

# Beehive

Community Centre - Burgess Hill

Response for the Beehive  
Community Centre redesign by  
unknown works

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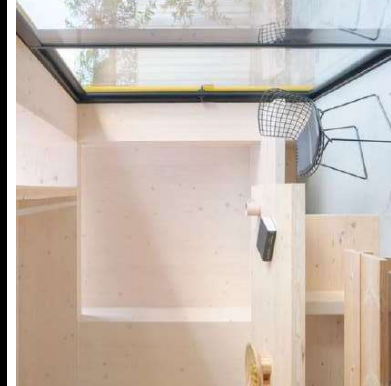
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# unknown works

## Architecture / Design Lead

Unknown Works is an award winning design studio based in London. The studio's work spans the fields of architecture, urban design, immersive events, exhibition design, installation art, graphics and digital media.

We work at all scales; from the creation of cultural and commercial buildings, residential projects, urban design and infrastructure projects to multi-media performances and immersive interventions. We apply architectural thinking to fields beyond, exploring bold ideas through critical research using writing, exhibitions, film and illustration.

As a studio we are fascinated by the human condition, the development of cities, the interactions of social and urban environments and the mechanics of space distribution. From inception to completion, our goal is to uncover the hidden potentials of a project's brief and context in order to arrive at a solution that is architecturally refined, when required, disruptive, and always progressive. We strive to benefit people and places through stimulating projects that have a positive lasting impact.

At unknown works we recognise the significance that cultural venues have on their local town and community. This is why at various points as a practice we have self initiated projects which provide a public forum for people to gather, meet, perform and engage. We love the possibilities of theatre and performance, both in terms of their artistic innovation, for example drawing upon the immersive worlds of London based theatre company Punchdrunk for inspiration, but also the social and community based opportunities which arise through engagement with the arts across society.

We see working through the medium of the built environment as an opportunity to create an infrastructure for change; it is therefore of great importance to us that we push our projects to be impactful, enabling new interactions and experiences.

Above all our projects are socially and environmentally responsible; we are experts in creating innovative solutions for low carbon construction systems, which has resulted in the delivery of sustainable housing, Passivhaus accredited homes

and off-grid community infrastructure. Current projects include; several low energy homes, a CLT house, a straw bale house, solar powered community hubs with the UN refugee agency, co-designing village housing in Rwanda and delivering the new energy revolution gallery at the Science Museum in London. The ambitious net zero landmark gallery will examine how the world can undergo the fastest energy transition in history to curb climate change

- 01 Scotts Arts Space, Chengdu
- 02 Vortex Jazz Club, London
- 03 Brightbox - an off grid community hub
- 04 Energy Revolution gallery at the Science Museum
- 05 CLT house - The use of CLT as the primary construction material meant the primary structure was completed on site in four days
- 06 The Village Code - an immersive exhibition

# Unknown Works

## How we would work with you

### Working with you

Our design process is to understand a brief as deeply as possible, building upon a client's explicit and implicit requirements. This is a continual process requiring discussion and debate which we deeply enjoy. All of our projects are a form of co-creation with our clients and we look forward to having the opportunity to work with you.

Co-director Kaowen grew up in Burgess Hill and this project represents something of a passion project for him; a rare and unique opportunity to give back something to the town that gave him and his family so much. It means the team has an instant familiarity and personal connection with the site, the local culture and an understanding of how needed this project is for the town and residents of Burgess Hill. It also means that a member of the design team would be located close by, maximising availability for meetings and ability to engage with the site and project.

### Designing as a team

At unknown works we have worked extensively across a range of sectors with theatre consultants, CharcoalBlue. We have found that by each bringing our different but complementary expertise to the brief we are able to design more boldly and creatively.

We are currently unclear as to the extent of the reorganisation of the design team, and whether the Theatre Consultant, Theatreplan, will retain the job. However if the opportunity is there we would propose taking on the job in collaboration with Charcoalblue, to maximise the fresh approach to the project, and utilise the strong and fruitful working relationship we have developed.

### Meeting the brief

We understand that the priority on this project is meeting the brief, namely delivering a functioning arts and community centre within the project budget of £5.27million. In order to be able to do this we will undergo a brief initial re-scoping stage, in order to help us understand your needs. Revisiting this stage with a team full of fresh eyes creates the opportunity for alternative creative and flexible approaches to be developed. We see this as our chance to quickly work through many more radical ideas in order to push for an innovative and bespoke solution.

### Approach to communication

We appreciate that this project has faced multiple external challenges which have delayed the programme significantly, meaning time is now of the essence. Key to tackling this will be setting up and maintaining clear and efficient channels of communication.

The main way that our design approach will respond to the Client team is via a clear process of Design Review and Evaluations, at scheduled times throughout the project. These are forums in which design progress will be presented, assessed and evaluated against the Client's brief to ensure that the project is remaining true to the agreed concept and vision. We find face to face reviews make more progress and therefore envisage many of these meetings being in person.

The outcome of the Design Reviews and Workshops will be Stage reports that capture the Design process, giving the Client a banked understanding of overall progress. It is also to obtain formal written and verbal feedback from the Client in order to freeze design on a Stage by Stage basis, allowing us to proceed with clarity.

We believe that if / when disagreement arises, resolution can be achieved through dialogue and healthy debate. Ultimate decisions will come down to the choices of the client team. We will of course advise as to what we and the design team feel is appropriate, but we will always follow client decisions and work to integrate them into the project.

# unknown works

## Relevant project experience

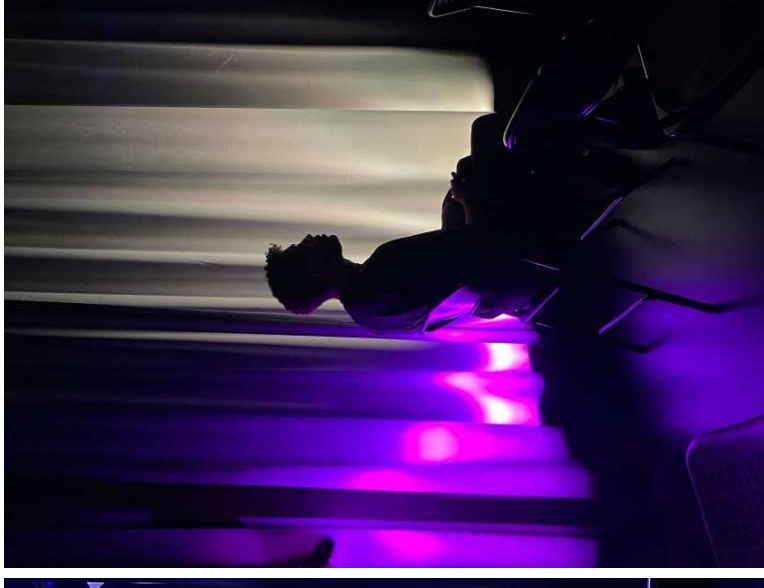
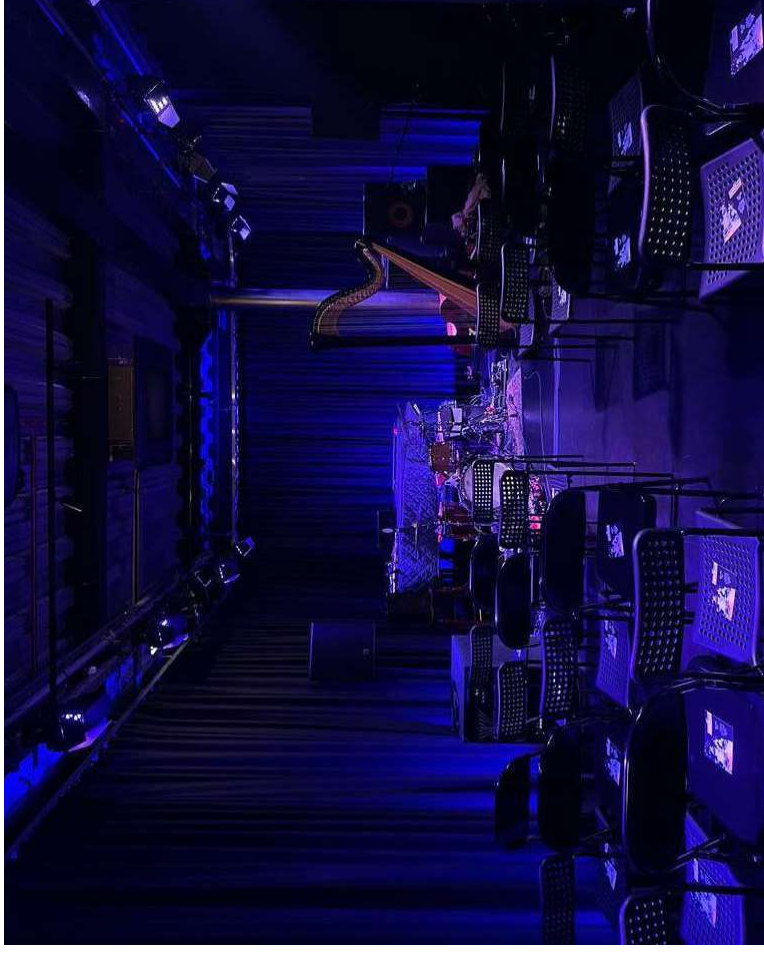
### Vortex Jazz Club, London Unknown Works, 2022 Complete

The Vortex Jazz Club is one of the UK's premier jazz venues, programming almost 400 performances a year in an intimate space. Unknown Works worked with the Vortex throughout the pandemic, at first improving the acoustics and sound of the venue and most recently redesigning the whole club space on both floors to create a fully flexible performance space.

New audiences expect a high quality of both ambient and technical experience. The sound strategy developed as the core of the project, by working closely with acousticians and musicians as well as theatre consultants Charcoal Blue, the team developed an intensive sound separation, augmentation and proofing strategy.

The new Vortex is able to straddle the physical and digital worlds. The moveable stage and curtain strategy allows spaces to be subdivided and screened off for special events, visual projection or green-screening if required. Online streaming of events, both live and otherwise allows the Vortex to reach beyond those who can just visit physically by increasing their digital presence. Through iterative material and digital testing followed by interactive, on-site lighting design Unknown Works designed a space which is greater than the sum of its parts.

The new performance space has been designed for maximum flexibility meaning that the club can both continue to excel at its primary function as a jazz club, but is also able to easily reconfigure its key space allowing the venue to take advantage of new revenue streams and audiences.





