

# Building to improve learning outcomes



At Clay Architecture we are passionate about the role architecture can play in improving learning outcomes.



Clay Architecture's studio

Cover image: Cranbrook School Sixth Form Centre

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## Our work with schools

We have worked on school building projects for over 20 years.

Our experience includes primary and secondary schools in the state and private sectors, and schools for students with special educational needs. Clients include local authorities, trusts, academies and schools.

Some clients are looking for an architect who understands schools and can guide them through the design and construction process on what may be their first building project. Other clients are looking for a safe pair of hands.

Whatever the circumstances, we work closely with the school leadership team to develop their brief and bring their aspirations and plans to life. They trust in our ability to deliver and realise we offer a unique set of creative and technical skills and expertise.

We always work to realistic budgets and timescales. We are resourceful and think outside the box when a project needs it.

In all our school projects, the health, safety and wellbeing of students and staff is paramount.

Cranbrook School Sixth Form Centre



Walderslade Primary School



# Types of projects for schools

**We work on a diverse range of school building projects. This diversity reflects the needs of our clients, the evolving nature of education and the different types of buildings and facilities on a school site.**

A single school site may include older buildings from the Victorian and Edwardian periods. Some have earlier buildings that may be listed. Often there are buildings from the postwar period of the 1950s to the 1970s and, more modern buildings and facilities,

some of which were originally designed to be temporary. Each period and type presents different challenges to look after and maintain.

Masterplanning connects all the elements on a school site, including buildings, facilities, land, other structures and physical assets. Our masterplanning work delivers opportunities for schools to make the most of their site or sites in a long-term, strategic way. Refurbishing and building work is often done on a phased schedule over several years.

**Most school building projects fall into three categories:**

1. RMI - the repair, maintenance and improvement of existing buildings and facilities
2. The design and construction of new buildings and facilities
3. Masterplanning

Design and construction projects	RMI projects
<ul style="list-style-type: none"> <li>• Temporary school buildings</li> <li>• Modular school buildings</li> <li>• Refurbishing and repurposing buildings</li> <li>• Extensions</li> <li>• Specialist buildings and facilities including:                             <ul style="list-style-type: none"> <li>– Halls, gymnasiums and sports facilities</li> <li>– Libraries</li> <li>– Sixth form centres</li> <li>– Special educational needs facilities</li> <li>– School farms</li> <li>– STEM blocks</li> </ul> </li> </ul> <p><b>Total construction costs range from £500K to £10m.</b></p>	<ul style="list-style-type: none"> <li>• Condition surveys</li> <li>• Roofing repair and replacements</li> <li>• Reglazing, re-cladding and other thermal efficiency improvements</li> <li>• Structural repairs</li> <li>• Building fabric repairs</li> <li>• Safety and accessibility works</li> <li>• Conservation of and remedial works to listed and historic buildings</li> </ul> <p><b>Total construction costs range from £150k to £3.5m.</b></p>

**We are perhaps unusual amongst architecture firms because of our RMI work. This is driven by our interest, training and experience in sustainable design and building conservation.**

Visit [www.clayarchitecture.com/blog/article/architects-add-value-rmi-projects](http://www.clayarchitecture.com/blog/article/architects-add-value-rmi-projects) for more information.

**In our experience, the idea for a new school building project can be either building-driven or driven by educational needs, or a combination of the two.**

Projects driven by buildings	Projects driven by educational needs
<ul style="list-style-type: none"> <li>• Repair, maintenance and improvement works</li> <li>• An existing building is no longer fit for purpose</li> <li>• Existing facilities are supplanted by newer facilities and can be repurposed</li> <li>• Surplus land or buildings can be redeveloped or disposed of to raise capital</li> </ul>	<ul style="list-style-type: none"> <li>• The school wants to use architecture to attract new students and parents</li> <li>• Rising roll requires expansion</li> <li>• There is a major change, for example a new Head or leadership team, or an amalgamation of two or more schools</li> <li>• A new or developing specialism requires very particular facilities</li> </ul>

# Key considerations

We've distilled the things that you need to think about into eight key considerations.

## 1. Briefing and concept design

**Briefing is how we learn about your school and your requirements.**

We work with you to develop and agree a brief and a scope of work for your project. Where new or re-ordered classrooms are involved, this brief often takes the form of an accommodation schedule. We will discuss and agree with you the standard to which the rooms or halls will be developed. In England this is usually the Building Bulletins produced by the DfE, which offer guidance on school design requirements.

**For design and construction projects,** once the brief is agreed we start by producing a concept sketch design.

**For RMI projects** (refurbishment, maintenance and improvement), we start with site visits to assess the condition of your buildings. Depending on the urgency and scale of the work involved, we may recommend more detailed condition surveys. We can then advise on the repair and remedial work.

## 2. Feasibility

**Feasibility looks at whether something can be done.**

**Our feasibility work is crucial to our school clients. We consider all the challenges you may face when developing an existing building or adding new facilities.**

Depending on your location, we look at site access, ground conditions, topography, flood risk, protected species and other factors which may affect your site. We also assess any specific challenges, risks or hidden costs that may arise on particularly difficult sites. These factors may affect your project's viability, make planning approval or construction more challenging, or affect the timing of your build.

**Carrying out a proper feasibility study helps identify potential risks and reduce the chance of unforeseen costs and delays once your project is underway.**

## 3. Viability and cost management

**Viability looks at whether something is affordable or worth doing.**

When we work with our school clients on viability, we look at all the potential costs alongside the value the project will deliver.

**Every school is different in terms of its needs, financial resources and the state of its existing built assets. Once we have developed an understanding of your school through the briefing and feasibility process, we will work closely with you to come up with creative and pragmatic solutions tailored to your budget and circumstances.**

The viability of your project will be tested through cost appraisals of the concept sketch design and feasibility studies. In some cases, more than one option will need to be tested in order to determine which is best.

**Once a budget and a preferred option are agreed, cost management techniques such as risk management and, if necessary, value engineering (cost cutting) will be used to keep your project within budget.**

## 4. Gaining planning permission

**Understanding the planning system and how to navigate it is crucial to a successful school building project. We have significant experience in gaining planning permissions for schools in Kent and elsewhere, including applications involving conservation areas, listed buildings, or schools within the Green Belt and other protected areas.**

The pre-application process is particularly important. We submit a preliminary proposal and consult with the local planning authority and other relevant parties on your behalf. This happens before a full planning application is formally submitted. We have an opportunity to test the planning feasibility of your project, identify potential planning issues and clarify the list of requirements for the full application.



