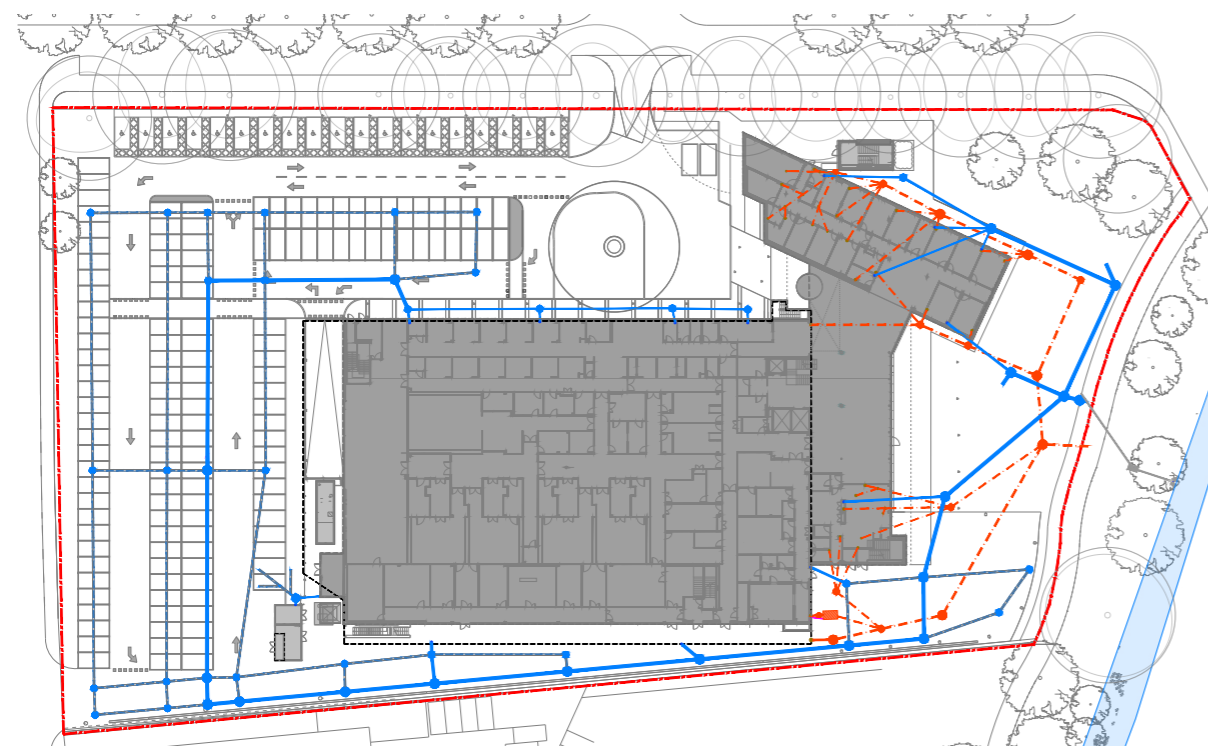
Status: Construction completed 2019, currently in use

How we added Value

- Developed design proposals for a below ground car park beneath the building footprint to provide a significant increase in car parking facilities to alleviate pressure on the surrounding area, as well as **resulting in a 90% volume reduction of imported material equating to a saving of over £1 million.**
- Introduced **significant areas of Sustainable Drainage Systems (SuDS)** to capture, treat and store surface water run off from the development whilst also providing amenity spaces for in-patients and staff. Greenfield runoff rates were achieved by using shallow gravel attenuation which replaced the carpark subbases, reducing excavations and road material costs.

Project Overview

A new private healthcare facility located on the old BBC Pebble Mill Studios site in Edgbaston, Birmingham. The development includes four operating theatres, specialised imaging facilities, a large in/out patient treatment complex and underground carpark. The site is restricted by a number of protected trees, and existing ground obstructions from the previous development.



Appointment

RIBA Stage 1 to 6

Environmental impacts;
Below-ground drainage
Below-ground utilities
External Works
Groundworks
Transport

Lead designer
Architecture
Structural engineering
MEP engineering



Residential:

Churchwood Gardens - London

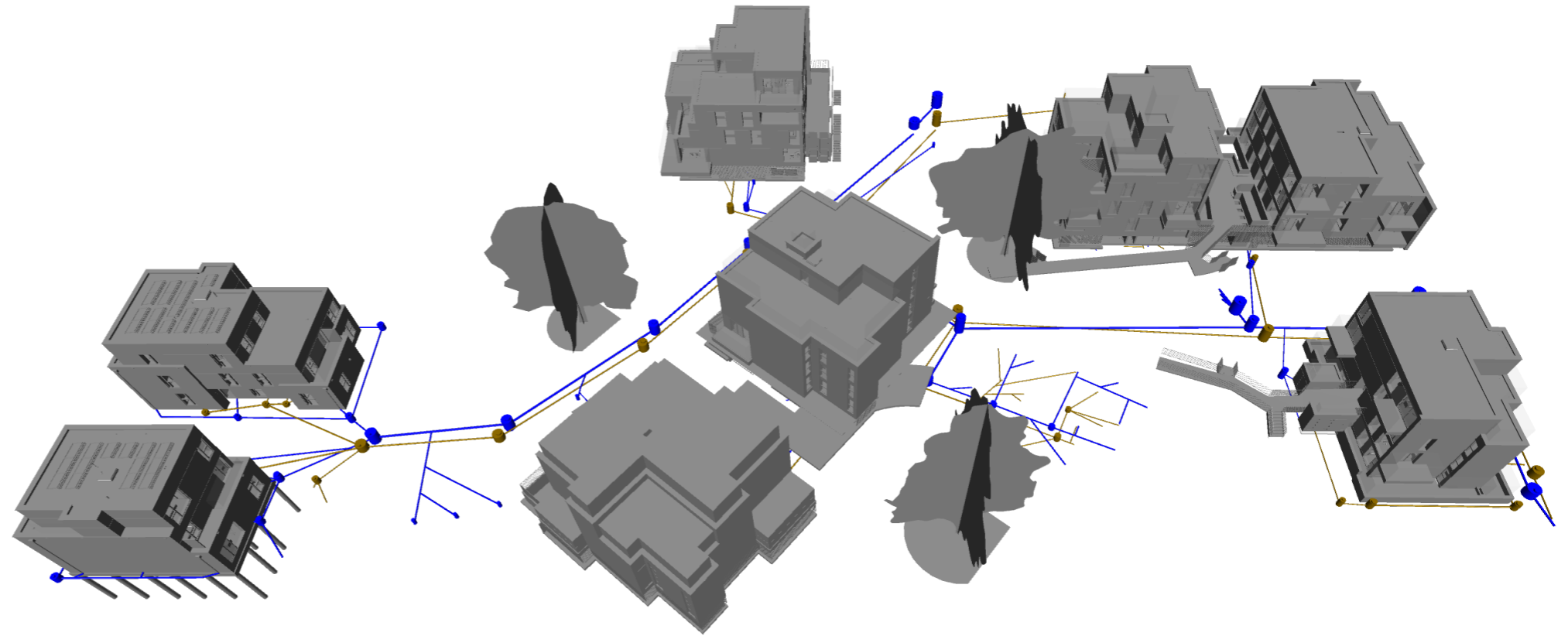
Client: Loromah Estates

Construction value £12 million

Status: Construction completed 2017, currently in use

How we added Value

- An overhaul of the drainage strategy inherited by the previous designer meant that **attenuation storage costs were reduced by 75%** and flood risk to low-lying properties was de-risked totally with no additional project cost.
- Extensive new public drainage was required and Bryden Wood **successfully acquired S104 approval** for Thames Water to adopt the network.
- Bryden Wood pioneered the use of virtual reality in the design of the below ground services to ensure coordination of the dense utility requirements within the numerous constraints of the site. This resulted in **no coordination issues being encountered** which allowed site installation to proceed without interruption and construction to be completed on-programme.



Project Overview

A residential development consisting of 9 high-end flats containing 74 dwellings in south London. The site was highly constrained by a steep slope, multiple tree protection areas and ecologically sensitive features including bats and stag beetles. The project won a Housing Design Award for its exceptional design.