# unknown works

## Relevant project experience

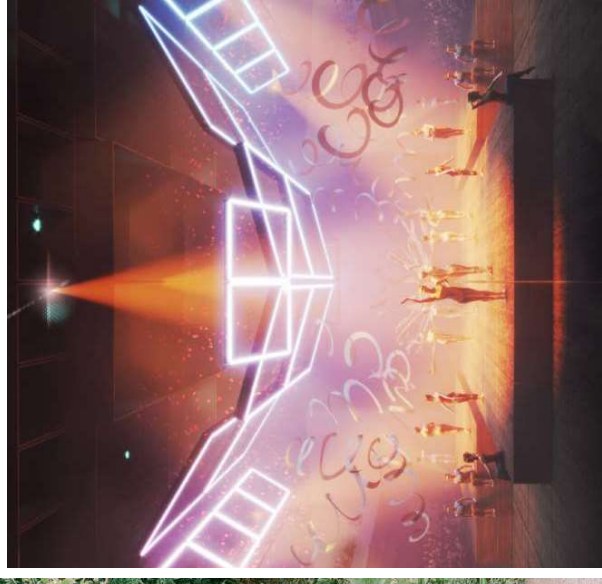
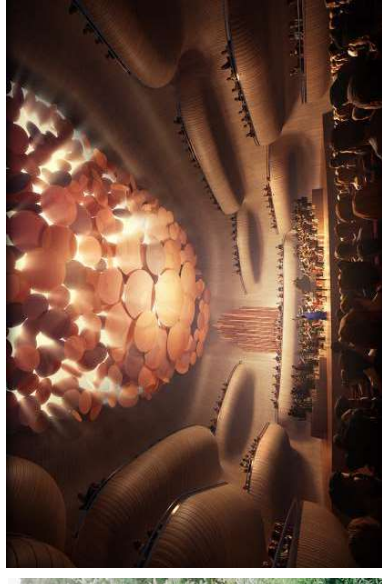
### Highshore Music Studios

The charred and scalloped accoya music studio sited in Peckham forms a new recording space for a prominent London based producer. Unknown works collaborated with prominent acoustic designer Nick Whitaker to ensure sufficient sound quality for professional use. The early integration of technical expertise into the design allowed unknown works to push the sunken monolithic aesthetic in a manner which improved the building's technical capabilities.



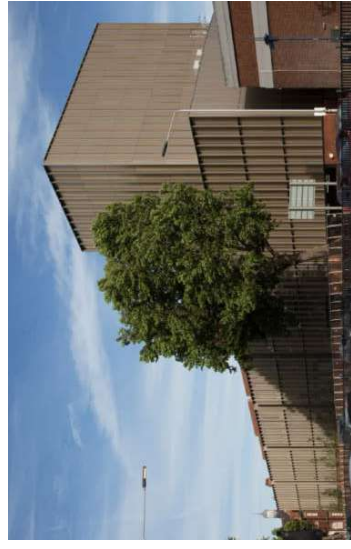
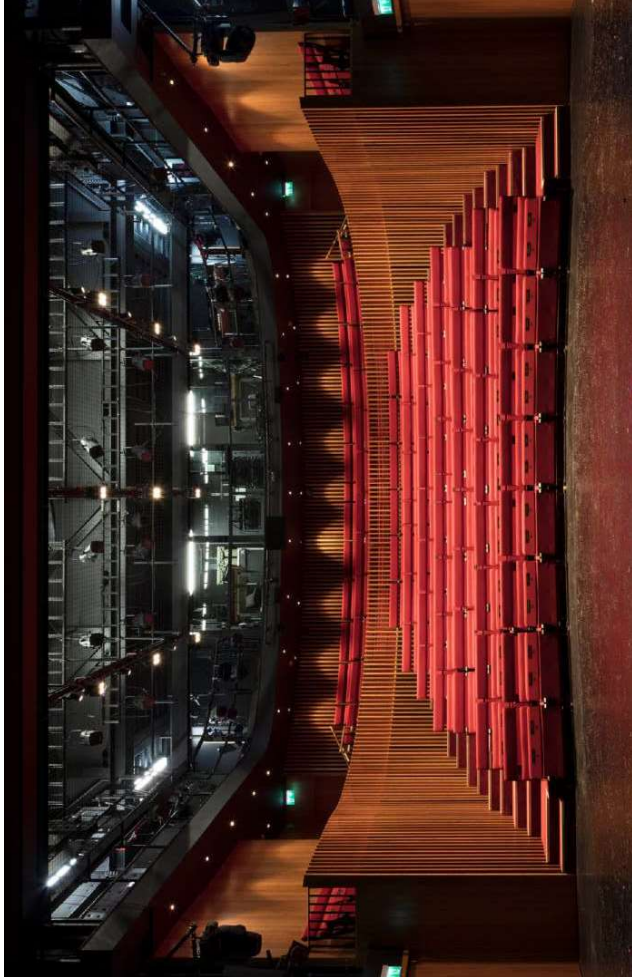
### Hainan Performing Arts Centre

A competition winning design for a multi-venue performing arts centre in the Hainan province of China. The proposal combined the an opera house, a concert hall and a theatre by enveloping the three volumes in a fluid skin, reminiscent of the costumes worn in Hainanese Opera. The proposal included a multi-function reconfigurable space, which will allow the centre to take on a wide variety of occasions not available to a more traditional, dedicated space.



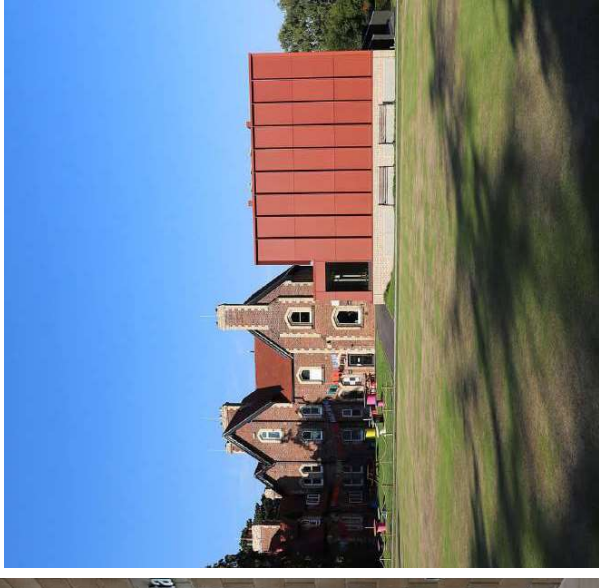
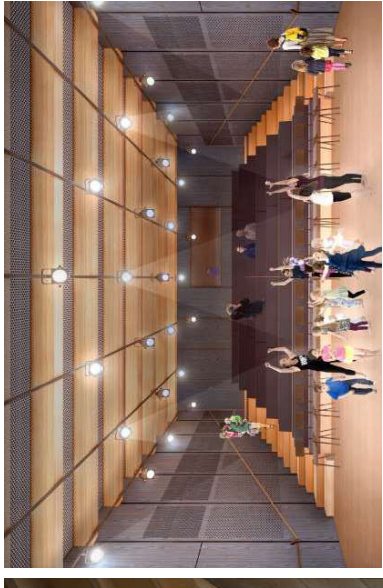
### Lamda Drama School

In 2002 Lamda made the decision to relocate their training facilities to a challenging site located between a trainline and a six lane highway. The new facility drastically increased the number of flexible rehearsal spaces and types of performance space, but the key to the success of the project lay in the mitigation of external sound pollution in order to deliver high quality acoustic spaces suitable for the high expectations of the school



### Theatre Porto

The charity Action transport theatre deliver youth theatre community services to the North West town of Ellesmere Port. This was previously run out of unsuitable facilities in an old manor house in need of refurbishment. The project delivered two new spaces adjacent to the manor as well as the general renovation of the interior of the house. The performance space with retractable raked seating and open and light flexible rehearsal room have enabled the charity to gain streams of revenue and reach a far wider audience



# unknown works

## Relevant project experience

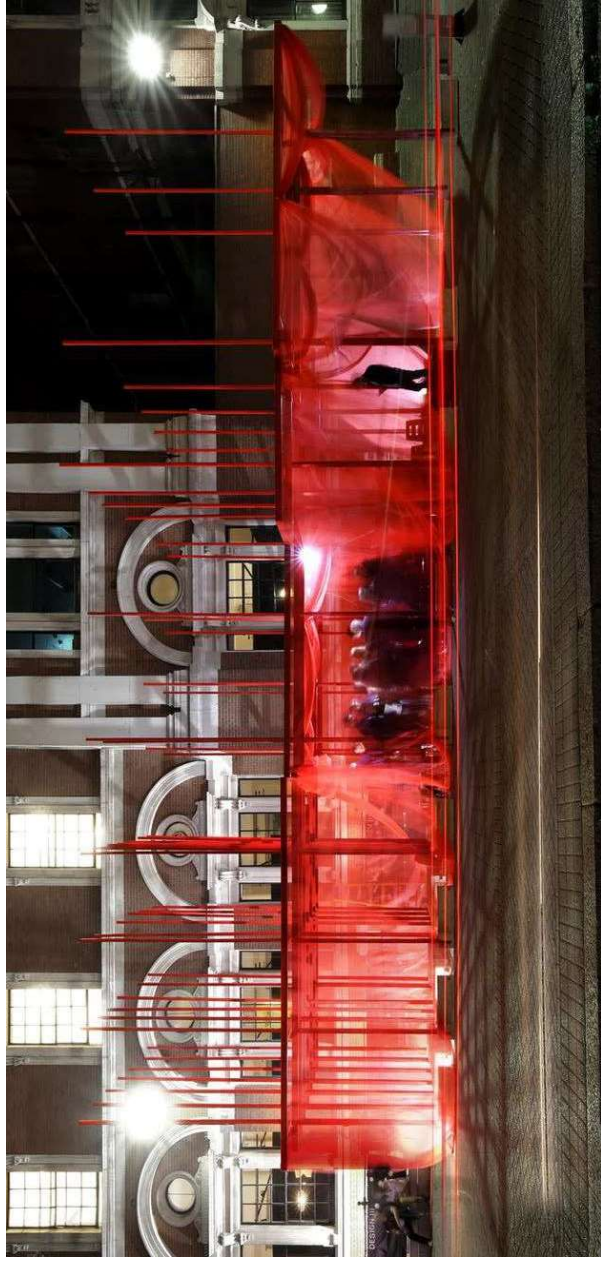
### Space Gap, London Unknown Works, 2018 Complete

Space Gap is a pavilion and events programme by Unknown Works.

