

# Technical Design

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WEST WADDY ARCHADIA









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# TECHNICAL DESIGN AT WWA STUDIOS

WWA are award-winning, multi-disciplinary professionals combining Architects, Town Planners, Masterplanners and Urban Designers in one consultancy. Born out of the merger between West Waddy and Archadia, WWA is a leader in the built environment creating outstanding people centric places that care for our heritage.

We have worked on a wide variety of projects over the years and a key part of our work has involved the delivery of technical design packages for contractors through both Traditional and Design & Build procurement. Primarily working in as lead consultants, WWA have a great degree of experience in the management of specialist consultants and coordination of subcontractor and supplier input to deliver projects on time and on budget.

WWA operate in Revit and uses various packages to share information across the contractor team to BIM Level 2. Our collaborative approach and in-depth experience working with developers and contractors ensures the production of high quality and relevant drawings and specifications to assist contractors in the delivery of the finished building.



# INTRODUCTION

WWA have experience and expertise in working with contractors on Design and Build projects and have successfully delivered numerous schemes from RIBA Stage 4 onwards. With sound technical knowledge, a collaborative working ethos and timely working practices we can assist contractors to deliver schemes for their clients.

Our particular expertise lies in housing, specialist housing, education and heritage and we have delivered a number of prestigious projects over the years including:

- › Two Bridges, Hounslow
- › Eden House, Hounslow
- › Maidment Court, Poole
- › All Souls College, Oxford
- › Lord Wandsworth College, Long Sutton, Hampshire
- › Abingdon Prep, Abingdon-upon-Thames, Oxfordshire

## Construction Methods

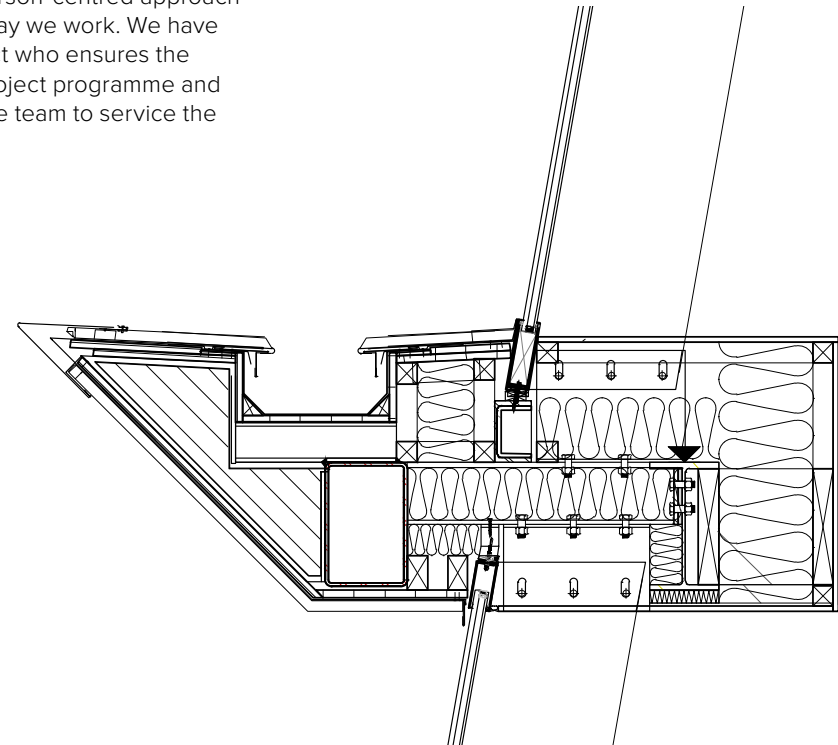
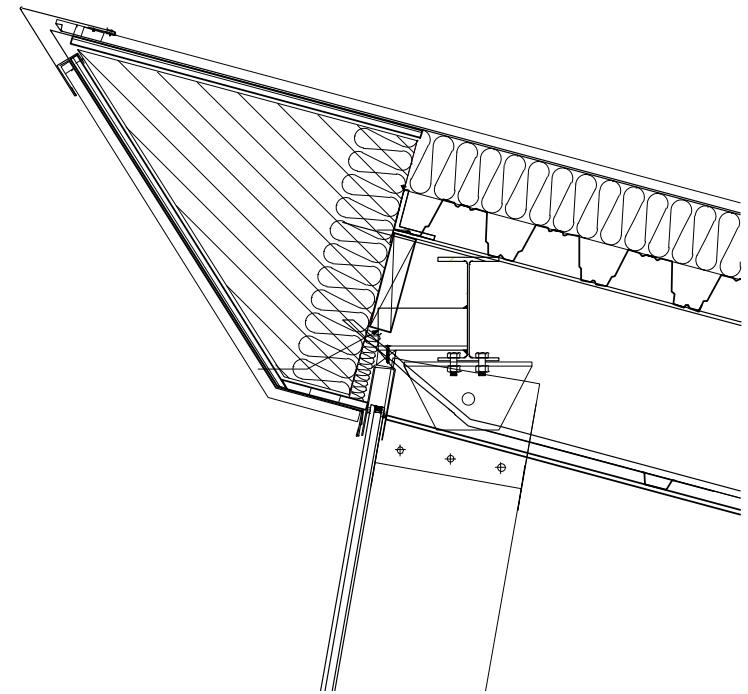
WWA have experience with a variety of construction methods including traditional and MMC techniques. We have worked with steel frames, concrete frames, lightweight steel frames, timber frames and panelised timber. This variety of experience allows us to adapt to the contractor's requirements based on preferences, no matter the driver.