Appointment

RIBA Stage 3 to 6

Environmental impacts;
Below-ground drainage
Below-ground utilities
External Works
Groundworks
Transport

Lead designer
Architecture
Structural engineering
MEP engineering





Residential:

Sugar House Island - London

Client: Vastint UK

Construction value: £350 million

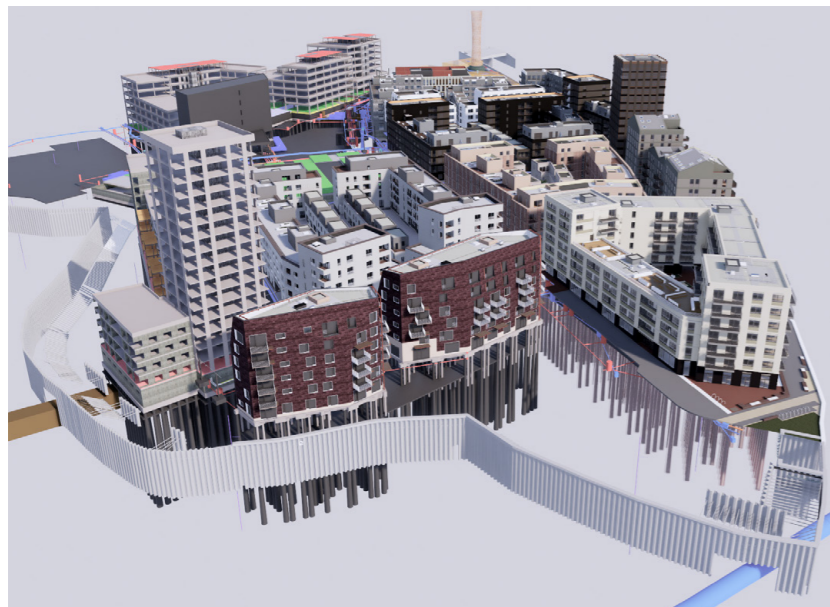
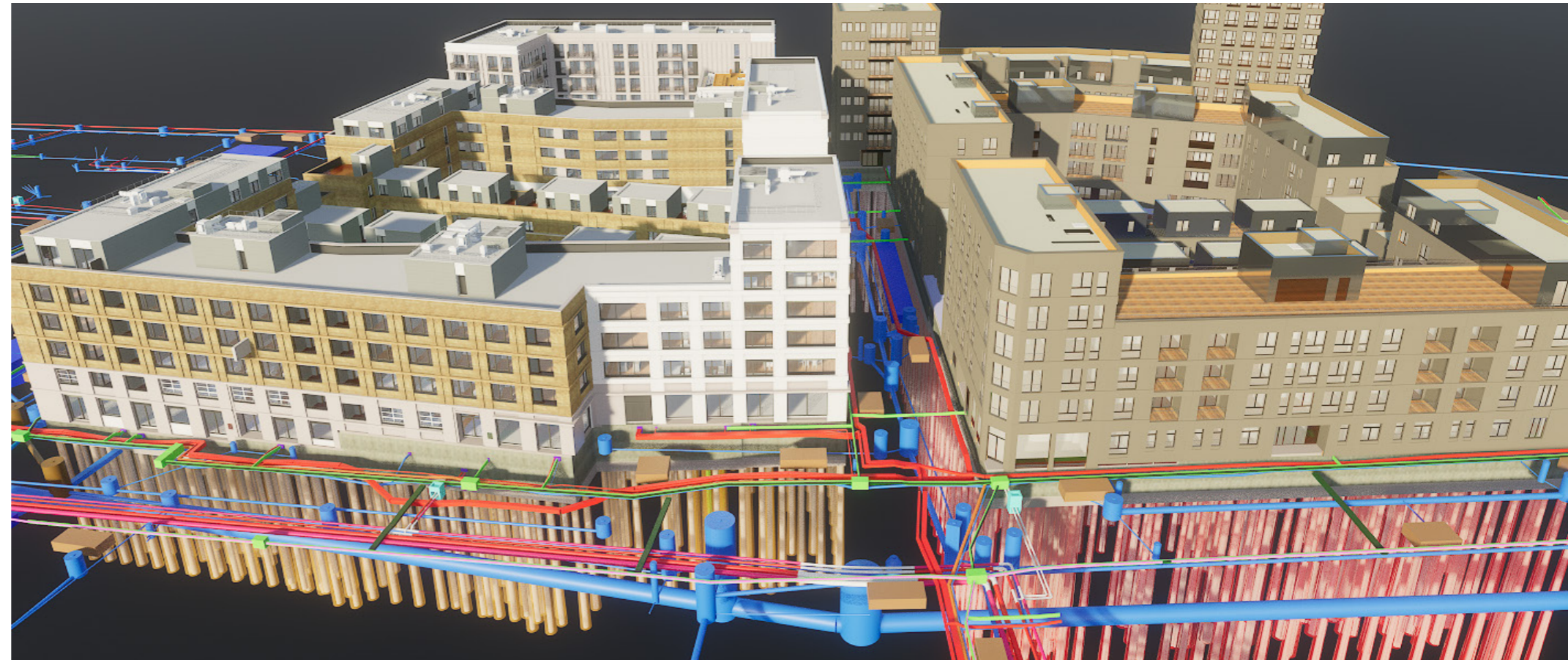
Status: BW design complete, construction currently underway

How we added Value

- Performed advanced data analysis to validate sitewide cut and fill volumes and inform optimal material movements, through this Bryden Wood developed a set of rules which **resulted in a £2.5 million saving.**
- Responsible for the sitewide BIM and digital coordination and **ensured full integration of the sitewide civils design for the overall project.**

Project Overview

This historical industrial site in Stratford, East London, has a rich history and is bounded by the River Lea and the Three Mills Wall River. It occupies 10ha and will see the introduction of 1,200 new homes, 6ha of offices & facilities, a primary school, plus a 350-bed hotel, in new buildings of up to 15 storeys. The site is restricted by below ground contamination, historical artefacts, unexploded ordnance, a large Thames Water sewer, major highways and a flood defence wall.



Appointment

RIBA Stage 2 to 5

Environmental impacts;
Below-ground drainage
Below-ground utilities
External Works
Groundworks

In addition to in-plot design Bryden Wood acted as the central digital delivery coordinator where we supported the numerous consultants and contractors. This role required us to combine information from various digital sources (Revit, AutoCAD, Civils 3D, ArchiCAD), into one centralised BIM model, which in turn was coordinated with site works and logistics.

Industrial:

Igus Manufacturing Facility - Cologne

Client: Igus

Construction value: €100 million

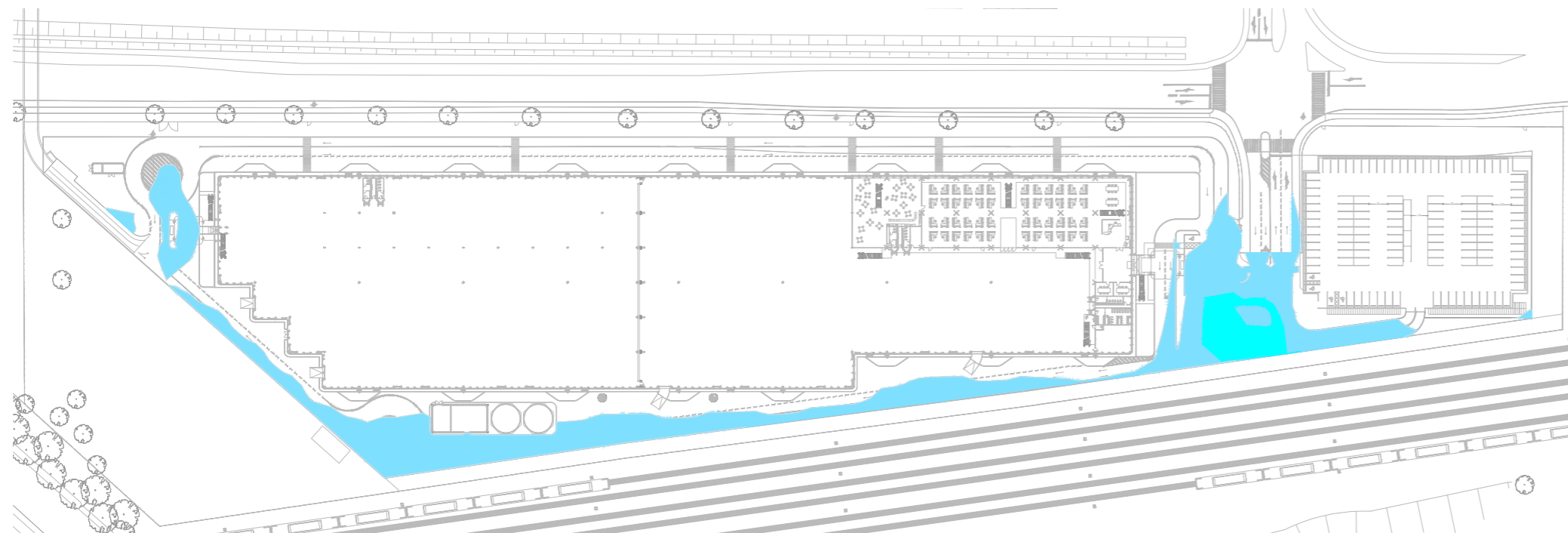
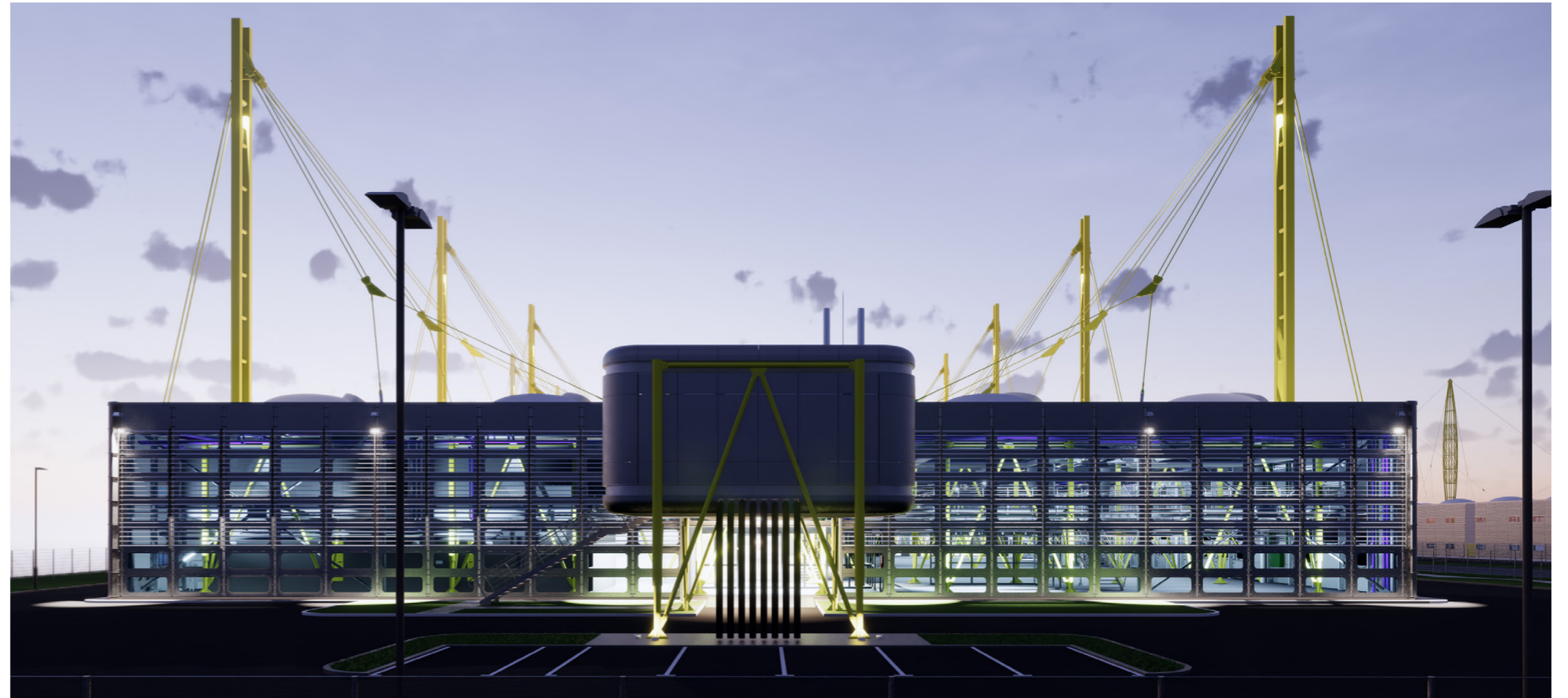
Status: Construction stage

How we added Value

- Advanced surface modelling identified a value engineering opportunity to use surplus excavated material to create visual screening banks and **eliminate material volumes removed and imported to site, saving €110,000.**

Project Overview

Bryden Wood has designed each phase of this facility, now measuring 10ha, with the first phase being completed in 1992. Now on Phase 8, this includes a 5ha new factory development and connectivity with the previous phases will be provided through the means of a tunnel beneath an intersecting public highway.