For the London Design Festival 2018 from 19th - 22nd September Space Gap manifested as a pavilion and events programme where design and social issues were addressed through performances, talks, debates, film screenings and in the immersive design of the pavilion itself. The project takes a holistic view of this complex debate. By raising awareness the project asks fundamental questions in order to find sustainable solutions the foremost being - 'Who has the right to space in the city?'

Space Gap is a self initiated project by newly formed London and Hong Kong based creative studio Unknown Works who designed and made the pavilion. The extensive event programme and funding for the project were developed in collaboration with London based Hildrey Studio.

Set in front of Kensington Olympia the pavilion formed the gateway installation to 100% Design as part of the newly created West Kensington Design District for LDF18. The project was made possible through the generosity of those who pledged as part of a successful crowdfunding campaign the generous support of Origin Housing - one of London's medium sized housing associations and Arts Council England through a Lottery Arts Council Grant.





# unknown works

## CVs



**Kaowen Ho**  
**BSc (Hons), MArch (Dis) ARB**

**Unknown Works / Founding Director**  
**Role : UW Lead Designer**

Kaowen is an architect and founding director of the Architecture Practice Unknown Works.

Working alongside his fellow directors at Unknown Works, he leads the design and technical side of the practice and specialises in fabrication and the innovation of construction technologies. He is highly involved in the day-to-day basis running of the wider project team and the array of projects that they undertake.

Kaowen has a close relationship to Burgess Hill having grown up there since the age of 10. From the start of the pandemic he has increasingly returned to the area spending a greater amount of time there with his family who still reside there.

Kaowen feels passionately about the development of the arts in Burgess Hill and in general the revitalisation of the town centre and therefore is deeply invested in the realisation of the Beehive project.

Kaowen was educated at the Bartlett School of Architecture, University College London. He has gained significant experience working on a variety of projects from concept to completion both in the UK and internationally.

Kaowen has previously worked at Heatherwick Studio, running a specialist team on the Google new workspace and campus in Mountain View, CA. Prior to this he was Associate at Haptic Architects, working on the New Istanbul Airport, Straume Sentrum mixed use development, Kristiansund Airport service projects in West London and Oxfordshire, Harpurhey City Masterplan, RIBA Shanghai Windows and part of a select team of UK Architects for the new Oaks Villa project in Prague.

Kaowen was previously an Associate at Undercover Architecture where he managed and oversaw a number of heritage and residential projects from concept to completion including the redevelopment of the listed building Leys Field Barn. Kaowen has also worked at Foster + Partners, working

on the award-winning completed Mont Kiara residential development in Kuala Lumpur. He also worked at Henn Architekten in Beijing working on a team that delivered Hainan Airlines HQ, World Seed Conference Centre and ChinaLife, Beijing HQ.

Outside of professional practice Kaowen also teaches the Bartlett's Summer Studio programme and his work has been exhibited at the Roca Gallery in London. He is fluent in Mandarin, having worked in Western Sichuan, China where he was involved with innovative design and reconstruction efforts following the devastating 2008 Wenchuan earthquake. Kaowen received first class honours for his Bachelors and graduated with Distinction for his Masters.

Key project experience:

- Pigment House, London, 2022
- CLT House, London, 2022
- Scotts TKL, Chengdu, China 2019
- Brightbox, UNHCR, Uganda, 2019
- Hainan Performing Arts Centre, 2020

Exhibition/gallery project experience:

- Energy Revolution Gallery, Science Museum, London 2019
- Fear and Love Exhibition, Design Museum, London 2019



**Ben Hayes**  
**BSc (Hons), MArch (Dis) ARB**

**Unknown Works / Founding Director**  
**Role : UW Lead Designer**

Ben is an architect, researcher and educator. He is a founding director of the Architecture Practice Unknown Works. Ben currently works between London and Hong Kong, overseeing the studio's Hong Kong office.

Ben was educated at the Bartlett School of Architecture at University College London where he received first class honours for his Bachelors and a distinction for his Masters in Architecture. He was awarded the prestigious Royal Institution of British Architects' President's Silver Medal in 2013. Ben has had his work exhibited at a number of galleries including the RIBA and private institutions in London and Hong Kong.

As a director of Unknown Works, he leads the design and creative vision of the practice and shares in the and day-to-day basis running of the wider project team and the array of projects that they undertake. The studio currently works internationally on a wide range of arts, cultural and residential projects. They have most recently completed residential and music spaces in London, 'Brightbox Phase 1' - a prototype for an off-grid community hub, clinic and school in Bid-Bidi Refugee Settlement in the North of Uganda, 'Scotts TKL' a concept store and art space in Chengdu, China which transposed 3D scanned chipmunks through digital fabrication to form all elements from dynamic facade to furniture, a series of music studios, and installations and pavilions both in which examine the densification of cities including 'Space Gap' pavilion for LDF 18 and 'Residual City' inhabiting and programming forgotten spaces in HK.

Ben was Project Architect at Niall McLaughlin Architects based in London where he worked and ran a number public and private projects in the UK, including the RIBA Stephen Laurence prize winning project "The Fishing Hut", Hampshire House shortlisted for RIBA house of the year in 2019. Stirling Prize finalist Nazrin Shah Centre in Worcester College, Oxford.

He also ran the Welcome Building and new extension to the existing Scotland Wing of the Grade I listed Castle complex part of a restoration and heritage development of Auckland Castle, County Durham.

Whilst based in China he founded Studio Hayes, a design studio working on built installations and concept stores in China. Prior to this, Ben worked at Foster + Partners in London on a number of high profile international projects, including Haramain High Speed Rail Stations in Saudi Arabia, Apple Campus in Cupertino and Pushkin Fine Arts Museum in Moscow. Following this, he moved to Foster + Partners Beijing to co-run the National Art Museum of China in Datong, China.

Alongside his work as a practitioner, Ben is a researcher and educator. Ben teaches at the Bartlett School of Architecture at University College London and has recently held a part time senior research position at the University of Hong Kong with the research cluster Rural Urban Lab. His research work engages in the rural-urban transformation of China and Mongolia through built projects, research, exhibitions and writing. Projects include the Angdong Hospital winner of the RIBA International Prize, Ger innovation Hub in Ulaanbaatar and exhibitions at the Design Museum and Venice Biennale.

Ben has lectured and taught a design studio on the Masters in Architecture programme at the University of Hong Kong. He is a founding member and trustee of the architectural heritage charity 'Wood Ark' and collaborates on research projects in Russia and UK.

Key project experience:

- Pigment House, London, 2022
- CLT House, London, 2022
- Scotts TKL, Chengdu, China 2019
- Brightbox, UNHCR, Uganda, 2019
- The Fishing Hut, Hampshire, UK, 2017
- Hampshire House, 2017
- Nazrin Shah Centre in Worcester College, Oxford, 2019

Exhibition/gallery project experience:

- Energy Revolution Gallery, Science Museum, 2022
- Fear and Love Exhibition, Design Museum, London 2019
- Materials Context Exhibition, Dulux Gallery, Melbourne, 2018
- Recycling the Rural, Venice Biennale, 2018
- Village in the City, Bi-City Biennale of Urbanism/Architecture, Hong Kong, 2018
- Village in the City, Bi-City Biennale of Urbanism/Architecture, Shenzhen, 2018
- Residual City, PMQ Hong Kong, 2020
- Ger Community Hub, Common Good, Museum of Applied Arts and Sciences, 2018
- Architecture as Art, Milan Triennale, 2016
- Losing Myself, Venice Biennale, 2016

# unknown works

## CVs



**Theo Petrohilos**  
**BSc (Hons), MArch (Dis) ARB**

**Unknown Works / Founding Director**  
**Role : UW Lead Designer / Point of Contact**

Theo is an architect, designer, illustrator, and educator. He is a founding director of Unknown Works and has 17 years experience working in the industry. Working alongside his fellow directors at Unknown Works, he leads the design and creative vision of the practice and shares in the day-to-day running of the wider project team and the array of projects that they undertake. He is a masters tutor at the London School of Architecture and is a visiting critic at the Bartlett, UCL

Theo founded Unknown Works with Ben Hayes and Kaowen Ho after leaving Studio Egret West in 2018 where he worked from 2012. There he led a wide portfolio of projects at all scales and stages of development, in both the realms of Architecture and Urban design. Theo had five years working on projects with Transport for London while at SEW allowing him to foster a strong relationship with the teams at London Underground, and build an understanding of their distinct processes and idiosyncrasies. Theo represented SEW on the TFL Design Governance Board, a high level body which reviews and guides projects coming forward on the network. He undertook an extensive feasibility study for Lewisham Station and Interchange (LSI) with collaborator Atkins, for clients TFL and Lewisham Council. This project created a comprehensive set of costed strategies that consolidated, improved and ultimately re-imagined this key piece of infrastructure.

Over three years he worked closely alongside David West and Christophe Egret, directors of SEW and with the plethora of departments within LU to create and co-author the London Underground Design Idiom which seeks to re-define how one of London's most defining networks is designed. Developed through the design of products and case study stations (both live and speculative), it builds on LU's rich design DNA. Through its 9 principles the Idiom sets key philosophies that guide everything from the changing of a tile to the design of a completely new station. Close engagement with stakeholders,

and LU / TFL at all levels was key to the success of the project. Theo led SEW's work on LU's 'Integrated Station Program' (ISP). A project for the reimagining and rebuilding of a large tranche of stations across the underground network.

Alongside this transport work at SEW, Theo led a range of urban design and residential projects including a 3500 framework plan for New Bermondsey, Orion Towers – a 600 home tower scheme with a church and community complex set beneath with a 3000 visitor capacity, Tottenham Library winning scheme as part of the High Road West project with Lendlease and Harringay, Sawmill Court – a 160 home PRS / mixed use and a framework plan for the Talbot Village estate in Bournemouth which integrated Talbot Village, Bournemouth University, Arts University Bournemouth into an integrated and future facing digital focused masterplan.

Working with Grosvenor, Theo was project architect for 'The Factory' which reimagines a 150 year old industrial building for use as a commercial and workspace heart to a large central London site. Working with existing structures, interior spaces were significantly reimagined and reconfigured to provide 20000sqm of public uses. The historic fabric of the building is renovated where appropriate and existing motifs are used to construct a new architectural language from the historic character of the building. A two storey extension allows for 5000sqm of modern light filled office space and a roof terrace. Theo was also project architect for Charlton Riverside - a 500 home and public mixed use scheme in South London with U+I / Galliard which is seeing the redevelopment of the historic Siemens Telegraph Cable Factory.