Chatham and Clarendon Grammar School

## 5. Student-focused design

**We design learning environments that are student-focused, which means they are responsive, flexible, easy-to-use spaces that encourage collaboration and can enhance learning.**

Air, noise, light and temperature controls are optimised wherever possible to provide a healthy learning environment. A great example of this approach is our work on an alternative 'inside-out' naturally ventilated prototype school building. You can find out more by following [this link](#).

**Our school buildings incorporate the principles of inclusive design and address the barriers that students and staff may face when accessing and utilising school facilities. Inclusive design is particularly close to our hearts as we work extensively with special needs schools.**

## 6. Sustainable design

**In our experience, young people are very concerned about climate change and the impact their school buildings can have on the environment.**

Planners also actively consider the sustainability of all property development, including school projects, which involves assessing climate change, flooding and coastal change, and conserving and enhancing the natural and historic environments of a planned building development.

**We have a set of sustainable design principles that inform all our work. You can find out more by following [this link](#).**

## 7. Funding support

Depending on your financial circumstances and your type of school, you may have access to external grant funding, or you may need to raise funds through borrowing, through a fund-raising drive or by other means.

**We support our school clients in this process by providing the technical project information they require for their fund raising. We have also been involved in presenting projects to board members and potential funders to help promote our client's project.**

## 8. Construction project management

Project management involves managing the activities required to complete a construction project successfully. If there is no official project manager position, we often assume that role because our clients want a single point of contact and they trust us to manage things effectively. We can also work closely with a Project Manager where a client appoints one. We also take on the official role of Contract Administrator where it exists. This role is focused on managing the legal and financial aspects of contractual agreements between the client and other parties, primarily building contractors.



Walderslade Primary School

# Walderslade Primary School

**Award-winning new one form entry community primary school on a technically challenging site.**

**Location:** Chatham, Kent

**Type of school:** State primary school

**Number of students:** 228

<https://www.walderslade-pri.medway.sch.uk>

Walderslade Primary School was a popular 105-year-old single form entry primary school known locally as ‘the hutted school’ because it consisted of a collection of modular units, huts and sheds.

The council had planned to move the school and merge it with another school, but strong local opposition meant the plan was abandoned. Instead, we drew up plans for a new build replacement school made of ‘permanent solid brick’, with common areas visible to the public to reinforce the school’s strong ties with the community. These plans were developed in close collaboration with the headteacher.



The school site is steeply sloping and had insufficient play area. Our plans included a 60-metre-long bored pile retaining wall that cuts into the chalk along the top boundary of the site. A compact two-storey single-aspect school building was built into the hill.

Pre-construction enabling works included the phased demolition of existing buildings followed by the installation of temporary classrooms. The school decanted into the temporary buildings, which were separated from the construction site by an acoustic fence.

The internal floors and corridors of the new building are designed to be gently stepped and imperceptibly sloped to fit within the contours of the hill. The new building has a low impact on neighbours, something the planners were keen on.



There are grassed and rubber-crumbed rooftop play areas, which make up the shortfall in hard play area. The north elevation forms a continuous brick ‘cliff face’ punctuated by large windows.

Classrooms set behind this cliff face benefit from the best natural light from north-facing windows and generous views across the valley. Large areas of rooflights and lightwells bring natural light and fresh air deep into the building.

The new school building achieved a 'Very Good' BREEAM rating. Circulation corridors and lightwells are top lit with south-facing monopitch rooflights specified to reduce solar heat gain. Additional control is provided by external roller blinds and openable lights operated by CO<sub>2</sub> and temperature sensors within the circulation space and rain sensors on the roof. A fully automatic passive ventilation system enables 'stack' effect ventilation with motorised wall louvres integrated into windows and acoustically attenuated ducts to roof mounted terminals.

During the summer months night-cooling is designed to purge the warm air and use the building's thermal mass to store coolth and help reduce internal daytime temperatures.



Rooftop playground

164m<sup>2</sup> of photovoltaic panels mounted on the south-facing roof provide carbon emissions savings in the region of 6,860 kg CO<sub>2</sub> per year, reducing the school's carbon footprint by 23%.

This project won a Kent Design & Development Award as well as a retrospective Medway Award in 2017 for best school building completed in Medway in the last decade.





# Rural Activities Centre at Abbey Court Special Educational Needs School

**Conversion of a former school playing field into a school farm and Rural Activities Centre, for students with severe, profound and multiple learning difficulties.**

**Location:** Strood, Kent

**Type of school:** State special foundation school for students aged 3 to 19 with severe and profound learning difficulties

**Number of students:** 185

<https://www.abbeycourt.medway.sch.uk>

The Rural Activities Centre is the culmination of the Abbey Court School's desire to use nature and animals to enrich its curriculum. It offers students a unique learning environment that

engages, motivates and prepares them for the future.

The rural activities centre is a mini working farm offering a safe environment for vulnerable students. We included hand-wash facilities and a wheelchair wash station. There are clearly separated circulation routes between farm and non-farm areas. The routes from classrooms to the stables, barns, paddocks and animal areas are free from farm vehicles