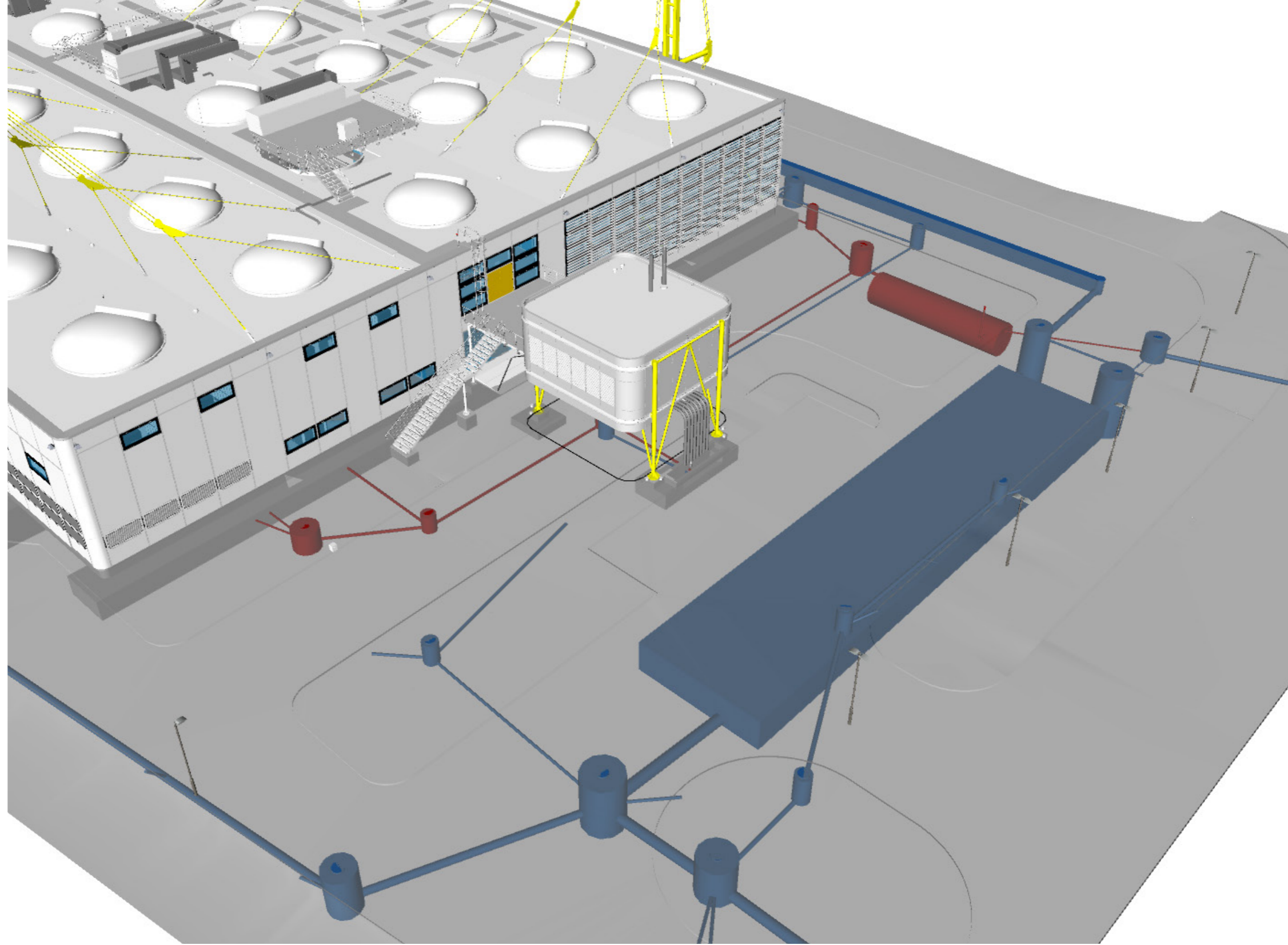


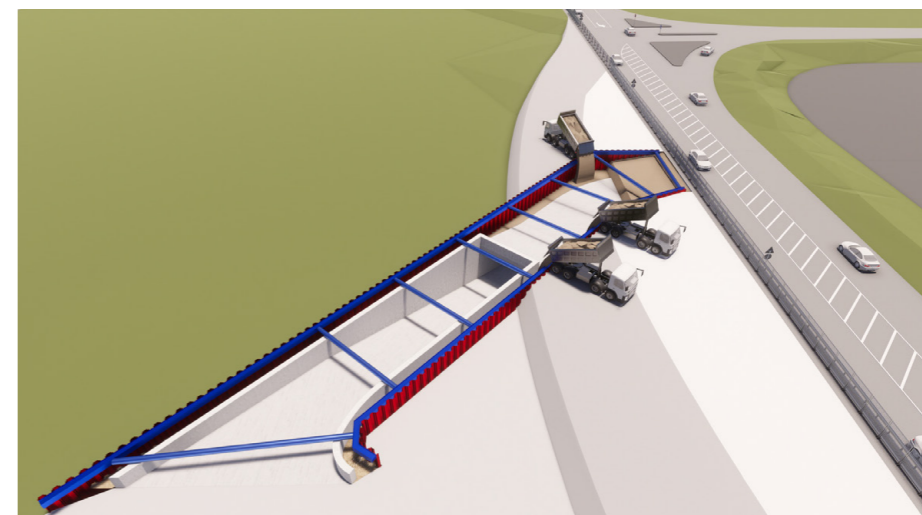
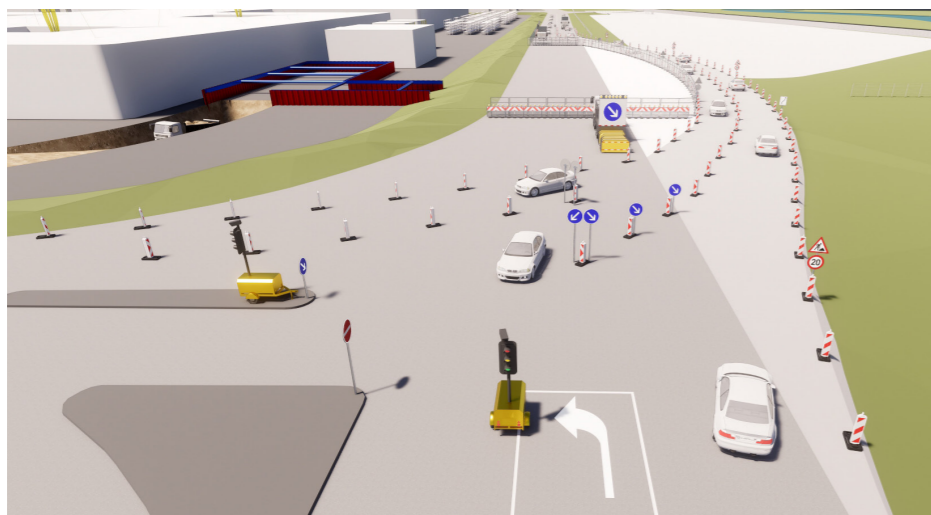
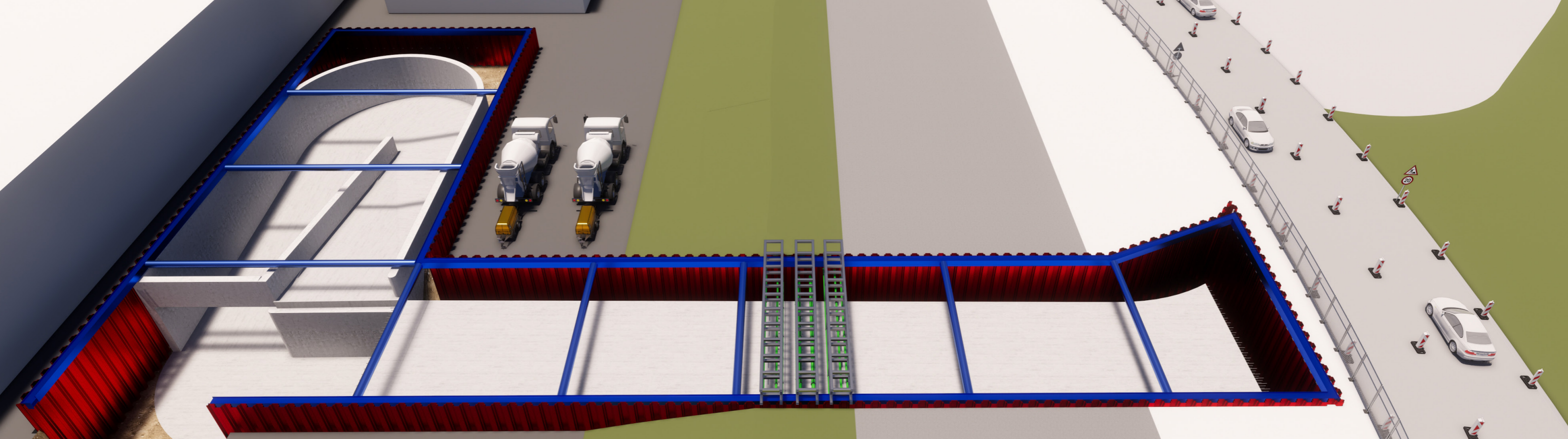
Appointment

RIBA Stage 2 to 5

Environmental impacts;
Below-ground drainage
Below-ground utilities
External Works
Groundworks
Transport

Lead designer
Architecture
Structural engineering
MEP engineering





Industrial:

Confidential Data Centre - United Kingdom

Client: Confidential

Construction value: £140 million

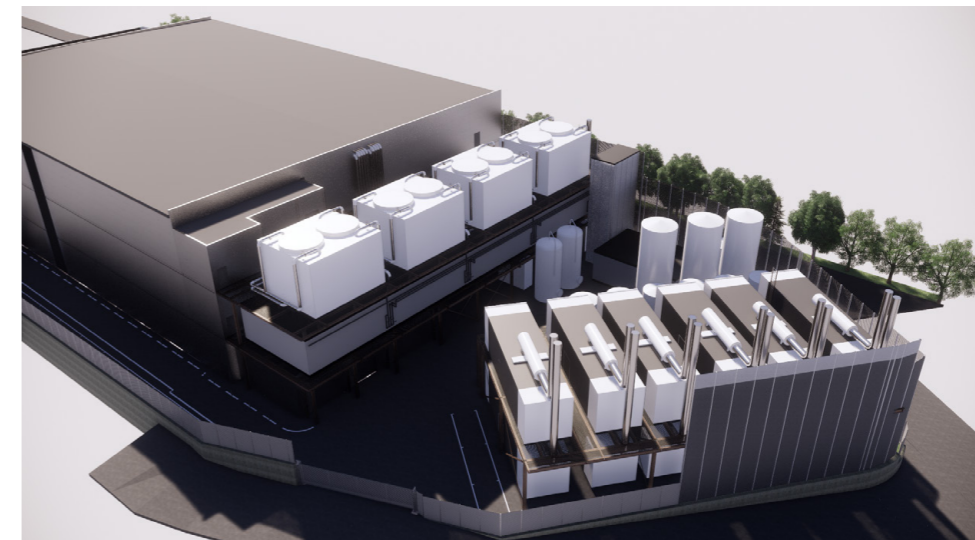
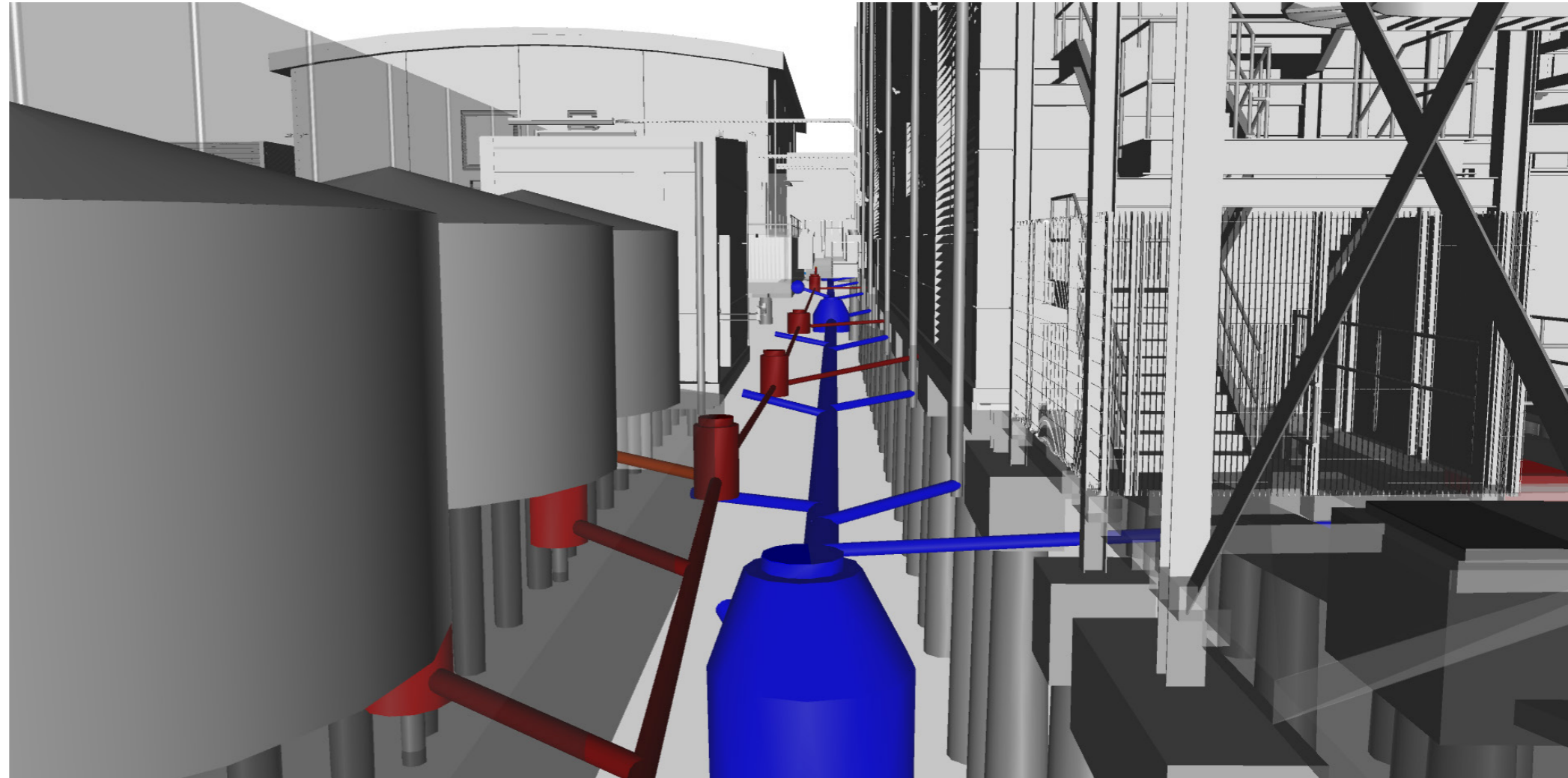
Status: Construction complete, currently in use