Theo is also an artist, illustrator and cartoonist and recently exhibited a 1.5 x 10m painting at the V3 Gallery in Waterloo, at his show 'Water Levels'. He illustrated the London Underground Design Idiom, takes on a number of private illustration commissions, and regularly produces large-scale glass mural installations. Theo has previously worked at Alsop architects, working on mixed-use and transport and infrastructure projects in the UK, Canada, Germany, Vietnam and Dubai. He worked on the CA\$150 million Finch West and Steeles West underground Stations and bus terminals in Toronto. He also worked on the De Vere Gardens residential development for David Chipperfield Architects and worked since he was seventeen at Make Architects.

Theo studied for his undergraduate and masters degree in architecture at the Bartlett School of Architecture, UCL.

**Key project experience:**

- Pigment House, London, 2022
- CLT House, London, 2022
- Scotts TKL, Chengdu, China 2019
- Brightbox, UNHCR, Uganda, 2019
- Orion - New Bermondsey, 2019

Exhibition/gallery project experience:

- Energy Revolution Gallery, Science Museum, 2022
- Fear and Love Exhibition, Design Museum, London 2019



**Mahalah Attwell Thomas**  
**BSc, MArch, ARB**

**Unknown Works / Part 3 Architect**  
**Role : Designer**

Since joining Unknown Works Mahalah has split her time between a large-scale interiors project for a post-covid head office, and a playful and bespoke family home renovation.

Mahalah has worked on a range of theatre and cultural projects during her time at Bennetts Associates. These include the concept design for additional theatre facilities for a community based youth theatre company, and the renovation of an existing cultural centre and youth theatre in central Manchester.

Prior to joining Unknown Works Mahalah undertook her part 2 experience at Acme. A medium sized firm aiming to break out of typical and traditional urban designs through innovative material use and geometries. During her time at Acme Mahalah worked on several timber projects, ranging from the construction of a bespoke timber pavilion to the concept design of an 11 storey full timber structure office. She was also part of the team successfully gaining planning for a Co-living development in North East London, before working on the construction phase of a luxury residential tower in the City of London. Whilst Mahalah was at Acme she successfully took her part 3 examinations at the University of Westminster.

Mahalah has also worked for Alore Architectural Collective, working to develop sustainable and ethical architectural processes with projects including the design of an eco hotel and restaurant in the Dominican Republic.

Mahalah studied for her Masters at the Bartlett School of Architecture. During this time she focused on the complexities that occur between vernacular architecture and rapidly developing communities, particularly related to cultural learning and relation to Landscape. Her thesis studied the emotional disconnect between people and urban landscapes, and how a more conscious relationship with our context could be developed. Mahalah received her Architecture BA from

Manchester school of architecture where she also received the Outstanding Academic Achievement award as well as Portfolio of the year.

**Key project experience:**

- Norcott Road, London, 2022
- Large scale company headquarters, South England 2022
- Minorities Residential, London, 2022
- The Collective Co-Living, London, 2021
- Brent Cross plot 20, London, 2020
- IQL Pavilion, London, 2020
- Z-Arts, Manchester, 2017
- Whitby Hall Action Transport Theatre, Cheshire, 2016

# unknown works

## CVs



**SJ Eng**  
BScArch MArch ARB

**Unknown Works / Architect**  
Role : Designer

### Key project experience:

- Science Museum, London, Gallery Design, 2022
- Norcott Road, London, 2021
- Casimir Road, London, 2021
- Dong Community Fireplace, 2021
- Open Havelock, 2019
- Queen of Catford, 2018
- Wooden Roof, 2018
- FINSA Pavilion, 2018
- Fulham Town Hall, 2016

SJ studied at the Architectural Association and the University of Westminster and is currently a practicing architect at Unknown Works. He worked previously at bespoke practices in Singapore and London including HYLE Architects, Tsuruta Architects and Creative Prototyping Unit.

SJ has been involved in cultural and social projects in various countries. Prior to joining Unknown Works, he helped develop a community fireplace for the Dong minority group in southern China. This was the first vernacular community centre commissioned by the Guangnan Dong Architecture & Culture Preservation Centre. He also participated in workshops with architects from DPR Korea to regenerate a 1km strip of land in the heart of Pyongyang, organized in collaboration with Choson Exchange. In London, he worked with different communities on a meanwhile-use scheme for the Havelock Estate masterplan, initiated and developed by Alison Crawshaw Architects for the Ealing Council. At present, he is designing a new sustainable gallery for the Science Museum Group in London.

SJ also has extensive experience delivering highly-detailed residential and mixed use projects in Singapore and London. These range from smaller scale extensions to new-build private residences and micro-developments of dilapidated sites.

Previous projects he worked on with Tsuruta Architects include Queen of Catford, which received a High Commendation at the New London Awards 2021 and Wooden Roof, which won RIBA National Award 2021 and London Small Project of the Year amongst others.



**Peter Holmes**  
BScArch

**Unknown Works / Architectural Assistant**  
Role : Designer

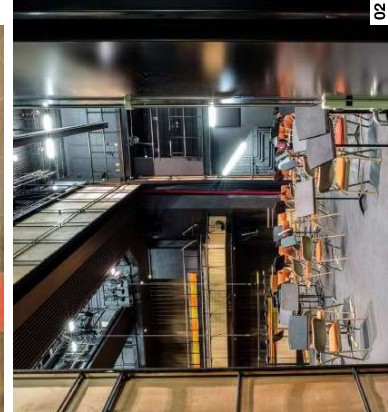
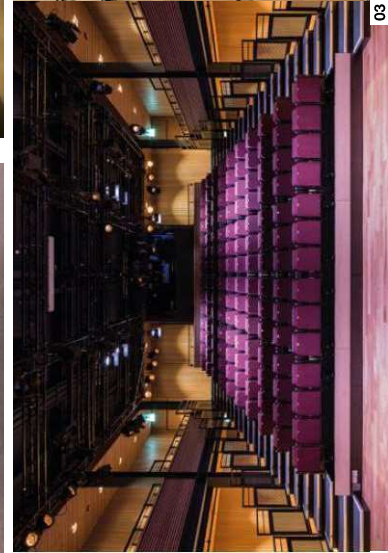
Peter Holmes is a Part 1 Architectural Assistant working at Unknown Works. In his time at the practice he has worked primarily on public facing and exhibition design projects. Part of this work has included the design for a new permanent gallery at the Science Museum, in which he has worked in close collaboration with curatorial and conservation teams to ensure successful coordination of design and content. This project focuses on using a holistic sustainable approach as a driver for narrative within the context of an exhibition.

This work builds on Peter's interest in environmental sustainability, which played a key role in his studies. Having undertaken his undergraduate course at the University of Bath, Peter furthered this area of study by taking part in material research at ENSA Lyon and qualifying as a Certified Passivhaus Designer.

In addition to this Peter's final project at the University of Bath focused on the interaction between architecture and sound, using sonic modelling to design a modulating auditory experience. Prior to working at Unknown Works Peter worked on a variety of residential and restoration projects at CAD Architects.

### Key project experience:

- Energy Revolution Gallery, 2022, London
- Lake House, 2021, Cotswolds
- Drehevel House, 2020, Cornwall
- Municipal Archive Exhibition: Rue de la République 2050, 2019, Lyon



# Charcoalblue

## Theatre Consultant (Potential)

Charcoalblue was established in the heart of the UK theatre industry in 2004. Since then, they have carved out a reputation as the world's leading integrated Theatre, Acoustic and Experience Consultancy service. They now operate as a cohesive and collaborative team across six international studios in the UK, USA and Australia, delivering projects to every corner of the globe

Charcoalblue believe the best work comes from a culture of collaboration; they bring talented people together, build long-term relationships and share ideas, in order to create the best possible space.

A love of theatre and acoustics is integral to Charcoalblue, and every employee has previously worked in the industry they now design for.

Charcoalblue provides a full spectrum of consultancy services from strategic analysis and creative concept generation through to detailed design and full project leadership. They have the expertise to integrate world-class acoustic, technical and digital design solutions from the outset. Their approach is always

bespoke and determined by the unique circumstances of each cultural projects, auditorium or technical opportunity.

Designing performance spaces where artists aspire to perform and audiences want to be is what Charcoalblue know best. They advise and guide, sketch out ideas, explore what is possible and resolve the seemingly impossible, tackling everything from reorganising seating, re-imagining an existing space, designing the perfect acoustic response, developing technical requirements and future-proofing your space with cutting edge digital innovations.

Charcoalblue have the capability to deal with everything from refining the brief right through to leading you through confidently to full design, tendering and construction. They relish making the most of existing buildings just as much as creating entirely new ones, and most importantly are always there as your partner in creativity; from the first napkin sketch right through to the glitter of opening night.