## Efficiency

WWA work with a library of standard layouts and use standardised components within our designs which helps with purchasing as well as surety on price. This also allows for the repetition of details and workflows across sites helping to create a simple build process. These standardised layouts and details can be quickly transposed onto drawings to deliver drawing packages efficiently and effectively to the programme.

## Resourcing

We pride ourselves on having a person-centred approach to business and this is key to the way we work. We have a Director assigned to every project who ensures the project is being delivered to the project programme and has a wide resource base within the team to service the individual projects.









# COLLABORATIVE WORKING

A key element of a successful build is to work collaboratively with the contractor team and other consultants. WWA have a rich history of working with a variety of contractors and consultants in the role of lead consultant and has successfully managed consultant teams through either a traditional or design-and-build procurement.

## **BIM**

Tools such as BIM enhance the ability to work collaboratively and allow the design team to work on a single model. This helps to identify areas for development prior to work commencing on site and features such as clash detection assist with the coordination of the different disciplines. BIM helps to ensure that information issued to contractors is accurate and reduces on-site abortive work. Another benefit is that it can be used to measure material take-offs assisting with accurate pricing.

## **SUBCONTRACTORS**

Key members of the contractor team are subcontractors who have detailed knowledge of specific elements. As part of our technical design process, we encourage meetings with individual subcontractors to fully understand interface details between the various trades on site to create a fully integrated set of construction information. This also creates cost-effective detailing where we can work with the subcontractors to standardise details across the project and helps to ensure buildability.

## **DELIVERY**

WWA has developed methods for the efficient delivery of construction information to the programme but is also adaptable to use different processes. Many contractors have specific working methods and our team is able to adapt to utilise these systems. We have experience with a variety of construction management tools including Viewpoint For Projects, Basecamp and BIM Collaborate Pro.

## **COMMUNICATION**

A key part of collaboration is regular communication and our team is always on hand to assist with advice and problem-solving whenever necessary. Each of our projects is assigned a Project Administrator and a Director to ensure that any issues raised can be dealt with efficiently and effectively. This ensures continuity on our projects and provides contractors with a constant point of contact.







# SUSTAINABILITY

WWA are experts in sustainable design and have Certified Passive House designers as part of our team. With progressively stricter energy performance standards to achieve, this knowledge can assist contractors in accomplishing these goals.

We are well-versed in a fabric-first approach and detailing for continuous insulation and air tightness. This knowledge can assist contractors in achieving sustainable performance measures for the client, delivering buildings fit for the future.

WWA has worked with a number of energy accreditation schemes and is well-versed in BREEAM targets and the credits required to achieve these targets.

In addition to practising sustainable design, WWA has a carbon reduction plan in place as part of their Environmental Management System, with a goal of being net zero by 2030. This can assist contractors on projects where there are client requirements for the supply chain to be in line with their own carbon performance metrics.