How we added Value

- As a result of the highly constrained nature of the site, no above-ground construction work could begin until the heavily congested below-ground utilities were installed. Detailed modelling was utilised to visualise the arrangement, and **extensive coordination efforts meant that construction was completed on programme to allow the above-ground work to start on schedule.**
- A number of critical existing Thames Water sewers crossed the site which threatened construction start and risked delaying the entire project. Through a rapid turnaround of proposals and proactive communication with Thames Water, **Bryden Wood accelerated a solution which unlocked the site.**

Project Overview

The redevelopment of an existing industrial site to accommodate a three storey 24MW data centre and associated ancillary plant areas. The site is restricted by adjacent buildings and National Rail railway lines, below ground drainage and utilities that require diversions with easements, and an existing SSE substation.



Appointment
RIBA Stage 1 to 6

Environmental impact;
Below-ground drainage
Below-ground utilities
External Works
Groundworks
Transport

Lead designer
Architecture
Structural engineering
MEP engineering

Industrial:

Confidential Data Centre - Republic of Ireland

Client: Confidential

Construction value: €300 million

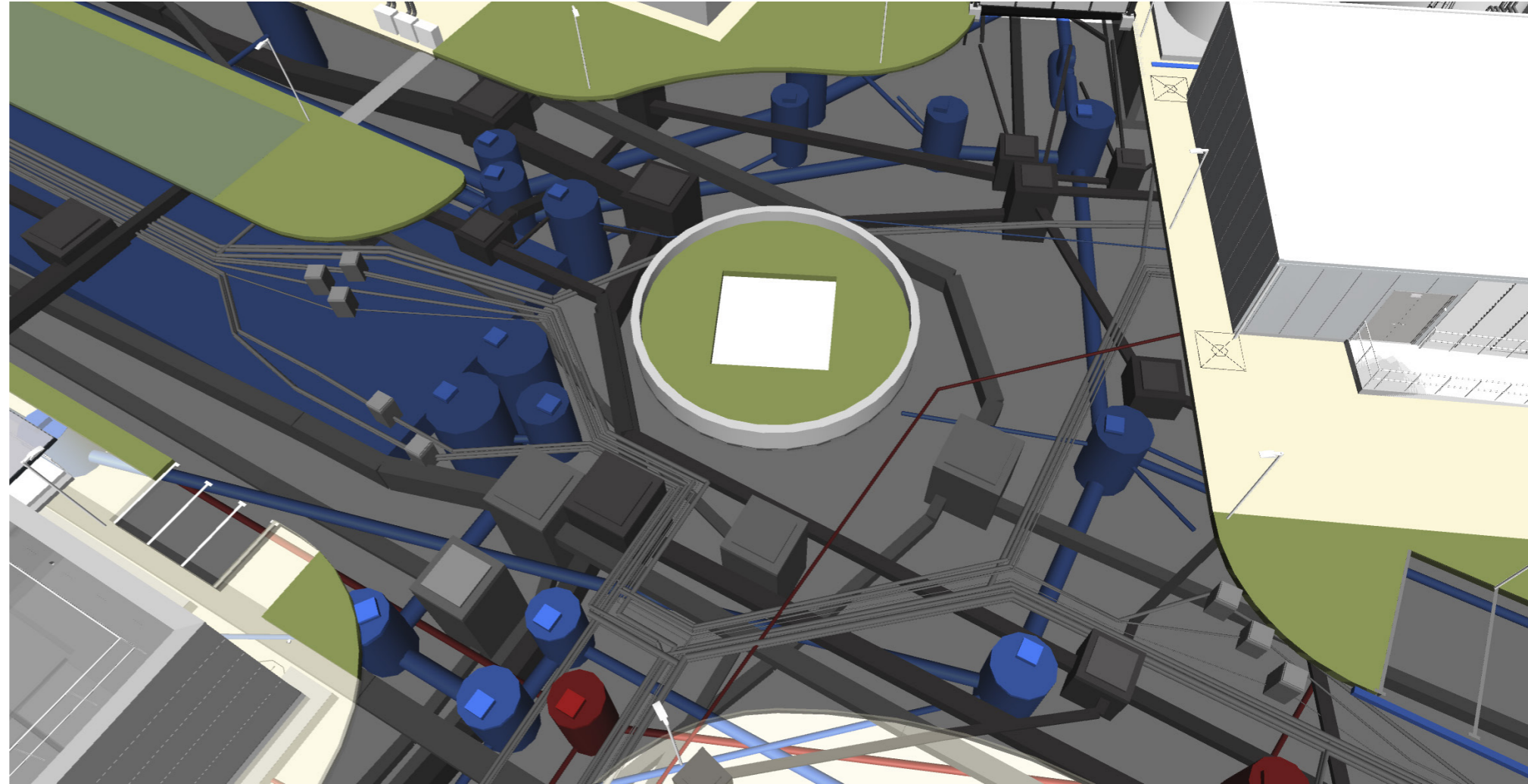
Status: Construction stage

How we added Value

- A degree of utility density that would have been extremely time consuming to resolve if coordination issues were discovered during construction; Bryden Wood's detailed 3d modelling and automatic clash detection procedures **allowed the intricate spatial coordination to be performed with a guaranteed accuracy and within the design programme.**
- Identified a value engineering opportunity to use surplus excavated material to create visual screening banks of sensitive ancillary equipment, this **reduced material volumes removed from site by 3,300m³, saving £150,000.**

Project Overview

The redevelopment of an existing site to accommodate a 37MW data centre of three buildings and associated ancillary plant areas. The site is restricted by adjacent buildings, overhead powerlines and below ground drainage and utilities that require diversion.

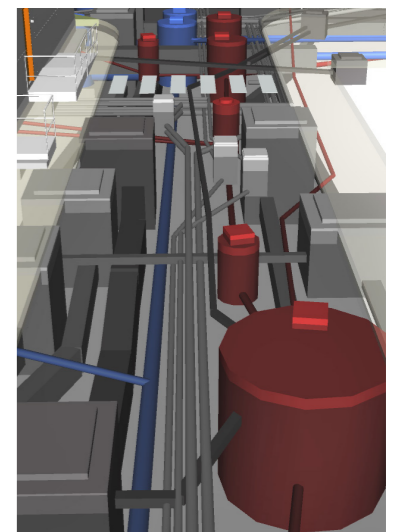


Appointment

RIBA Stage 2 to 4

Environmental impacts;
Below-ground drainage
Below-ground utilities
External Works
Groundworks
Transport

Lead designer
Architecture
Structural engineering
MEP engineering



Education:

Redbridge Schools - London

Client: London Borough of Redbridge

Our partners: ISG

Construction value: £4.5 million

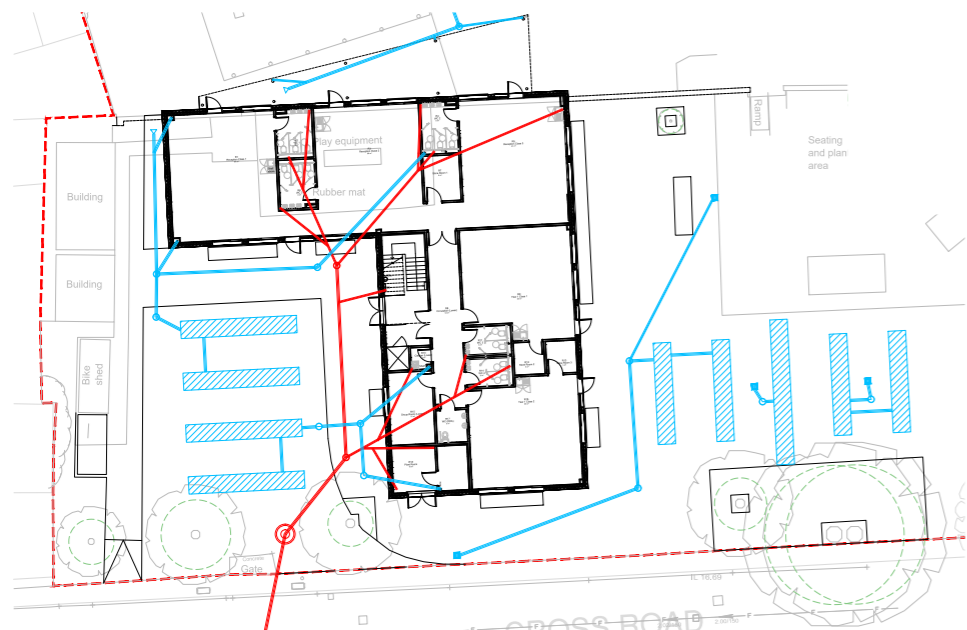
Status: Construction completed 2014, currently in use

How we added Value

- The design utilised Sustainable Drainage Systems (SuDS) and in particular integrated the use of permeable and porous paving and soakaways to achieve zero surface water discharge off-site. The use of infiltration drainage, and a focus on recycled materials for the road layerworks played an important role in **all three schools being awarded a BREEAM rating of 'excellent'**.