- 01 The Klin Theatre - North West London
- 02 The Peter Hall Performing Arts Centre - Cambridge UK
- 03 Perth Theatre, Perth, Scotland
- 04 Lyric Theatre, Hammersmith London
- 05 George Wood Theatre - Goldsmiths University, London
- 06 Cedar Hall - Well Cathedral School

# Charcoalblue

## Relevant project experience

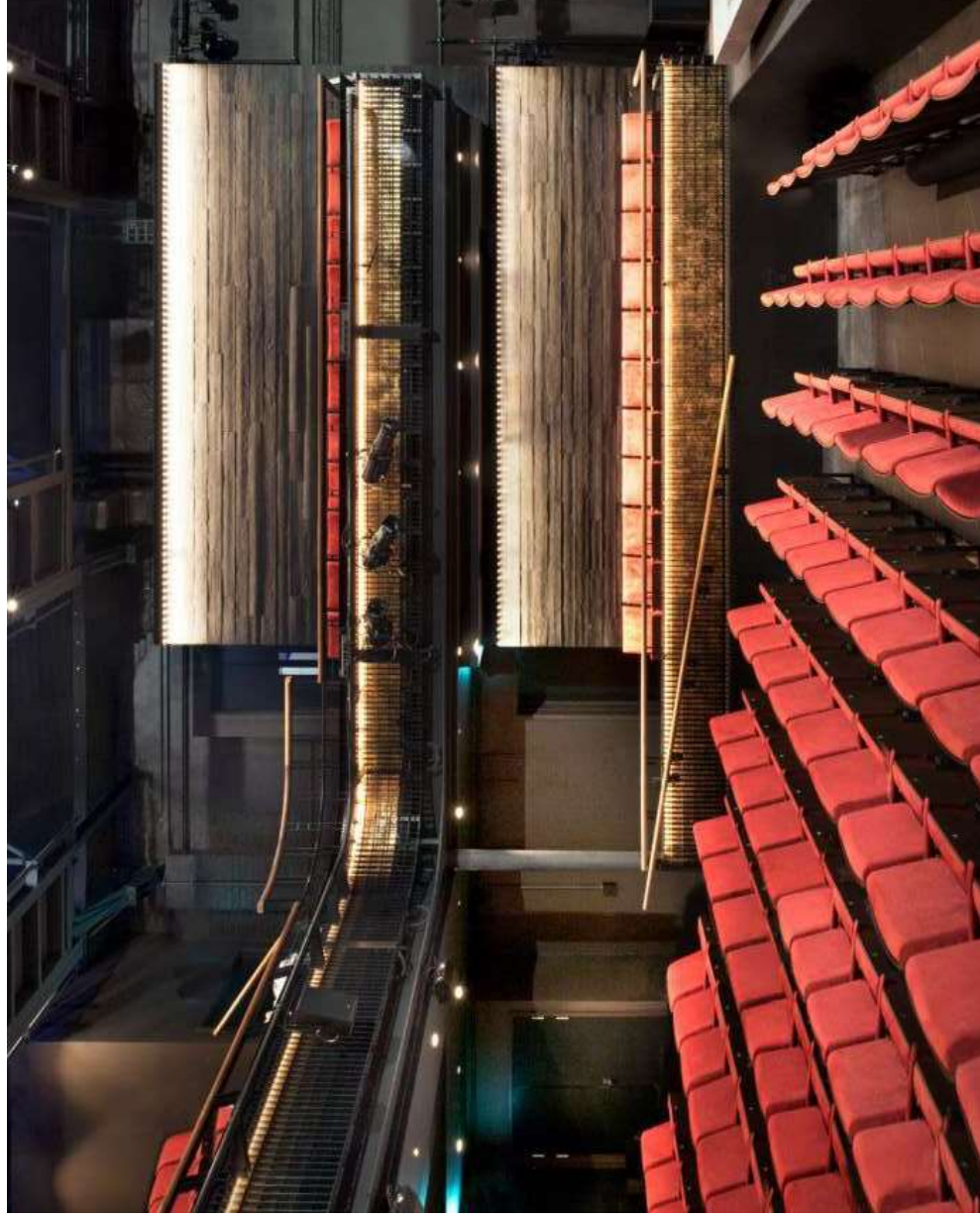
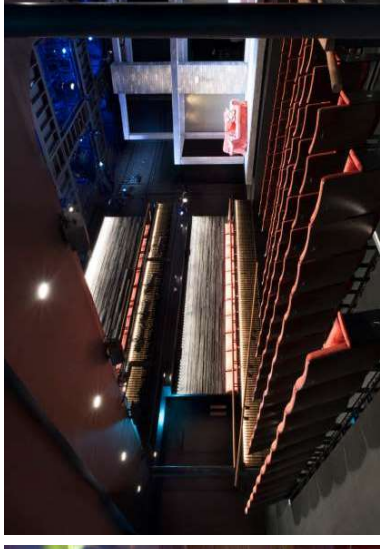
### Kiln Theatre, London

The Kiln Theatre on London's Kilburn High Road (previously known as Tricycle Theatre) has been a centre for diverse, experimental productions since the 1980s. The unique footprint of the theatre sees it nestled inconspicuously between smaller shop fronts but expanding out behind the street facade to adjoin the Cinema at the rear.

The new theatre takes the courtyard form of the 235 seat old Tricycle, with the two-level auditorium surrounding a stalls area maintaining the intimacy whilst increasing the capacity to 294 seats. The theatre volume has been expanded to inhabit the majority of Forester's Hall, pulling the auditorium out to the external walls and dropping the stalls entrance level to the existing floor slab. This key move has meant that the new auditorium has become a more accessible with level accessible access to stalls.

The new room allows adaptations to the space within the extent of the balcony. Its primary form is an end-on format that echoes the original Tricycle, but it can be adapted to do far more. In the same way as the original concept, the space is not designed to be reconfigured using gadgets and expensive machinery; rather it is a space which be transformed by reconfiguring, adding or removing demountable structure to create the alternative formats. The room can transform from the standard end on format to an extended end-stage, cabaret, in the round traverse and promenade configurations and more, all with differing sized stages and seat counts and all supported by the new technical provisions.

A new permanent control room at the rear of the theatre leads onto a dedicated technical level from which equipment can be rigged and focused without the need for ladders or access equipment, providing a safe working environment for technical staff



# Charcoalblue

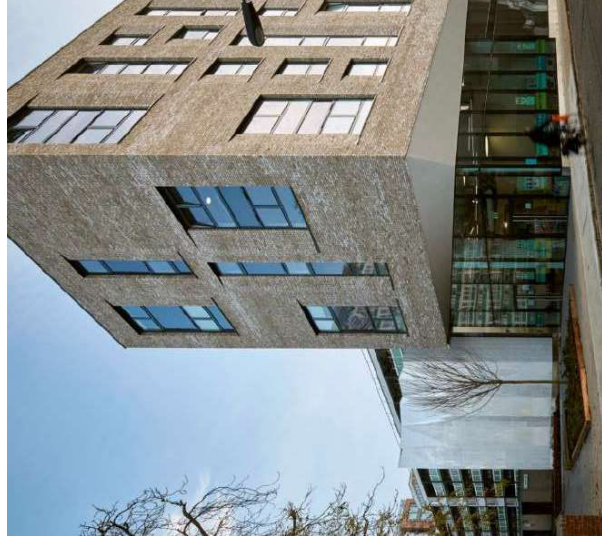
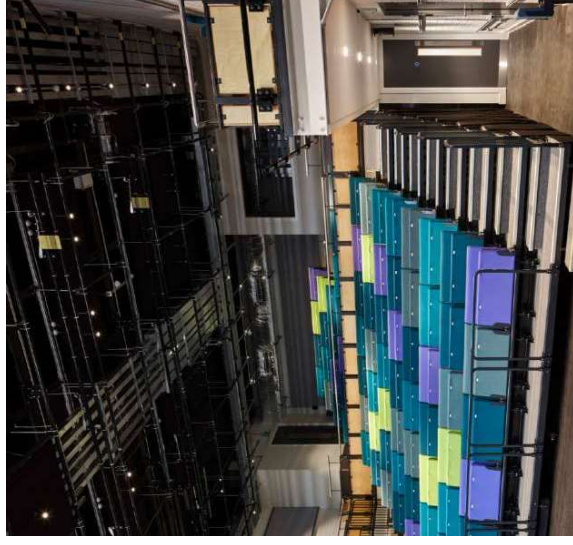
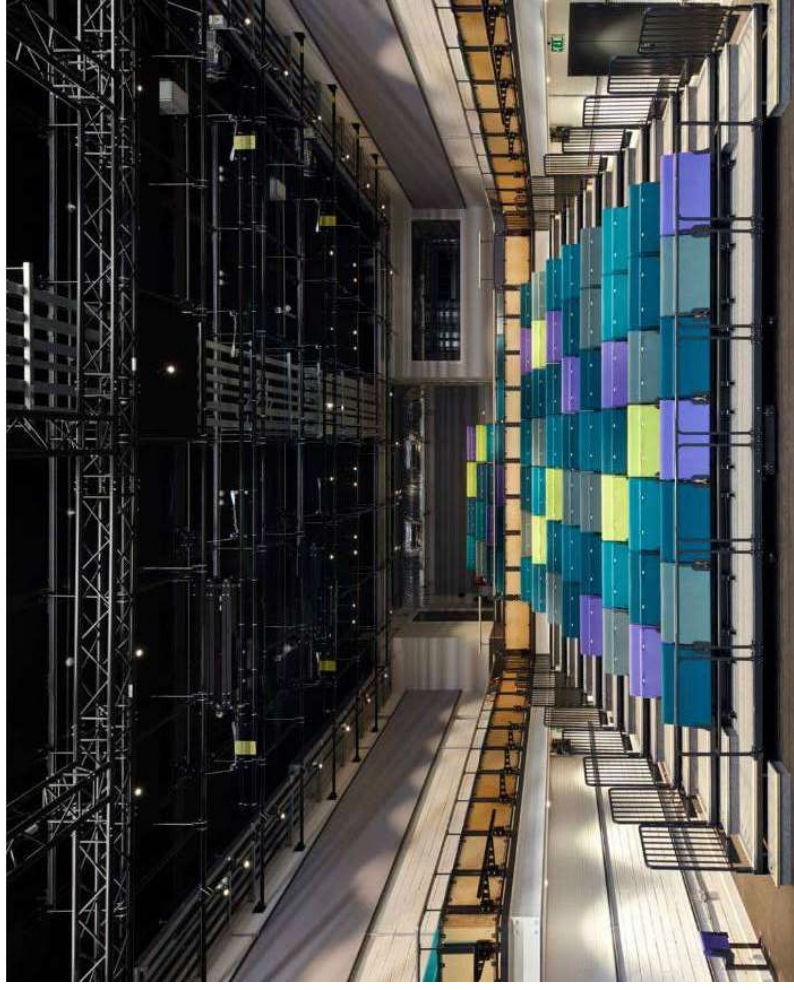
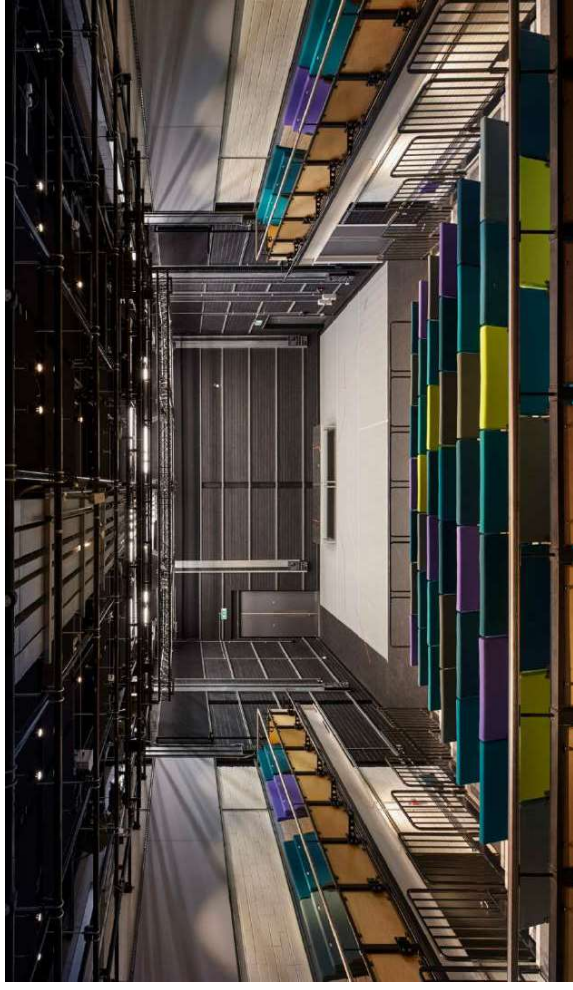
## Relevant project experience

### Theatre Peckham, London

Theatre Peckham was established to enable children and young people to discover theatre and develop a new generation of audiences and practitioners. Through a broad series of educational activities as well as a full schedule of shows, the theatre is a creative hub for emerging theatre lovers in the capital.