Aerial view of the completed Rural Activities Centre



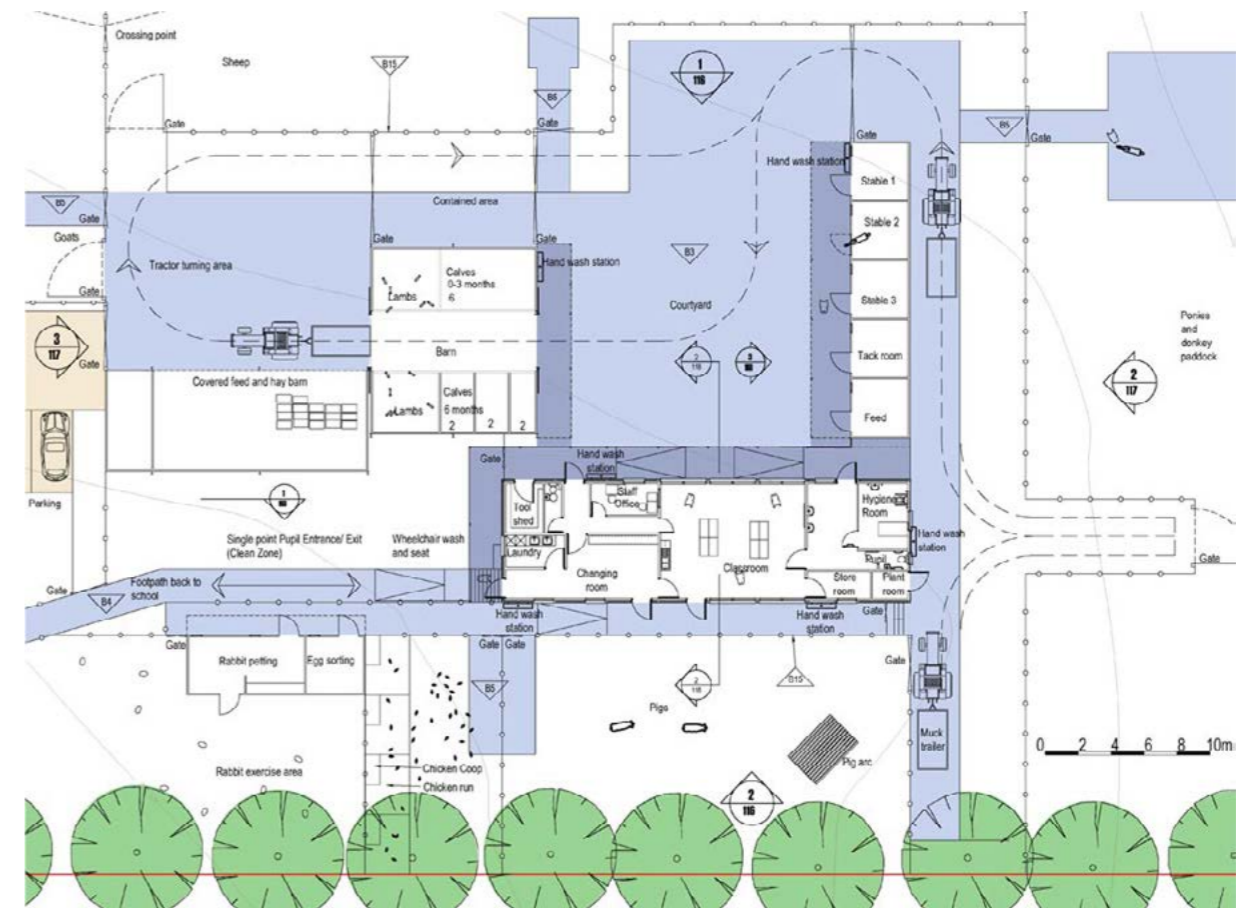
and tractors and include covered, accessible, all-weather pathways.

To keep costs down and to provide as authentic a farm-feel as possible, we selected and adapted standard agricultural and equestrian building systems, and completely repurposed and refurbished a used modular classroom. Large picture windows look out from the classrooms to the farm, so larger animals can be brought right outside the classrooms as a gentle first step to familiarising students with the animals.

*'Our farm is constantly growing and developing. We currently have several different animals living on the farm, including, donkeys, Shetland ponies, goats, rabbits and chickens. The pupils are also helping us to develop the polytunnel, where we have already successfully grown a range of fruit and vegetables, which many of the pupils have enjoyed tasting!'*

## Abbey Court School

<https://www.abbeycourt.medway.sch.uk/curriculum/curriculum-enhancement/rural-activity-centre/>



the school farm is carefully laid out to ensure accessibility and safety

## Danecourt School

**Replacement new build Foundation and Key Stage 1 wing for students aged 2 to 11 with moderate learning difficulties including autistic spectrum disorders.**

**Location:** Gillingham, Kent

**Type of school:** State special school for students with complex learning needs

**Number of students:** 234

<https://www.danecourtschool.com>

Danecourt School's Foundation and Key Stage 1 classrooms were housed in modular buildings coming to the end of their useful life.

Working closely with the headteacher, we designed a replacement wing as a three-sided cloister around a central courtyard of outdoor play areas, creating calm and safe internal and external environments.

The split-roof section provides natural light and ventilation. Spaces are as clear and as simple to understand,



navigate and use as a child's drawing. A rich but controlled palette of materials is punctuated by slabs of eye-popping colour which differentiate spaces and frame views of the playground and field.

The outer wall of the cloister is a physical and visual barrier against the car park. No doors lead out and windows screen the views so students are kept away from parked and moving vehicles.

**Staff and students like the new wing because it does not feel like a Special Educational Needs school.**

The colours are based on a study on the effects of colour on autistic behaviour, but you don't need to know this to enjoy it.





## Brompton Westbrook Primary School

**Expansion works for a school located in a protected historic military landscape.**

**Location:** Gillingham, Kent

**Type of school:** State primary school

**Number of students:** 443

<https://www.bromptonwestbrook.medway.sch.uk>

Brompton Westbrook Primary School has very close links with the Royal School of Military Engineering and the Gurkhas and is located on the edge of an army housing estate in Gillingham.



40% of its students come from service families and some do not speak English as a first language. There is a high level of churn as families move from posting to posting.

In response, the dedicated staff have developed a successful teaching style involving small groups, one-to-one teaching, and close engagement with the community. The new expansion works are designed to accommodate and facilitate this.

Extending the original Kent County Architects' buildings, our aim was to take standard materials and methods of construction and put them together in a way that is carefully thought out and a little less ordinary.

We asked Sue Mason, Head of Brompton Westbrook Primary School, what difference the extended building is making to the school.