Project Overview

Three new build schools at Downshall, Chadwell and Barley Lane procured on the 'Primary Places' framework, set up by London Borough of Redbridge. The school buildings have a range of accommodation including 6-8 new classrooms per building, dance halls, main halls and ITC facilities.



Appointment
RIBA Stage 1 to 6

Environmental impacts;
Below-ground drainage
Below-ground utilities
External Works
Groundworks
Transport

Lead designer
Architecture
Structural engineering
MEP engineering

Transport:

Smart Motorways Programme - England

Client: Highways England

Our partners: Costain Group

Construction value: Non-site specific

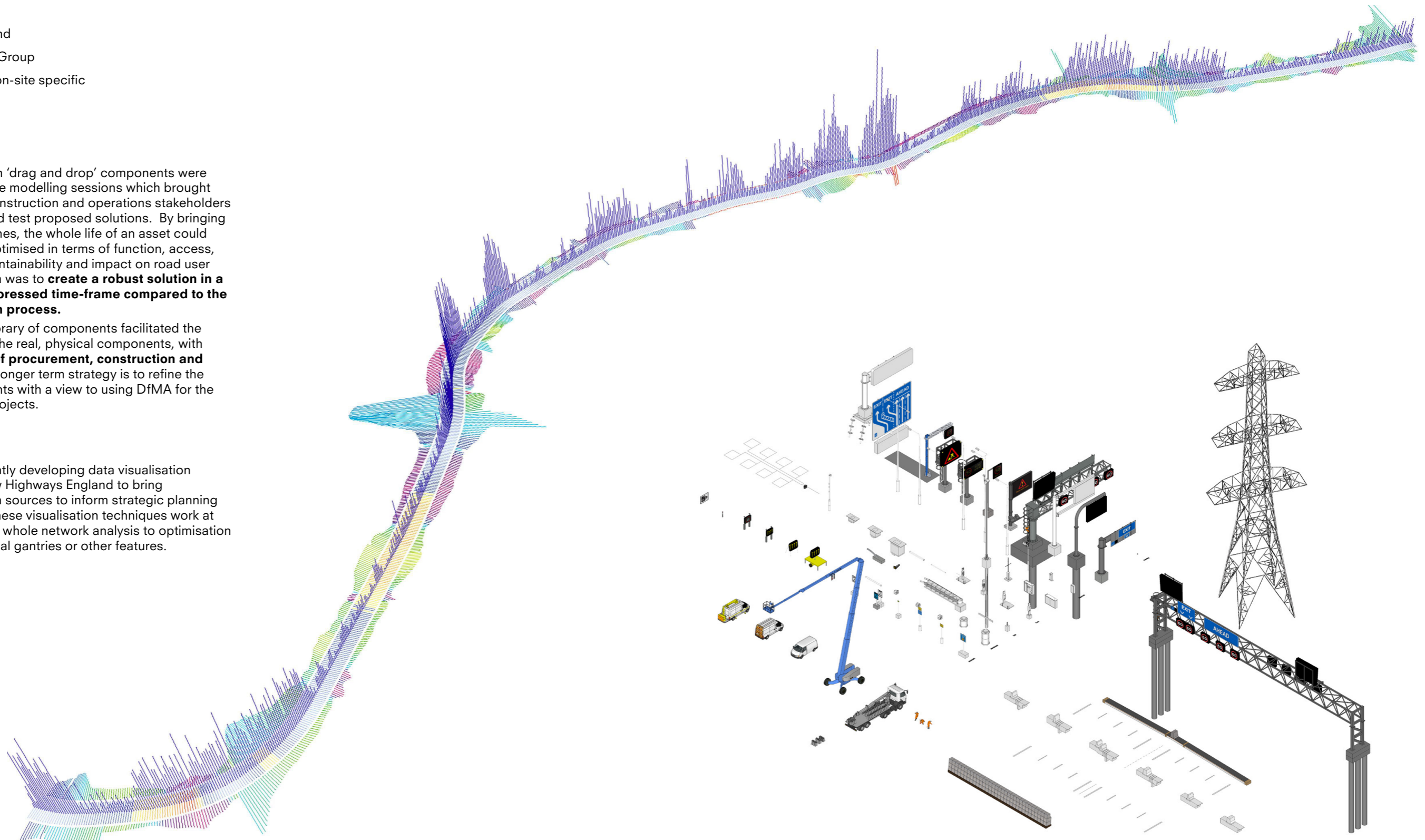
Status: Design stage

How we added Value

- A library of data rich 'drag and drop' components were used in collaborative modelling sessions which brought together design, construction and operations stakeholders to rapidly model and test proposed solutions. By bringing together all disciplines, the whole life of an asset could be modelled and optimised in terms of function, access, constructibility, maintainability and impact on road user experience. The aim was to **create a robust solution in a considerably compressed time-frame compared to the 'traditional' design process.**
- Using a standard library of components facilitated the standardisation of the real, physical components, with **benefits in terms of procurement, construction and maintenance.** The longer term strategy is to refine the standard components with a view to using DfMA for the delivery of future projects.

Project Overview

Bryden Wood are currently developing data visualisation workflows that will allow Highways England to bring together a range of data sources to inform strategic planning and decision making. These visualisation techniques work at a variety of scales, from whole network analysis to optimisation of placement of individual gantries or other features.