Charcoalblue were appointed by the developer, Alumno, to prepare a theatre planning scheme and technical systems design for Theatre Peckham's new home as part of a Section 106 agreement with Southwark Council. Designs were developed in consultation with Theatre Peckham to ensure their requirements could be met within Alumno's budget. Our theatre planning scheme was coordinated with Jestico+Whiles, the project architect, to fit within the rest of their building plan.

The theatre is designed as a flexible studio space with a retractable seating unit that is deployed for end-on performance formats and closed when a flat floor space is required. An audience gallery wraps around the rear and sides of the room and connects with the top of the seating bank, enabling audience members to enter the theatre from either the ground-floor or first-floor foyers. The theatre is equipped with a motorised truss grid over the end-on stage, and fixed pipe grid bays over the audience interspersed with motorised rigging bars to provide a variety of rigging positions for stagelighting and audiovisual and scenic equipment. Modern stagelighting and audiovisual wiring infrastructure throughout the theatre is terminated to a dedicated dimmer and audiovisual rack room beneath the control room. The architectural and worklighting fixtures are controlled by a dedicated theatrical lighting processor which disables and enables local control of lighting zones according to present conditions. Two studios complement the theatre as additional rehearsak and small performance spaces. Each studio is provided with a semi-sprung floor, pipe grid, temporary equipment power supplies and a locally controlled loudspeaker system, as well as audiovisual tie-lines to the theatre. A backstage paging system is provided to all key spaces providing show relay and calls to cast and technicians



# Charcoalblue

## Relevant project experience

### Bury Theatre, Hurstpierpoint College West Sussex, UK

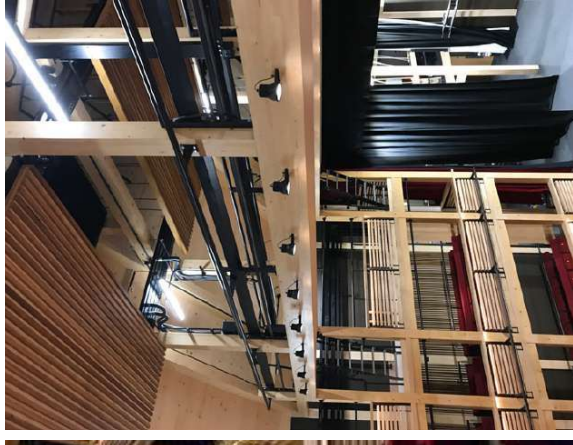
Hurstpierpoint College's old Bury Theatre was no longer performing to the standard the school required, resulting in a new facility which delivers a wide range of performance and training opportunities.

The theatre is constructed of cross-laminated timber floors, walls and roof layers are formed of layers of laminated timber with relatively little steelwork to frame up the space. This process may have taken a little longer to design but sped up on-site assembly. Additionally, the inner linings of the building are predominantly self-finished.

Charcoalblue designed the auditorium as a two-level galleried space with flexible capacity for school assembly (up to 427) end stage drama with a deeper stage (up to 337), end state with pit (up to 307), and thrust stage format (up to 213).

Technical galleries above the auditorium integrate into the roof structure and provide safe access to high level equipments. Above the stage heavy equipments is suspended on motorised hoists while lighter scenic elements can be raised manually on rope sets. The flying space is used to the maximum by allowing narrower bars to travel higher into the apex of the exposed roof form; full width bars can travel less high.

The auditorium is acoustically isolated from other school activities including the adjacent music school and junior school playgrounds. The room acoustics response well to both music and spoken word but with a timbre that supports young voices. The auditorium is naturally ventilated and the system is designed to be suitable quiet by introducing attenuation through a labyrinth of basement intake chambers.



# Charcoalblue

## CVs



**Luca Dellatorre**  
MEng, MArch

Charcoalblue / Associate Director

Alongside team leading, Luca consults and assists on all aspects of theatre design, with special emphasis on acoustics to include: room acoustic design and planning, sound separation, and noise and vibration design for the performing arts.

Luca has more than fifteen years' experience in consultancy for performing arts buildings, creating great sounding performing arts spaces through working closely with architects, clients and contractors. Luca has master's degrees in Architectural Engineering and Architecture and has studied classical guitar and trumpet. Being a musician has influenced Luca's interest in performing arts venues design and the relation between music, acoustics and architecture. His design experience includes theatres, concert halls, recital halls, opera houses, outdoor concert venues and sound and light installations. Luca has worked across all project phases from inception to planning, detailed design, tendering, construction, completion and commissioning.

Key project experience:

- Southbank Sinfonia at St John's Smith Square, London
- Studio and Cinema Design at London College of Communication, London
- Sidcup Library and Cinemas, Sidcup
- Royal Academy of Dance, London
- Resonation Tree, London
- Grosvenor East Building at Manchester Metropolitan University, Manchester
- Gecko Creation Space, Ipswich
- Vortex Jazz Club, London
- Cliftonville Art Centre, Margate
- National Holocaust Centre, Nottingham
- ArtsEd, London
- George Wood Theatre at Goldsmiths University, London



**Elina Pieridou**  
BArch, MArch, MA

Charcoalblue / Senior Consultant

Elina is responsible for consultancy on all aspects of theatre design, specialising in auditorium design, theatre/venue planning, seating layouts, seat design, sightlines and accessibility. Elina joined Charcoalblue in 2016 as a Theatre Designer. She is a qualified Architect with an MArch from the National Technical University of Athens.

Elina's strong interest in the re-use of historic sites and activation of found spaces led her to the highlight of her academic work, her master's thesis on the Design and Transformations of a Prefabricated Outdoor Theatre Space with experimental placement in two historical fortified sites in Greece.

Her fascination with performance and the connection between theatre and architecture led her to Bristol Old Vic Theatre School (BOVTS). At BOVTS she worked with RSC director Bill Alexander and designed the Setting the Scene Theatre Design Exhibition in RWA, Bristol and NCCA, London. She participated in BBC One documentary Acting Dawn Until Dusk. On Stage with BOVTS, as the Costume Designer of the first modern candlelit production of 'Congreve's Love for Love' at the Bristol Old Vic and designed the first Iranian opera ever performed in the UK.

Key project experience:

- Sadler's Wells East, London
- @sohoplace, London
- Orange Tree Theatre, London
- Centre for Music, London
- Actor's Centre, London
- Kiln Theatre, London
- Glasgow University College of the Arts, Glasgow
- Easterbrook Hall, Dumfries
- Palace Court Theatre, Bournemouth



**Jamie McIntyre**  
BA Sound Technology

Charcoalblue / Consultant

Jamie consults on theatre design, specialising in audiovisual systems.

During his first year at Charcoalblue, Jamie has worked on theatre consultancy projects all over the world. He specialises in audiovisual design, ensuring the technical systems and infrastructure are tailored to the projects needs. His work has covered all stages of the design process, from Briefing and Concept Design through to Construction and Handover.

After graduating from the Liverpool Institute for Performing Arts with a BA (Hons) in Sound Technology, Jamie spent ten years as a sound and video theatre practitioner. During this time, he worked on shows as an Associate Sound Designer, Production Sound Engineer, and Sound No 1, as well as in venues as a Senior Sound and Video Technician and Deputy Supervisor. He specialised in London's producing houses such as the National Theatre, Young Vic and Almeida as well as West End and international transfers to venues including the Piccadilly Theatre (West End), Park Avenue Armory (New York), Schaubühne (Berlin) and Grand Théâtre de Luxembourg.

Key project experience:

- The Old Vic - The Annex, London
- BAFTA 195 Piccadilly, London
- Hertford Theatre, Hertford
- The Broadway Theatre - Catford, London
- Paisley Town Hall, Paisley
- Royal Academy of Dance, London
- Stephenson Memorial Hall, Chesterfield
- Thameside Theatre, Grays
- Hull City Hall, Hull
- St George's Quarter Project at London South Bank University



# Charcoalblue

## CVs



**Jon Morgan-Heath**  
MDrama Scenography

Charcoalblue / Consultant

Jon consults on all aspects of technical systems design, specialising in stage engineering and delivering our BIM strategy.

Prior to joining Charcoalblue, Jon was a Digital Engineer and BIM Coordinator at Arup, based in Cardiff. With ten years' combined experience within the building services design and theatre industries, Jon has an intimate knowledge of building consultancy, MEP building systems, specifically mechanical engineering, and BIM standards. Prior to this Jon worked as a Draughtsperson for Cardiff Theatrical Services, as well as a set builder for Bristol Old Vic.

Jon's background in theatre, the arts, and teaching has enabled him to excel at creating and developing training courses for his previous employer that he delivered to offices across the UK.

Key project experience:

- Stephenson Memorial Hall, Chesterfield
- The Hexagon, Reading (Feasibility Study)
- Geelong Arts Centre, Geelong, VIC, Australia
- Edith Cowan University, Perth, WA, Australia
- Kiran Nadar Museum of Art, Delhi, India
- Novo Park, Bucharest, Romania



**Milo Fox**  
MSci (Hons) Physics

Charcoalblue / Consultant

Milo provides consultancy in all aspects of acoustics for performing arts venues, including room acoustic design and planning, sound separation, and noise and vibration design.