*'I'll say how we have been able to meet community need with the new, self-contained hall (as well as this helping sustain budget through income generation). That the children have benefitted from the new classrooms and the increase in roll has helped to meet local need for school places. How the design has complemented our teaching style to meet the needs of our high student mobility (i.e. with lots of small spaces to provide group and 1-1 intervention) and how this in turn has ensured that, during a time of assessment, instability and change, our results continue to improve. I can say how proud we are of the new design and how visitors comment on how nice the building looks.'*

**Sue Mason, Head Teacher**



## Cobham Hall School

**Feasibility study to reconfigure vehicle parking, drop off and pick up points within this Grade I listed setting.**

**Location:** Cobham, Kent

**Type of school:** Independent boarding and day secondary school for girls with a co-ed sixth form

**Number of students:** 180

<https://www.cobhamhall.com>

Grade I Listed Cobham Hall is one of the largest and most important houses in Kent, consisting of Tudor wings dating from the 16th century and a classical central block or cross wing dating from the 17th century. It was



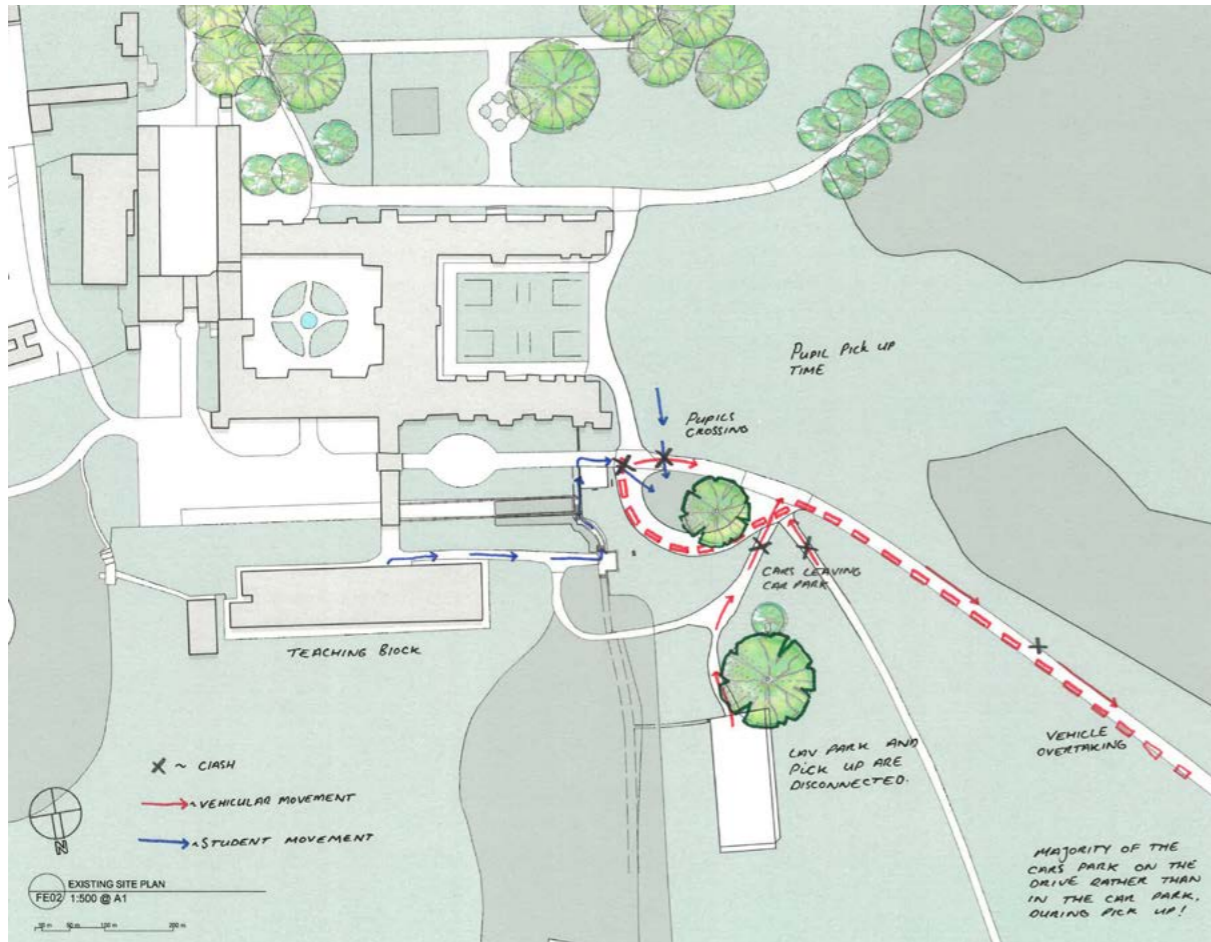
the family home of the Earls of Darnley from the 18th century until 1957, when it became the home of Cobham Hall School, an independent boarding and day school for girls aged 11 to 18. The park and garden are Grade II\* Listed, and the landscape is an Area of Outstanding Natural Beauty.

The house is set in a deer park which no longer has deer. A grand avenue of fine old trees once led directly from the west to a stepped main entrance on the impressive and beautiful Tudor south wing which has sweeping views of the park and avenue. The avenue remains but is no longer the drive to the house.

In the 18th century, the practice of improving estates according to

picturesque principles gained in popularity. Humphry Repton, regarded as the successor to Capability Brown and the last great designer of the classic phase of the English landscape garden, produced one of his Red Books (designs presented in red Morocco bound albums) for the garden in 1790.

The house is now approached from the north-west and visitors arrive at what is effectively the rear entrance. There is a small car park and a drop off and pick up area for students. Both are poorly planned and this means cars are badly parked or stuck in a jam on the drive, with students walking in between them to reach cars further back in the line. We carried out a sketch design exercise to rethink this arrangement.