Appointment
Construction Innovation consultants

Transport: Automated Highway Design - England

Client: Highways England

Our partners: Costain Group

Construction value: Non-site specific

Status: Design stage

How we added Value

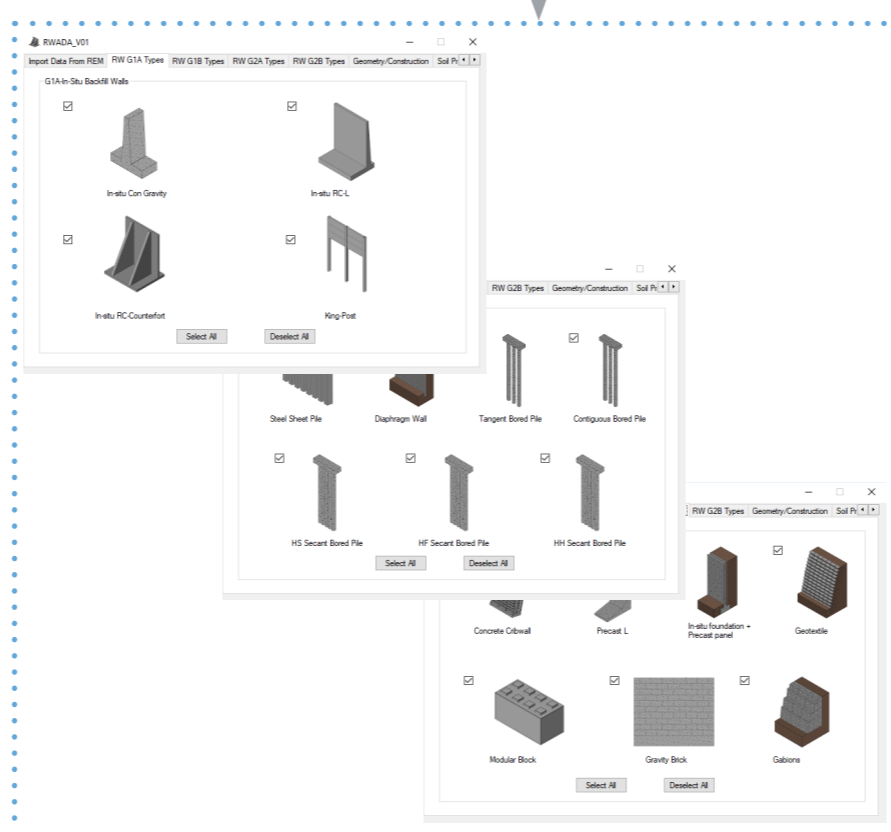
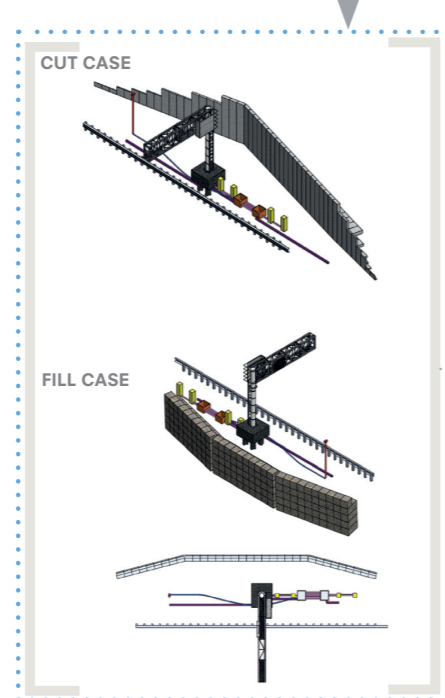
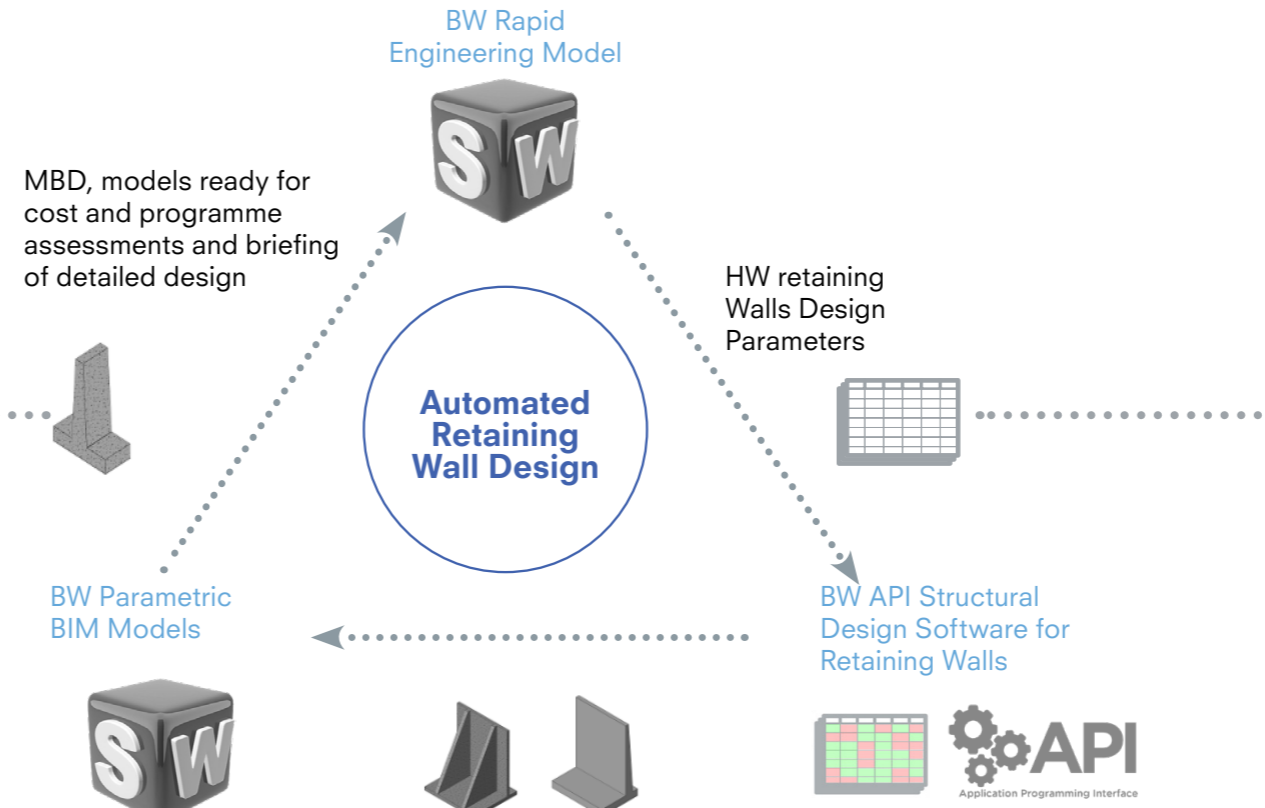
- Demonstrated that highway gantries and all ancillary infrastructure could be **optimally identified, designed and modelled in a fraction of the time of a manual engineering and modelling design process.**

Project Overview

Bryden Wood were appointed by Highways England to explore innovation opportunities to significantly reduce the design time of highway features, in particular the location of gantries and associated ancillary infrastructure including drainage and retaining walls.

Rapid Engineering Models (REM) used GIS and Big Data sources to provide insights into where highway features were necessary and optimal. In-house software was then developed to fully automate engineering analysis and design decisions to select the most suitable solutions for the various ancillary elements at each position identified by REM. This included determining a retaining wall's specific structural arrangement and optimising its performance.

After selection and design, parametric modelling software automatically generated concept models of the gantry and all ancillary elements at each individual position along the highway. This modelling could be automated beyond concept design to output detailed design and construction stage information.



Description	Height	Cost	Soil Conditions										Water table conditions			Other requirements			
			Cost £/m2	FC	NC-S	NC-F	NC-H	C-S	C-F	C-H	ST-WT	LT-WT	GW	RC	AE				
GROUP 1A - FILL WALLS	Instu Concrete Gravity Wall	0.2	200	0.00	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Instu RC Counterfort Wall "L"	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Instu RC Counterfort Wall "T"	10	750	0.33	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Instu Sheet Pile Wall	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Instu Contiguous Bored Pile	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Instu Tangent Bored Pile	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Instu Hard/Soft Secant Bored Pile	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Instu Hard/Firm Secant Bored Pile (EPA)	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Instu Hard/Very Firm Secant Bored Pile (EPA)	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Instu Hard/Extremely Firm Secant Bored Pile (EPA)	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
GROUP 1B - CUT WALLS (Embedded wall)	Diaphragm Wall	5	750	0.75	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Concrete Culvert	3	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Precast L	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Instu foundation + Precast panels (including twin wall)	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	MS Geogrid, Geotextile, Winked Wire Facing	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Modular Block wall	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Sturdy Brick wall (masonry)	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Gabions	2	150	0.15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Soil improvement by Impact Compaction (e.g. Vibrating Deepwater Rammer)	1	50	0.05	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Soil improvement by Vibratory Compaction (e.g. Vibrating Plate Compactor)	1	50	0.05	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Transport:

Central Reservation Innovation - England

Client: Highways England

Our partners: Costain Group

Construction value: Non-site specific

Status: Design stage

How we added Value

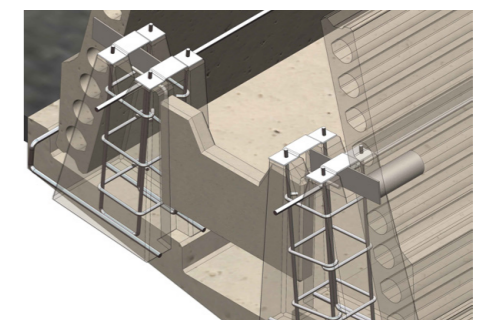
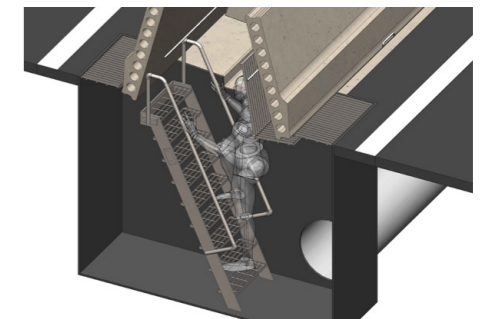
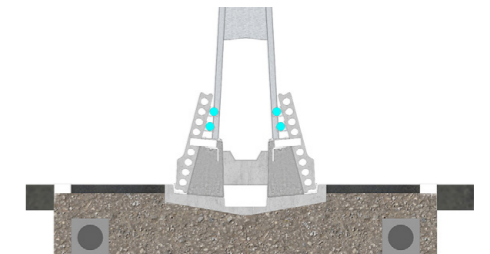
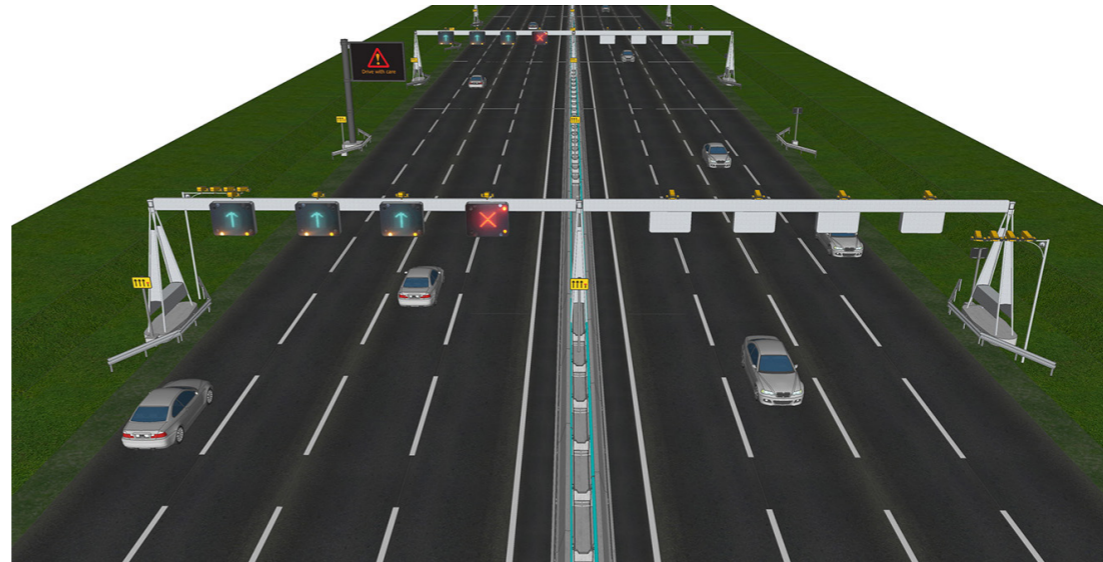
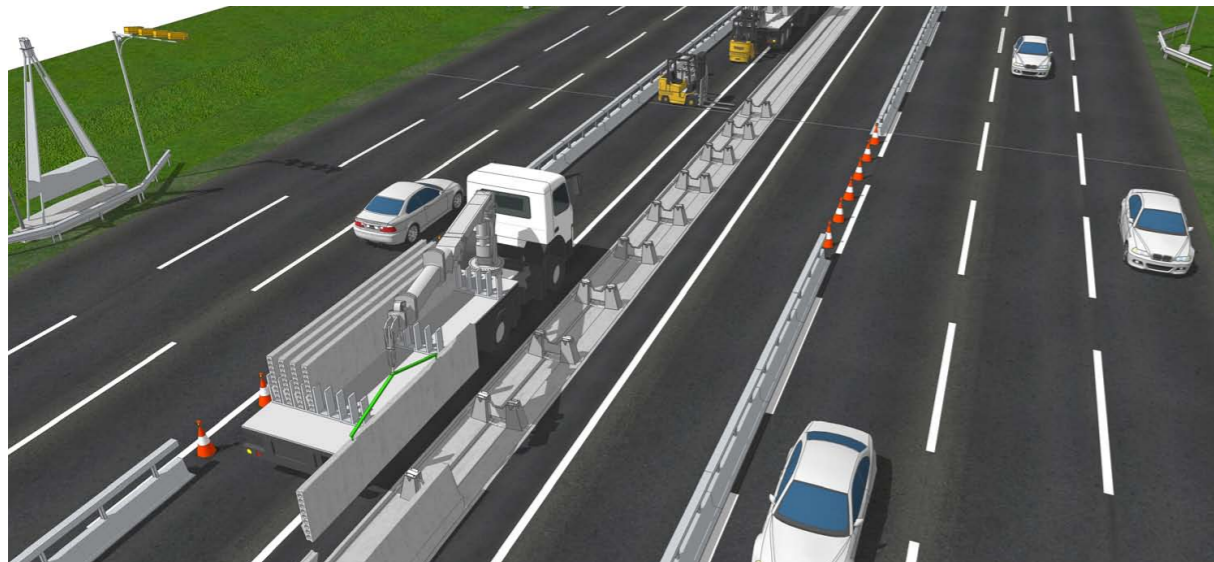
- Bryden Wood designed a standardised kit of prefabricated parts for the central reservation which included concrete slip form drainage channels with flexible profiles, precast planks for safety barriers and lightweight sign gantries. The component kit of parts were then applied to a sample section of motorway as a simulation of the installation process. This demonstrated a **considerably accelerated construction programme as well as achieving improved worker safety.**

Project Overview

In conjunction with Costain, BWT were asked to identify possible solutions to reduce the length of time to complete the central reservation works on highways in England. Lane closure periods were perceived to be too long resulting in a poor road user experience with large sections of motorway affected at the same time. In addition, the motorway upgrade sector was considered as having a worse safety record than other sectors of the construction industry.



Appointment
Construction Innovation consultants



Water:

Wastewater Treatment - Uttons Drove

Client: Anglian Water

Construction value: £10 million

Status: Construction completed 2013, currently in use

How we added Value

- Instead of using a traditional civil engineering approach the assets were located above ground which resulted in **improved worker safety and accessibility for maintenance**. The elimination of major ground excavations resulted in significant time, cost and carbon savings.
- Modular off site construction and other DfMA techniques accelerated the construction programme.
- Overall the scheme was delivered with **48% reduced embodied carbon and 15% lower capital cost**.

Project Overview

A component-based prefabricated construction system approach to Anglian Water's wastewater treatment plant. The project included the construction of two large circular tanks, one large square tank and several smaller support structures. One of the major objectives was to transfer as much of the construction as possible off site with the intention of significantly reducing time on site and accelerating the overall programme.

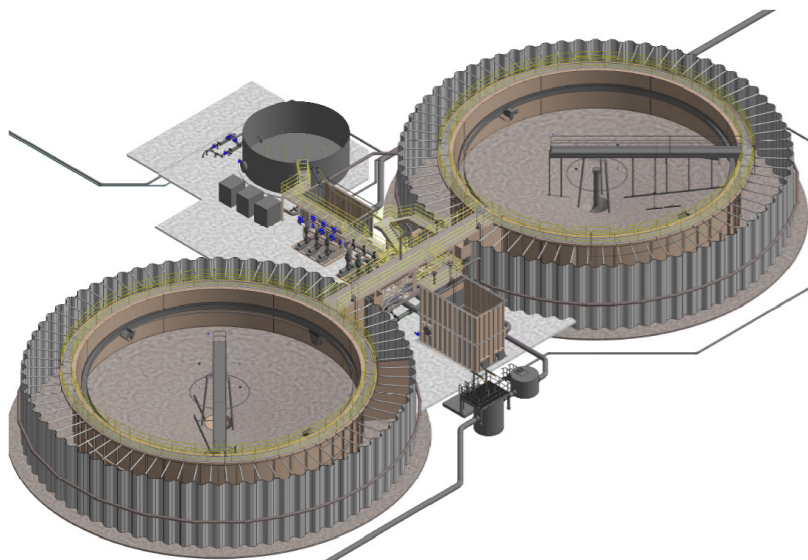


Appointment

RIBA Stage 2 to 6

Environmental impacts;
Below-ground drainage
Below-ground utilities

Lead designer
Architecture
Structural engineering
MEP engineering



Select Client List

A	ACT Foundation Amazon American Airlines Anglian Water Ardmore	I	ICS Igus GmbH Integrated Building Products Investec ISG PLC	R	RAF Royal Holloway University of London Royal Mail RG Group
B	British Airways BAA Limited BG Group Bovis Lend Lease Balfour Beatty Basepoint British Airways British Land BT Group Buckinghamshire County Council Building and Construction Authority, Singapore Bupa Buro Four Byrne Group	J	Jones Lang LaSalle	S	Sainsbury's Schneider Electric SEEDA SES Serco Shangri-La Shepherd Group Simons Group Sir Robert McAlpine Skanska SnoozeBox SPB Renovation Spie Matthew Hall Stanhope
C	Cabinet Office Capgemini Carillion Chorus Group Costain Group Circle Health	K	Kent Institute of Medicine and Surgery Kier Group	T	Tate Modern Tesco Stores Ltd The London Clinic Three Valleys Water TRE Global
D	Durkan Group	L	Laing O'Rourke Land Securities London Borough of Barking and Dagenham London Borough of Bromley London Borough of Kensington and Chelsea London Borough of Lewisham London Borough of Redbridge London City Airport London School of Hygiene and Tropical Medicine Loromah Estates Lufthansa	U	University College London (UCL) University of Southampton University of Greenwich
E	Essex County Council Explore Living Explore Manufacturing Equinix	M	Mace Group Mahle Powertrain Manchester Airport PLC Metropolitan Police Service Moorfields Eye Hospital Mount Anvil Ministry of Justice Ministry of Defence	V	Vastint Vestfold Hospital Trust - Norway Vinci PLC
G	Gatwick Airport Limited GlaxoSmithKline Global Switch Graham Construction Great Western Studios	N	NG Bailey North Manchester General Hospital Norstead	Y	Yotel
H	Henderson Global Investments Heron International Hertfordshire County Council Heathrow Airport Holdings Limited Highways England Hinchingbrooke NHS Trust	O	Oxfordshire County Council		
		P	Parkview International PM Property Services		
		Q	Qatari Diar Delancey		