Following graduation from the Masters in Physics course at Queen Mary University of London, alongside his work as a musician and music teacher, Milo became a consultant with Charcoalblue in 2021, having interned and freelanced with the company since 2018. Since then, he has worked on projects across the globe, focusing on all aspects of room acoustics, sound separation, and noise and vibration control, as well as being involved in many of the acoustics department's research and development projects.

Studying both saxophone and clarinet from a young age, Milo has always been intrigued by the different spaces he has performed in and visited, from venues across his home city, Bristol, to those across the UK, and beyond.

His research and development role for Charcoalblue's acoustics department has included standardisation research for software-based room acoustics predictions, and creation and management of their AutoCAD drawing standards.

Key project experience:

- The Kit Kat Club at the Playhouse Theatre, London
- The Old Vic - The Annex, London
- Theatre Royal Drury Lane, London
- ArtsEd, London
- Science Museum Technician's Gallery, London
- The Olivier Hall and Christie Centre at St Edward's School, Oxford
- Theatr Clwyd, Mold



**Simon Denman Ellis**  
BA (Hons) Theatre studies

Charcoalblue / Consultant

Simon provides consultancy for theatres and production spaces, majoring on production lighting and electrics but also has experience in Audiovisual and Stage Engineering.

Simon joined Charcoalblue after 26 years of working in technical event and venue management. From Technical Stage Manager of St David's Hall, Cardiff, the national concert hall of Wales, he moved to oversee the new build and re-structure of the Royal Welsh College of Music and Drama in 2011.

Simon then moved to Oman in the Middle East as Assistant Head of Lighting for the newly built Royal Opera House in Muscat. In 2016, he then worked at Institute Le Rosey in Switzerland as Assistant Technical Director for their brand new concert hall/theatre complex working with artists and students alike on productions.

After returning to the UK in 2017, he was part of the opening lighting team for the Bridge Theatre in London before becoming Head of Technical Services for the brand new £83 Million International Convention Centre in Wales, where he oversaw the final build and opening stages.

Key project experience:

- Cambridge Arts Theatre, Cambridge
- The Hexagon, Reading
- Venue Cymru, Llandudno
- Le Retraite School, London
- Cork Arena, Cork Ireland

# Unknown Works

## Previous proposal analysis

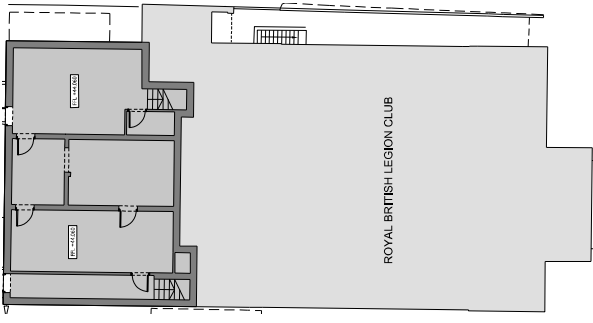
The beehive consists of three major programmes:

- A theatre with capacity and facilities for touring shows
- A lettable dance and education suite
- Cafe and bar facilities

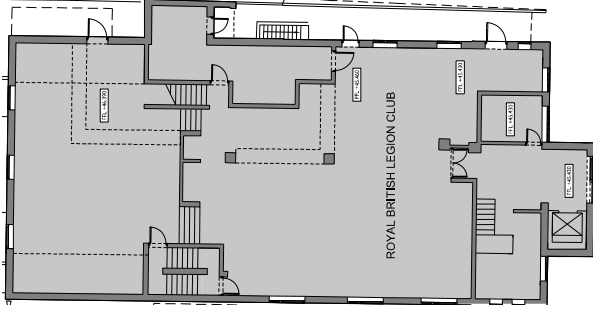
Analysis of the previous proposal highlighted three key areas of the layouts that could be reorganised in order to improve efficiency and reduce costs

- 01.** Basement excavaton - the proposal nearly tripled the size of the existing basement requiring significant excavation.
- 02.** Double height foyer cafe/bar space
- 03.** High performance dance space place vertically adjacent to acoustically sensitive theatre zone.
- 04.** Articulated roof at the entrance of the building means much of the potential volume available is not usable.

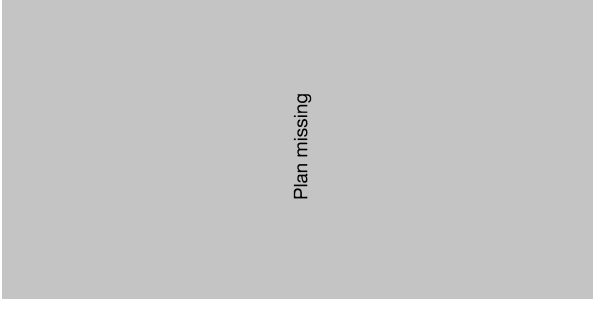
Lower ground floor



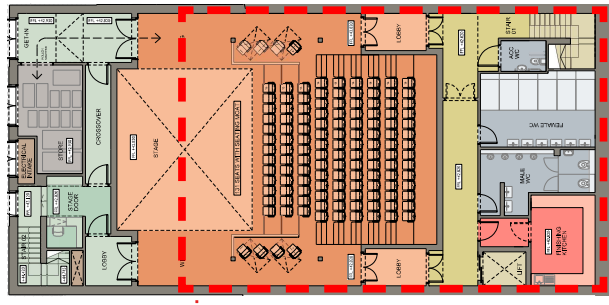
Upper ground floor



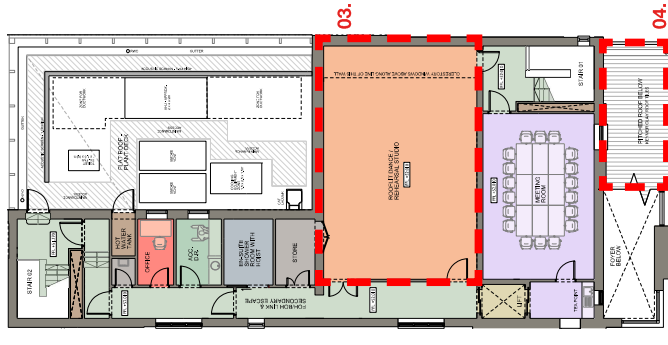
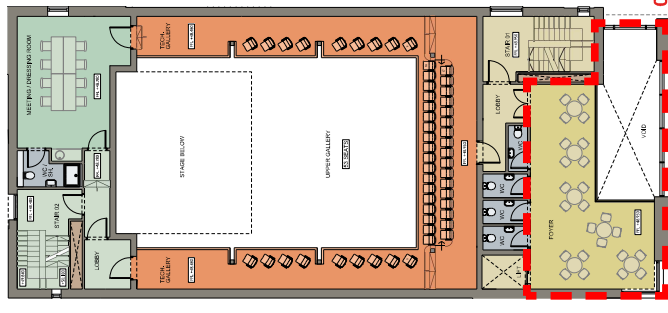
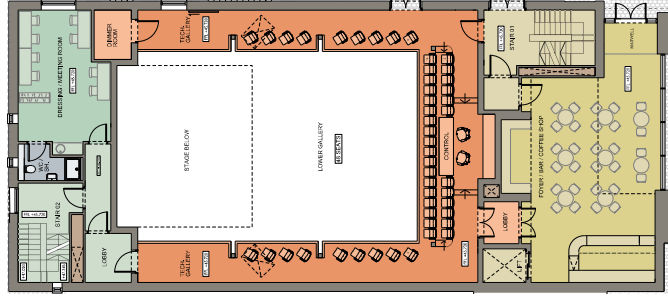
First floor



Second floor



Proposed

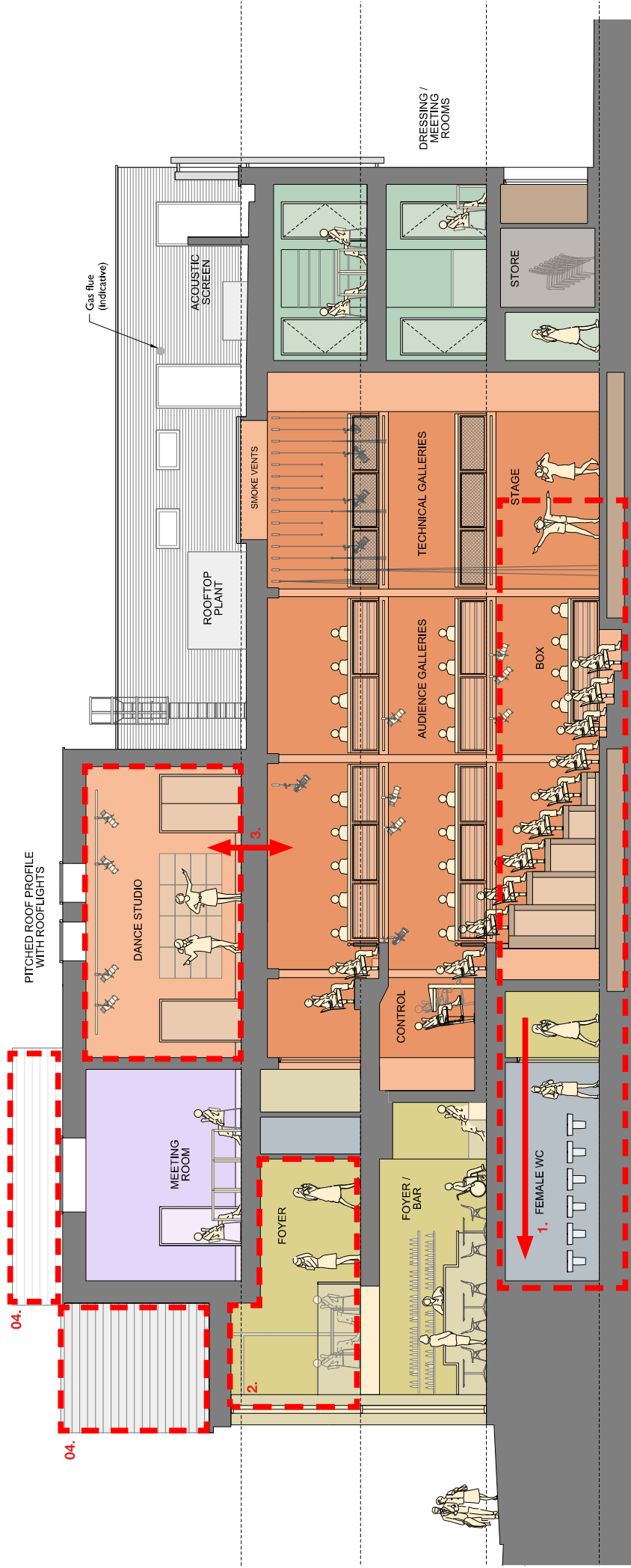


The approx. GIA of the previous proposal is 1150m<sup>2</sup>, meaning that at a cost of £9million, the rough rate is £7826/m<sup>2</sup>. To reach of the construction budget of circa £5million, either the area needs to reduce to 650m<sup>2</sup>, or the rate needs to reduce to £4348/m<sup>2</sup>.