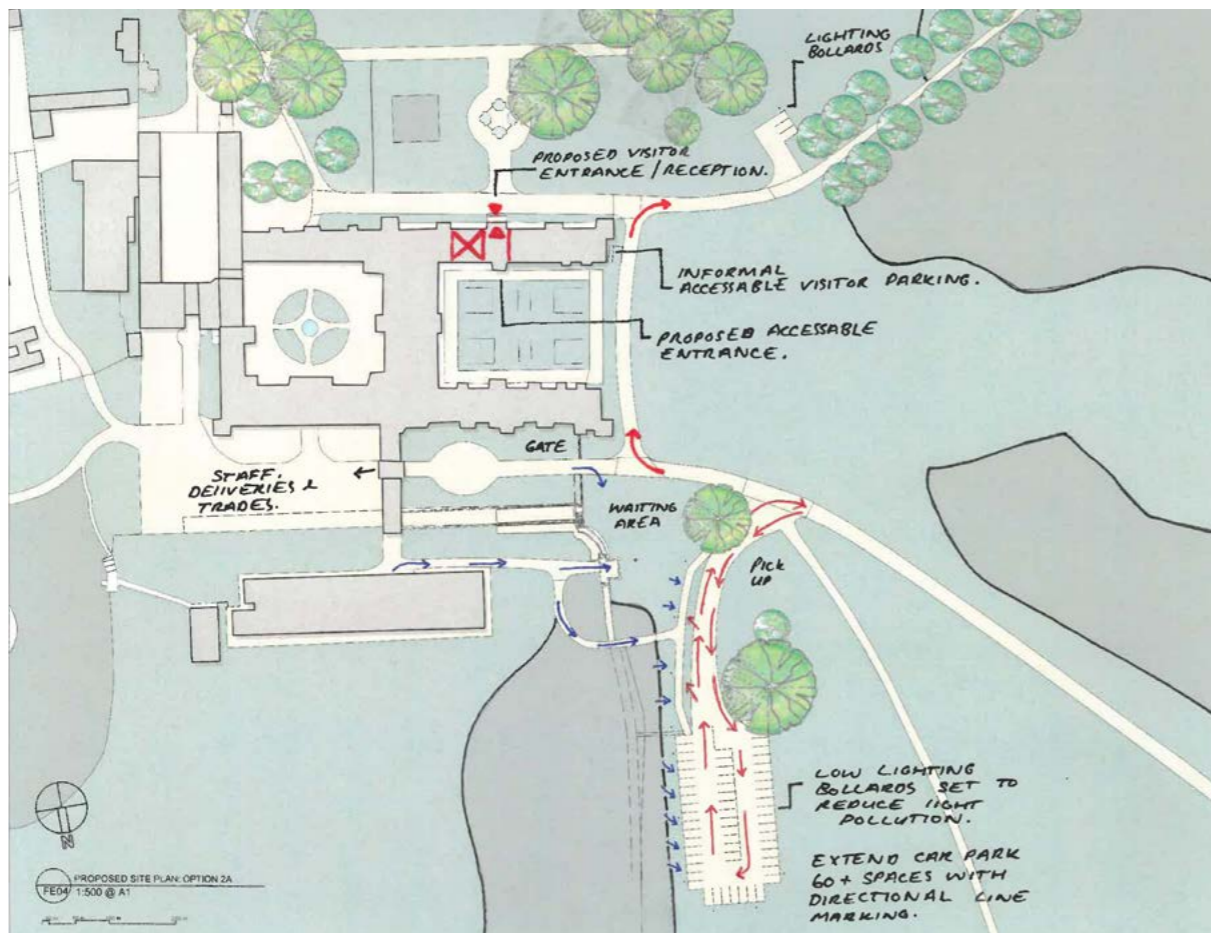
Plan analysis of safety issues and the causes of congestion



View of the existing layout



View of the proposed layout



Proposed reordering of parking and pick-up to solve issues

**Our designs mean that:**

- The visitor entrance and school reception is relocated to the south wing, with dedicated visitor parking carefully sited within the park and ramped pedestrian access through the ornamental courtyard garden. Through creative design and with minor amendments to the historic doors, the entrance hall will have optimum views of both park and courtyard garden, impressing visitors with the glorious landscape.
- The car park will be enlarged and redesigned to enable a better flow of cars away from the main drive for drop off or pick up, and partially obscured from view by a grassland habitat. A clearly defined waiting area is centred around and in front of the raised bastion designed by Repton.