Sustainability encompasses more than just the environment; it also includes social sustainability. This is frequently a requirement for clients, and WWA takes a number of steps to improve social value, including apprenticeships, mentorship, and practice-based certificates. It also has connections to institutions that can help contractors when demonstrating social worth to clients.



Image Courtesy of RCC Visuals







# TWO BRIDGES

Brentford, London

## SUPPORTED HOUSING

WWA Studios assisted the London Borough of Hounslow; development partner Lampton 360 and EcoWorld London to create a new supported housing scheme. The project delivered 29 new homes, a mix of purpose-built supported housing, shared ownership and build-to-rent units. We were appointed from RIBA Stage 4 onwards and took the previous architect's design through the technical design stages.

The development is comprised of two blocks: one for general housing and one for supported housing. The second building adjacent to the new supported housing block, provides new residential homes in line with the London Housing Design Guide. The high-quality new homes are much needed in the area and deliver contemporary affordable and supported homes to the segment of the community most in need.

Our technical team delivered the scheme including detailing the fire strategy which was complex owing to the layouts of the buildings. The detailing and design of the two-tone brick facades were undertaken with great care to ensure the concept was delivered and included bespoke detailing of the part-brick, part-metal balustrade.

The landscaping around the building provides a natural setting for the buildings and as the vegetation matures it will provide various health and well being benefits to residents associated with the natural environment.

The technical design skills WWA used on this project enabled an efficient build and realisation of the concept design.

Photography by Adelina Iliev









# EDEN HOUSE

Hounslow, London



we are happy to bring 75 much-needed new homes to the community.

Cllr Steve Curran, Lead of Hounslow Council

## MIXED-USE DEVELOPMENT

Eden House is an exciting new development offering a variety of homes for individuals, couples and young families and a community space in the London Borough of Hounslow.

The Project was undertaken as a joint venture between EcoWorld International and Lampton 360, a wholly owned subsidiary of London Borough of Hounslow who employed our team as their architects for the scheme for RIBA Stages 0-6.

The eight storey scheme has been designed to provide every spacious apartment with its own balcony and shared access to a garden. The scheme also provides 4000 sq ft of community space at ground floor level.

Construction was a concrete frame with a lightweight steel frame infill system with a series of brick support angles incorporated to support the external cladding. The balconies were delivered to site pre-fabricated and slotted onto the secondary structural system.

The project was delivered in BIM and collaboration throughout the Design Team was managed in Viewpoint For Projects. Our technical package included a full set of drawings and specification. One of the key technical issues we overcame during the project was the impact of the change in fire regulations which occurred during the design process. This resulted in a change in fabric build-ups and our team were able to turn around solutions quickly to avoid delays to the project programme.

Photography by Adelina Iliev









# MAIDMENT COURT

Poole, Dorset

## INTEGRATED RETIREMENT COMMUNITY/ RESIDENTIAL CARE

Our Maidment Court scheme in Poole replaces an existing outdated care home. The new scheme comprises two buildings: one providing 47 assisted living apartments and the other 40 care suites plus staff offices, a bistro, coffee lounge, activity room, shop and hairdressing salon.

The spacious apartments allow wheelchair use and are dual aspect with stacked south facing balconies providing shade and private outside space. To break down the scale and bulk, there are glazed links, deep recesses, varying heights and a palette of complementary colours resulting in the appearance of a cluster of buildings rather than one large mass.

Careful programming and site layout design prevented the need for existing residents to vacate their homes, reducing the impact on their health and well-being and allowing a smooth transition to state-of-the-art residential care accommodation. This was fully coordinated with the contractor team to minimise disturbance to residents whilst maximising the site working area.

The project was undertaken on a Design and Build basis through a steel frame with lightweight steel infill. We worked collaboratively with the contractor to deliver the design sharing knowledge to deliver design details which were buildable, but also provided the required aesthetic.

Photography by Adelina Iliev



state-of-the-art retirement properties in landscaped grounds, along with a superb range of facilities and amenities designed to make retired life easy and enjoyable.

MHA









# ALL SOULS COLLEGE

Oxford

## HERITAGE

One of WWA's specialisms is heritage work and the projects undertaken at All Souls College are a good example of how WWA are able to work with contractors to preserve heritage buildings.