## Cranbrook School Sixth Form Centre

**Conversion of a 1960s gymnasium into a vibrant new sixth form centre.**

**Location:** Cranbrook, Kent

**Type of school:** Co-educational state secondary grammar school with boarding

**Number of students:** 320 in the sixth form, 872 in total

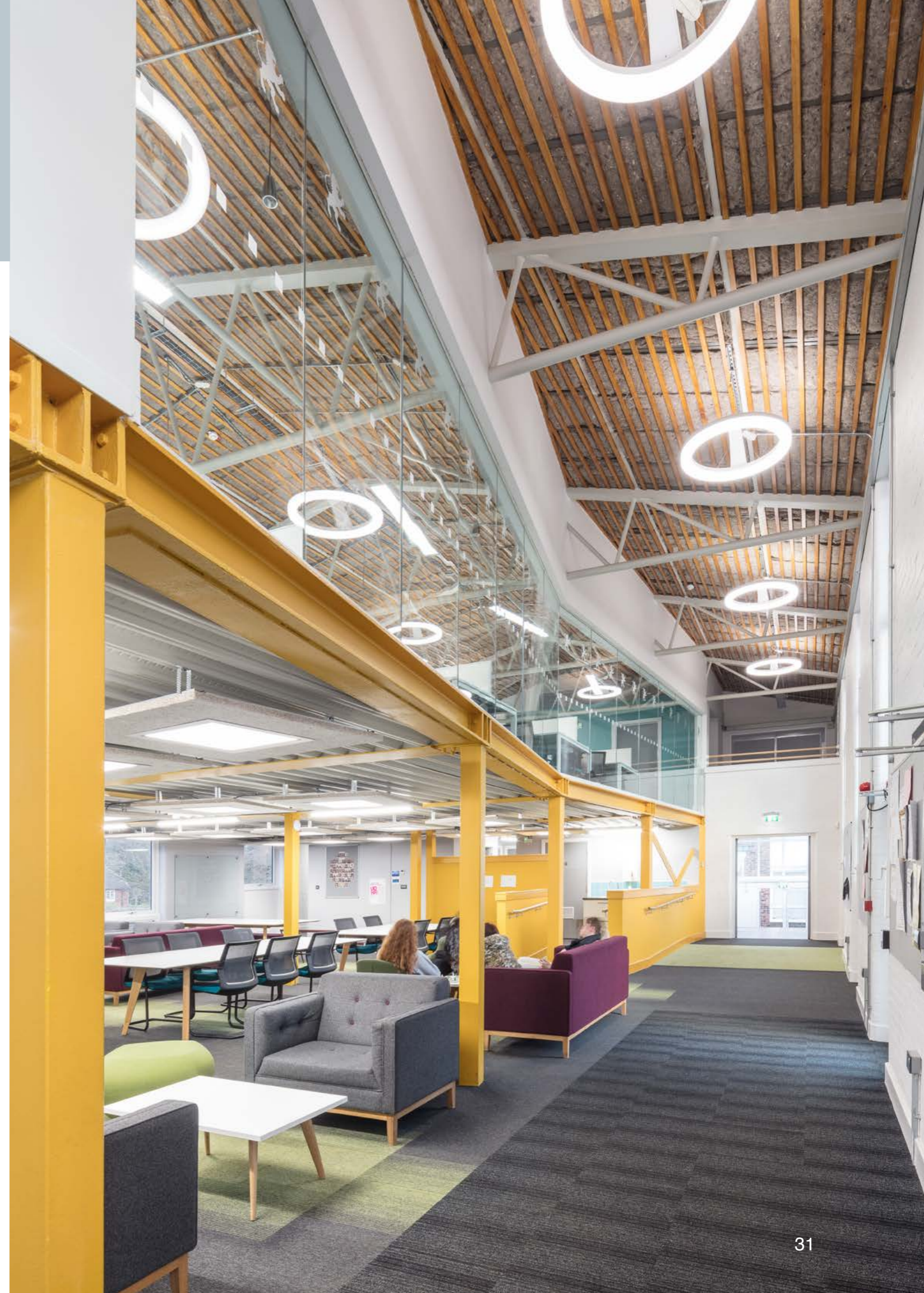
<https://www.cranbrookschool.co.uk>

Founded in 1518, Cranbrook School is a mixed grammar school with boarders. Top of the school's masterplan for redevelopment was a new sixth form

centre, to mark the school's 500th anniversary.

The brief was to convert the old 1960s gymnasium into a contemporary sixth form centre. The design inspired a fundraising drive within the school community and alumni.

Our plan avoided radical and costly changes to the building and instead







included viable, sustainable solutions for a healthy and comfortable interior environment.

The result is a light-filled, naturally ventilated open plan space with a generosity of space and height.

Noise was a significant problem in the old sixth form centre. Our use of strategic acoustic separation and acoustic dampening, coupled with large areas of thick frameless glass, now allows noisy social activities to co-exist happily with quiet study.

*‘Clay Architecture’s work on Cranbrook School’s new Sixth Form Centre has been exemplary. Students, staff and parents have fed back unanimously and positively on the quality of the new building. The segregation between the work space and the social space has been a revelation. The new structure has improved the work ethos and the study environment of our students beyond measure. All in all, a great design, a great building and real asset at a time when the school’s Sixth Form is becoming increasingly successful and popular.’*

**John Weeds, Headteacher**

## Fairview Community School

### Amalgamation, refurbishment and extension of existing junior and infant schools into a single three form entry primary school.

**Location:** Gillingham, Kent

**Type of school:** State primary school

**Number of students:** 662

<https://www.fairviewprimary.co.uk>

Fairview Infant School and Fairview Junior School shared the same vehicular entrance and playing fields, but were separate schools with separate identities, headteachers, boards of governors and staff.

The two schools were physically abutted but unconnected on a sprawling site. They had separate kitchens, dining halls and assembly halls. Car parking and drop off was poorly planned with local traffic gridlocked at the start and end of each school day. Footpaths and car parks were poorly planned and unsafe, with little segregation between vehicular and foot traffic. Few students walked to school.



When one of the headteachers retired, Medway Council took the opportunity to amalgamate the two schools into a single three form entry primary school, one of the largest in the area.

A combination of new builds, extensions and refurbishments forged a distinct identity for the new school with tilted, sweeping and curved roof forms topping walls of Staffordshire blue brick and red, blue, purple, and green rendered walls set against the existing palette of flat felt roofs and yellow brick.

The extensions and new builds house a new, centralised front entrance with

administrative hub and staff area. There are new nursery and reception block and a new link and lift access to first floor classrooms in the junior section.

We carved out space between the two formerly separate schools to create a large, shared, centralised dining hall and kitchen. We formed new routes across the two halves of the school to link classrooms with the infant and junior assembly halls respectively.

Key stage 1 classrooms were upgraded to provide adequate storage, cloakrooms and toilets to the standards of the time.





'Ahhhhh! Celtics Rule' from drawing workshop conducted by Camilla Prizeman



Sample sgraffito by Tom Organ for proposed mural using students' drawings

Clay Architecture Director Camilla Prizeman gave talks to students about different ways of drawing and conducted drawing workshops on themes connected with their school curriculum, such as the Roman Invasion and Will Adams, the local seaman who became the first English samurai.

**External works included:**

- Car park expansion
- New external circulation with clearly defined vehicle and pedestrian zones
- Creating new pedestrian access and footpaths across the site to encourage parents and students to walk to school via the formerly land-locked school playing fields
- Re-organising and rationalising the different parent waiting areas, play areas and pick-up points for foundation, Key Stage 1 and Key Stage 2

**The works were delivered on time and on budget in five separate building contracts over two years.**



## Queen Elizabeth Grammar School

**Repair and refurbishment works to the deteriorating façade of a 1960s school building, improving comfort and providing a fresh look.**

**Location:** Faversham, Kent

**Type of school:** Co-educational state secondary grammar school

**Number of students:** 984

<http://www.queenelizabeths.kent.sch.uk>

The main teaching block and science block were built in 1967 of reinforced concrete with an exposed concrete frame. It was in a very poor condition with sections of concrete spalling and



falling off, exposing the corroded steel reinforcement underneath. Repairs undertaken in 2001 and 2005 were already failing. The buildings needed constant maintenance and posed a risk to health and safety.

We carried out a detailed investigation of the building frame and envelope and an analysis of heat gain and natural ventilation to develop a refurbishment strategy involving:

- Encasing two linear kilometres of defective concrete
- Removing horizontal concrete window transoms
- Repair and protection of the exposed concrete frame
- Installation of double-glazed aluminium windows
- Insulating and recladding the walls

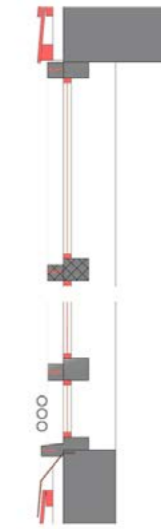
The new windows and cladding were designed to be fixed in front of the exposed concrete frame, protecting and insulating the reinforced concrete elements from the weather. An outer pane of solar glass reduces solar heat gain by 52% without a significant loss of daylight. In summer, blinds can be raised, the windows can be opened for natural ventilation and the and natural light floods the classroom, so artificial lighting is not needed.