WWA has been appointed on a series of conservation led projects for All Souls College Oxford over the past 12 years. Starting with an energy audit of the 1438 front quad, we examined options for reducing energy consumption and carbon emissions from this medieval Grade I listed building. Subsequent works for the College include a series of stone conservation and restoration works to the south and west public facades and to the internal kitchen quad elevations.

WWA had to work closely with specialist subcontractors and the main contractor to deliver the solutions agreed under the Listed Building Consent. This included specialist cleaning techniques and replacement stone have combined to transform the appearance of the building achieving an Oxford Preservation Trust Public Realm Conservation Award.

The façade restoration phase was awarded the **Outstanding Contribution to Oxford** award by the **Oxford Preservation Trust Conservation Awards**.



We appreciate and value the team's knowledge, expertise, and sensitivity in relation to historic buildings, together with their strong awareness of the need for practical solutions which also address energy conservation requirements.

Dr Sarah Beaver, All Souls College, Oxford









# LORD WANDSWORTH COLLEGE

Long Sutton, Hampshire

## EDUCATION - SCIENCE CENTRE

The new Science Centre at Lord Wandsworth College was planned and designed as part of wider masterplan proposals to rationalise the existing campus with a landscape-led urban design strategy. The project was delivered through a traditional contract with WWA delivering contract administration and project management services.

The building is designed to provide new science laboratories for secondary school children and 6th formers. Many of the existing buildings on the campus are statutorily listed and brickbuilt with generously proportioned tiled roofs incorporating mansards. The science block design draws from these proportions, through the emphasis of the roof-scape. The use of modern zinc panels, in a tonal red-brown is sympathetic to the heritage context surrounding the building while embedding a future ready approach that responds to the climate emergency.

The contemporary design had to cater for the practical demands of the Science Department. For example, the demands of the science laboratories required significant ventilation to cater for fume cupboards and the use of bunsen burners. The design team worked closely with the M&E consultants to ensure the demands of the building could be met in a buildable manner creating a modern and elegant design.



WWA has been instrumental in transforming our campus. From campus masterplanning, to architecture, to project management, to planning consultancy, they have been superb. Professional, approachable and dependable.

Adam Williams, Headmaster, Lord Wandsworth College









# ABINGDON PREP

Abingdon-upon-Thames,  
Oxfordshire

WWA were appointed by Abingdon Preparatory School to analyse the suitability of existing teaching and support accommodation at the school and develop a strategy to resolve operational challenges of the site. The school is located within a Grade 2 listed building which has been extended and remodelled on an ad-hoc basis over many decades. A key part of this initial analysis was the conclusion that an expansion of the teaching facilities was required through an extension to the existing school building.

The project was delivered on a design and build contract with WWA switching to the contractor following the creation of a thorough set of Employer's Requirements Documentation for contractors to tender against. Particular attention was paid to the design of the bay windows which required careful detailing to ensure structural support and weatherproofing.

Once switched to the contractor WWA worked collaboratively to deliver the project and this working ethic helped to deliver a sensitive extension constructed to the highest quality.



Abingdon School has worked successfully with West Waddy Archadia over many decades. Most recently we are working together on substantial development plans for Abingdon Prep School and have now cleared planning consent and look forward to completing the project successfully!

Justin Hodges - Abingdon School.









# MEET OUR EXPERT TEAM

WWA is a an innovative multi-disciplinary practice of Architects, Urban Designers and Town Planners with a rich pedigree of successful projects delivered over our 137 year history. We offer outstanding client focussed services embracing the natural crossover between built environment disciplines and we consistently deliver high quality projects on time and on budget.

Our team of town planners offer added value to clients with an exceptional success rate in achieving planning consent.

Find out more about our team and the outstanding projects they deliver, via our website and social media.



@wwa\_studios



[wwa-studios.com](http://wwa-studios.com)











## OXFORD STUDIO

THE MALTHOUSE  
60 EAST ST. HELEN STREET  
ABINGDON, OXFORD  
OX14 5EB

0123 552 3139  
OXFORD@WWA-STUDIOS.COM

## LONDON STUDIO

ASHLEY HOUSE  
58-60 ASHLEY ROAD  
HAMPTON  
TW12 2HU

0208 941 5161  
LONDON@WWA-STUDIOS.COM