The success of this project means the classrooms are now comfortable and perform significantly better than before, with reduced running costs.

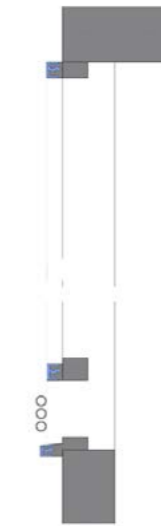
We managed the contract, took on the post-contract quantity surveying role and kept to the tight budget, completing in time for the new academic year.

*'In working with Clay at Queen Elizabeth's School Faversham, I have seen how their meticulous and accurate work in preparing and managing a 350-window replacement and recladding project has revitalised a drab and uninspiring 1960s building into a building fit for the 21st century. This project alone helped the school to improve its marketing appearance and helped improve the students' perceptions of the school.'*

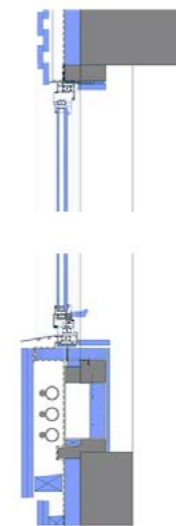
**Chris Freeman, School Business Manager, Queen Elizabeth Grammar School**



The teaching block before repair and refurbishment with cross section through existing window and wall



Work in progress: strip out, concrete repairs, recladding



The teaching block after repair and refurbishment with cross section through new cladding and glazing

# Chatham and Clarendon Grammar School

## Successful £2.3m funding bid for essential repairs to Grade II Listed grammar school buildings.

**Location:** Ramsgate, Kent

**Type of school:** Co-educational state secondary grammar school

**Number of students:** 1,400 approximately

<https://www.ccgrammarschool.co.uk>

Chatham & Clarendon Grammar School is a large co-educational

grammar school located in the centre of Ramsgate. The school was established in 1797 and currently operates from three very large sites to meet the needs of its 1,400 students.

Chatham House is a Grade II Listed four-storey Victorian school building dating back to 1882. Under the Property

Chatham House



Data Survey Programme the Education Funding Agency's surveyors carried out a ground level visual survey and graded the building condition B, or Satisfactory – low funding priority.

We raised concerns over a severely weathered stone finial on the roof turret, visible from a window at the top of the stairs. Storms and high winds were forecast for that winter, so an emergency Listed Building application was made for the removal, repair and reinstatement of the finial.

Due to the size of the buildings and restricted access around the rear, we had to hire different sized cherry-pickers and spend another two days surveying to get the full picture. The completed condition survey report marked the building condition grade down to D, or Bad – Priority rating 1, in need of immediate action.

Clarendon House



Based on our condition survey report, the Condition Improvement Fund (CIF) awarded the school £2.3m to carry out essential works.

*'Clay Architecture have worked on several building projects identified within the School's Premises Development Plan since 2013 and were selected due to their previous works carried out at the Queen Elizabeth Grammar School, Faversham and Chatham Grammar School for Boys. Kasan Goh and Camilla Prizeman worked very closely with us to understand our requirements and to translate these requirements into reality. Kasan, Camilla and their team have provided an excellent architectural and building project service to our school. Their understanding and knowledge has helped other schools improve their buildings and the surroundings for thousands of students and staff.'*

**Chris Freeman, School Business Manager, Chatham & Clarendon Grammar School**



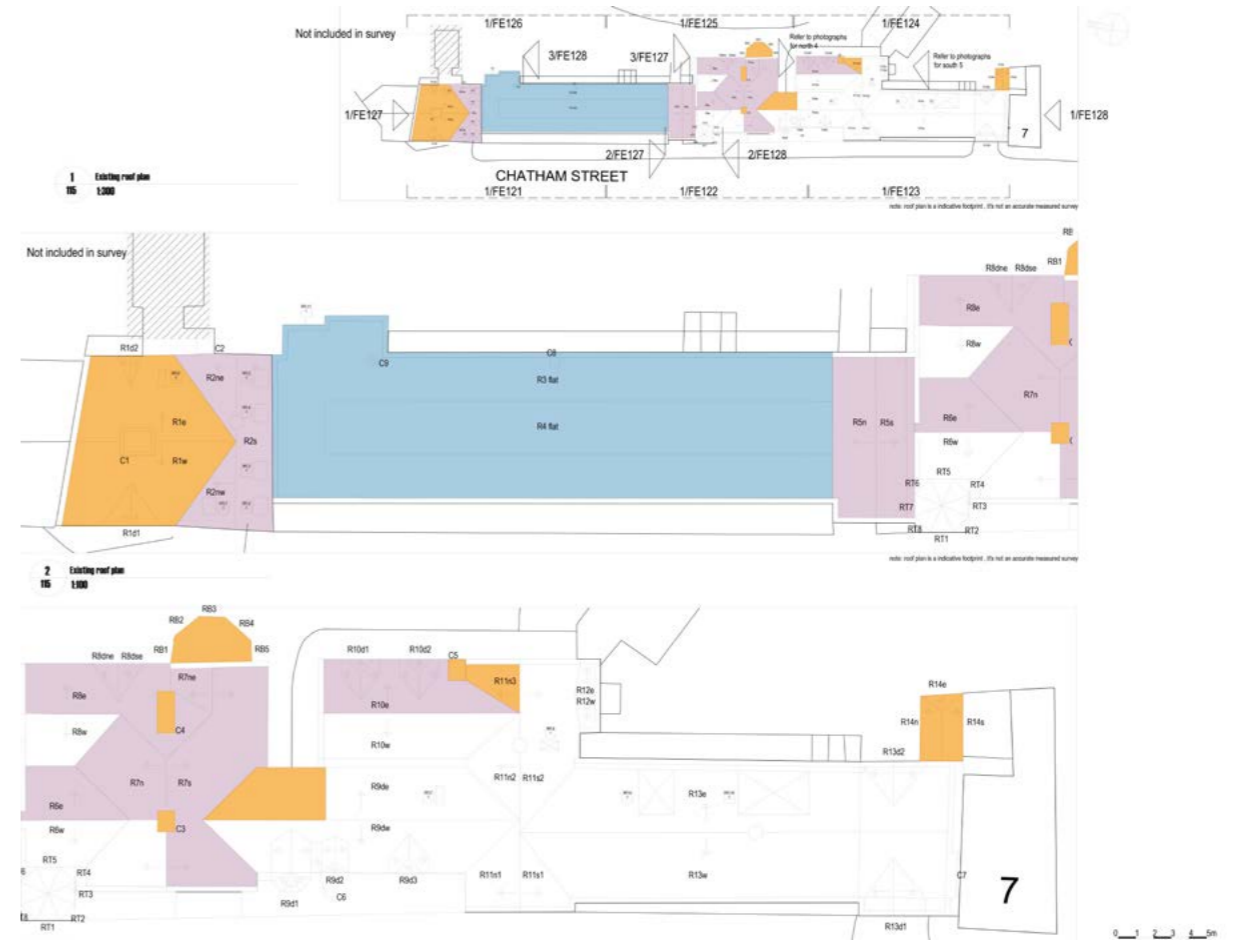
Roof survey and inspection



Rooftop weathered finial above the front entrance



Dangerous rooftop objects temporarily removed



Plan of roof condition: blue indicates 100% reroof of flat roofs, mauve 100% reroof of tiled roofs, orange 25 to 50% reroof of tiled roofs.



Wall condition: green indicates areas of concrete mortar leading to spalled bricks and deteriorating walls

## Gad's Hill School

**Phased masterplan for new Upper School buildings set in the grounds of Grade I Listed Gad's Hill Place, the former home of Charles Dickens.**

**Location:** Higham, Kent

**Type of school:** Co-educational independent day secondary school

**Number of students:** 321

<https://www.gadshill.org>

This is a highly complex and challenging project with several issues.

In 2010, under a previous leadership team, the school obtained planning approval for a new junior school and senior school. The junior school was completed in 2014 but constructing it put the school under financial strain.

The 2010 approved senior school is not financially feasible.



Temporary planning permission has expired for key buildings that were due to be replaced by the approved but unaffordable senior school.

The floors of Grade I Listed Gad's Hill Place are in a poor structural condition after 100 years of use as a school building. To conserve the building and prevent further deterioration, major structural repairs are needed within the next few years.

Working closely with the school, we have produced an alternative masterplan to meet the school's needs with a number of smaller school buildings spread across the site. They will be built in several affordable phases alongside the conservation of Gad's Hill Place.

The school grounds are within the Green Belt. There are also sensitivities regarding the impact of the proposed



Charles Dickens in his study at Gad's Hill







Plan from the sale of Dickens' estate in 1870



Google Earth aerial view of the school site



Removal of cupola at Gad's Hill Place for refurbishment

new school buildings on the setting of the Grade I Listed house and their impact on historic views from the house which Dickens described in his letters. This adds an additional level of complexity to the design and planning approval process.

In collaboration with cultural and heritage consultancy Sue Millar Associates, we are developing plans for a Creative Arts Hub and Storytelling Centre as an educational and community facility and visitor attraction to be housed in Dickens' former home. This could create an additional revenue stream for the school, helping to raise funds for the phased masterplan.

Pre-planning consultation has been completed with Gravesham Borough Council and Historic England and will lead to a full planning and listed building application.

We have begun essential and urgent repair work on the historic buildings, most notably the restoration and repair of the cupola on the roof of Dickens' former home. This first small step towards the larger project will be completed in time for the School's centenary and Gravesham Council's 50th anniversary celebrations.

*'From their first visit to site, it was clear that the directors of Clay Architecture are very creative and collaborative and their ethos and culture are a great fit with Gad's Hill School. Their balance of contemporary design and building methods with careful, skilled heritage restoration make them the ideal partner. We're pleased that we will be working closely with the directors on this long-term programme of significant investment.'*

**Barry Golding, Former Bursar and Clerk to the Board of Governors, Gad's Hill School.**

## About us

Clay Architecture is a RIBA Chartered Practice based in the Medway area of Kent with long-standing clients and a deep sense of place.

We love working on difficult sites and challenging briefs and we are tenacious, obsessed with innovation and detail. We combine a passion for historic buildings with a flair for contemporary design. Clients trust in our ability to deliver.

### Kasan Goh

Kasan is a Chartered Architect and is design, technical and procurement director at Clay Architecture.

He has worked on a wide range of projects in addition to schools, including community centres, libraries, museums and galleries, crematoria and residential.

After completing his national service as a combat engineer officer in Singapore, Kasan studied at the Architectural Association in London under Alvin Boyarsky.

Kasan listens, consults, observes and analyses client needs, which he then crystallises into a clear vision and a viable plan.

### Camilla Prizeman

Camilla is a Chartered Architect, a Conservation Architect Registrant and Managing Director of Clay Architecture.

Her work spans schools, healthcare, sport and leisure, community, museums, libraries and galleries, ecclesiastical and residential.

Camilla studied sculpture at Chelsea School of Art. She then worked with her father, the polymath and architect John Prizeman, on the crypt at St Martin in the Fields and with conservation practice Carden and Godfrey before qualifying at the Architectural Association.

Camilla combines a tenacity and steely practicality with her love of sculpture, design, English gardens, the natural landscape, traditional forms of construction and decorative façade techniques.

## Our in-house team

Camilla and Kasan are supported by a small team who work at Great Lines Studios in Gillingham, Kent.

Great Lines Studios is a converted British Concrete Federation hut on the edge of the Great Lines Heritage Park, one of the few remaining intact historic military landscapes in England.

Clay Architecture has a growing in-house team who share a drive and determination to make a difference. We believe in teamwork and in training our staff. We give them hands-on experience so they become well-rounded architects. Our in-house drawing and management systems enable us to work accurately and collaboratively in real time, and share, update and cross-check information so that potential issues are identified and ironed out promptly.

## Our wider team

To complement our in-house team, we assemble a wider multidisciplinary team to work on a school project. Our network of trusted consultants and collaborators includes:

- Acousticians
- Building Control providers
- Conservation specialists
- Cost consultants
- Ecologists
- Landscape architects
- Mechanical and electrical service engineers
- Structural and civil engineers
- Town planners



Design for a prototype 'inside-out' naturally ventilated STEM Block using modern methods of construction.

**Please contact us to discuss your project in detail.**

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