The solution will likely need to be a combination of the two factors.

# Unknown Works

## Previous proposal analysis



- 01.** Basement excavation - the proposal nearly tripled the size of the existing basement requiring significant excavation.
- 02.** Double height foyer cafe/ bar space
- 03.** High performance dance space place vertically adjacent to acoustically sensitive theatre zone
- 04.** Articulated roof at the entrance of the building means much of the potential volume available is not usable.

# Unknown Works

## Previous proposal analysis - Opportunities for reducing cost

### Size & Efficiency

The escalating price of the previous scheme has been attributed to inflation caused by unforeseen events - this has caused a general and significant price increase in the years since the original budget was set and therefore it is no longer possible to produce the same extent of building for the same budget. Therefore we propose carefully tailoring the proposal to ensure it meets the needs which are most valuable to Burgess Hill. Examples of this include ability to integrate the foyer and theatre spaces for large scale events by placing them on the same level.



### Phasing

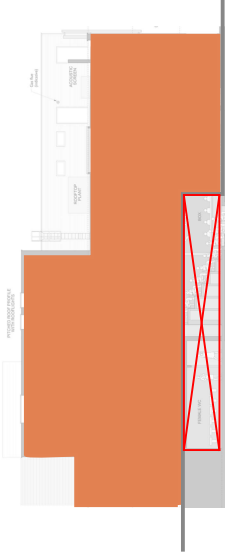
Due to its three phased approach the previous proposal leaves itself open to the risk of further cost increases due to inflation, potentially meaning key elements of the design are never feasible. Unknown works propose to simplify the programme and layout in order to deliver the primary elements of the building in one phase, preventing further escalation of time and money.

### Single phase

- Phase 1:** This will be the main build featuring all the key aspects including the auditorium.
- Phase 2:** Creates a dedicated rehearsal, dance and education suite. Additional cost £300,000.
- Phase 3:** Rebuilds the facade of Cyprus Hall, completely refurbishes the building and links the building to the Beehive to create new space. Estimated additional cost £1.6 Million.

### Extent of excavation

The previous proposal increased the area of the basement circa three times, requiring a significant amount of excavation on a complex site due to its sloped nature. There is potential to significantly reduce costs by retaining the footprint of the existing basement.



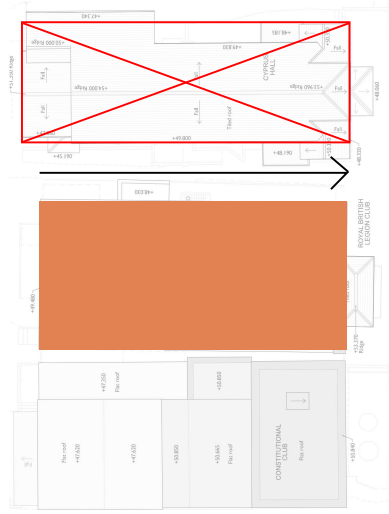
### Alternative structural solution

In order to accommodate the much enlarged proposed lower ground floor the previous structural design proposed the use of an extensive raft foundation, which forms the base of a concrete box basement. An alternative solution could be proposed by using as lightweight as possible a structure above. There is the possibility of using timber construction, this aligns with the projects sustainability aims as well as shortening the on-site construction period, again reducing costs.



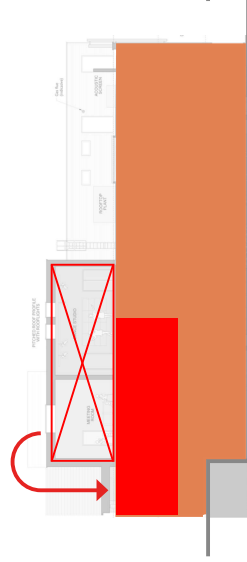
### Works to Cyprus Hall and adjoining alley

There are significant alterations proposed to the alley between The Beehive and Cyprus Hall. Improving the public realm here is significant and important but the works could be reduced.



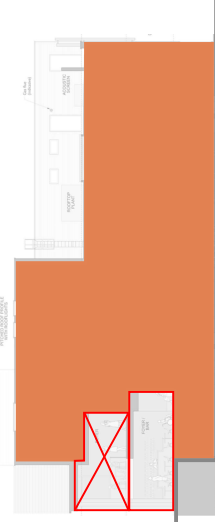
### Acoustically separated dance facility above theatre

The current layout of placing the dance studio above the acoustically sensitive theatre requires a complex engineered solution. We propose to internally rearrange the adjacencies in order to simplify the construction.



### Double height foyer and cafe space

A significant proportion of the scheme is dedicated to foyer and cafe space, which will only experience heavy use at certain limited times of day. We propose to ensure this area is comfortably sized, as well as working hard to provide services to the community.



### Complex external geometry and materiality

We understand that the current proposal is well received and popular with both the community and the local authority, and therefore there is a desire for the external appearance to remain the same. However, whilst looking for potential cost savings one of the few areas of the previous proposal with obvious scope for simplification is the complex external geometry. It would be prudent to undertake a feasibility study with fresh eyes to understand if there are any hidden opportunities. We would seek to understand what elements of the previous proposal are relevant to the planners, and look to simplify the construction and materiality overall.



# Unknown Works

## Responding to the brief

### Key moves:

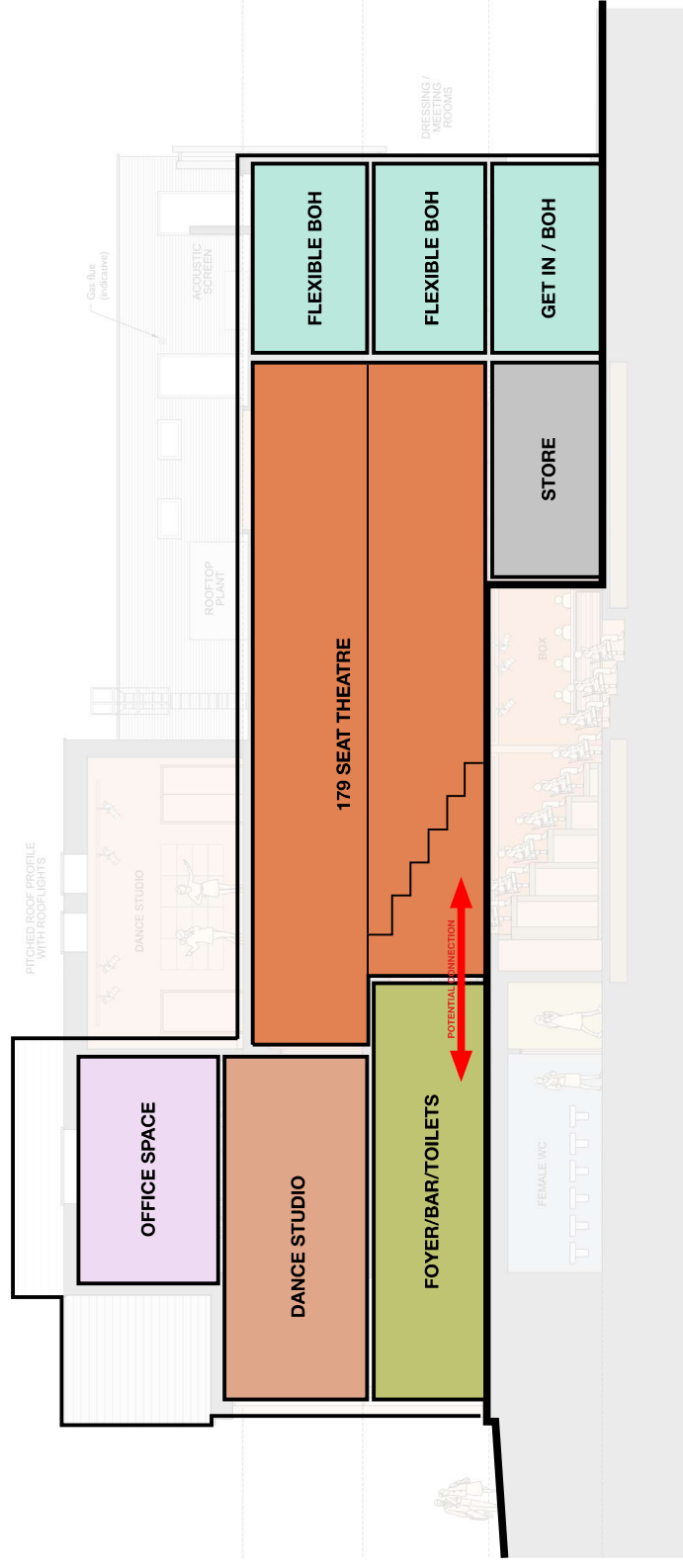
- Minimise excavation by retaining the existing basement footprint
- Push theatre up so stage is at upper ground floor, level with the foyer. In order to sit within the approved envelope this would mean reducing the size of the theatre by removing one of the balcony levels, reducing capacity by 53 seats.
- Relocate dance studio to sit above entrance cafe. This simplified the acoustic isolation required between the two spaces
- To make the most cost saving, this revised scheme has the opportunity to reduce the overall GIA of the proposal, whilst delivering all of the three key programmes.
- Opportunity to extend onto the roof at a later stage to provide further facilities if and when further funding is secured, but the business plan would not be reliant upon this

### Pros:

- Reduction of GIA resulting in cost savings
- Delivery of all three key programmes
- Savings through reduced excavation
- Savings through simplified acoustics
- delivery of dance studio in phase 1
- Opportunity to extend higher in a later phase
- Flexibility maintained
- External envelope geometry maintained
- Connection possible between foyer and theatre for larger events with bleachers retracted
- If GIA was reduced to make best cost saving, the changes would be to the rear roof and any planning amendment required would likely not be contentious

### Cons:

- Theatre seating reduced (but theatre facilities and therefore suitability for touring shows maintained)
- Foyer area reduced
- Dance studio auxiliary facilities slightly reduced



# Unknown Works

## Responding to the brief B

### Key moves:

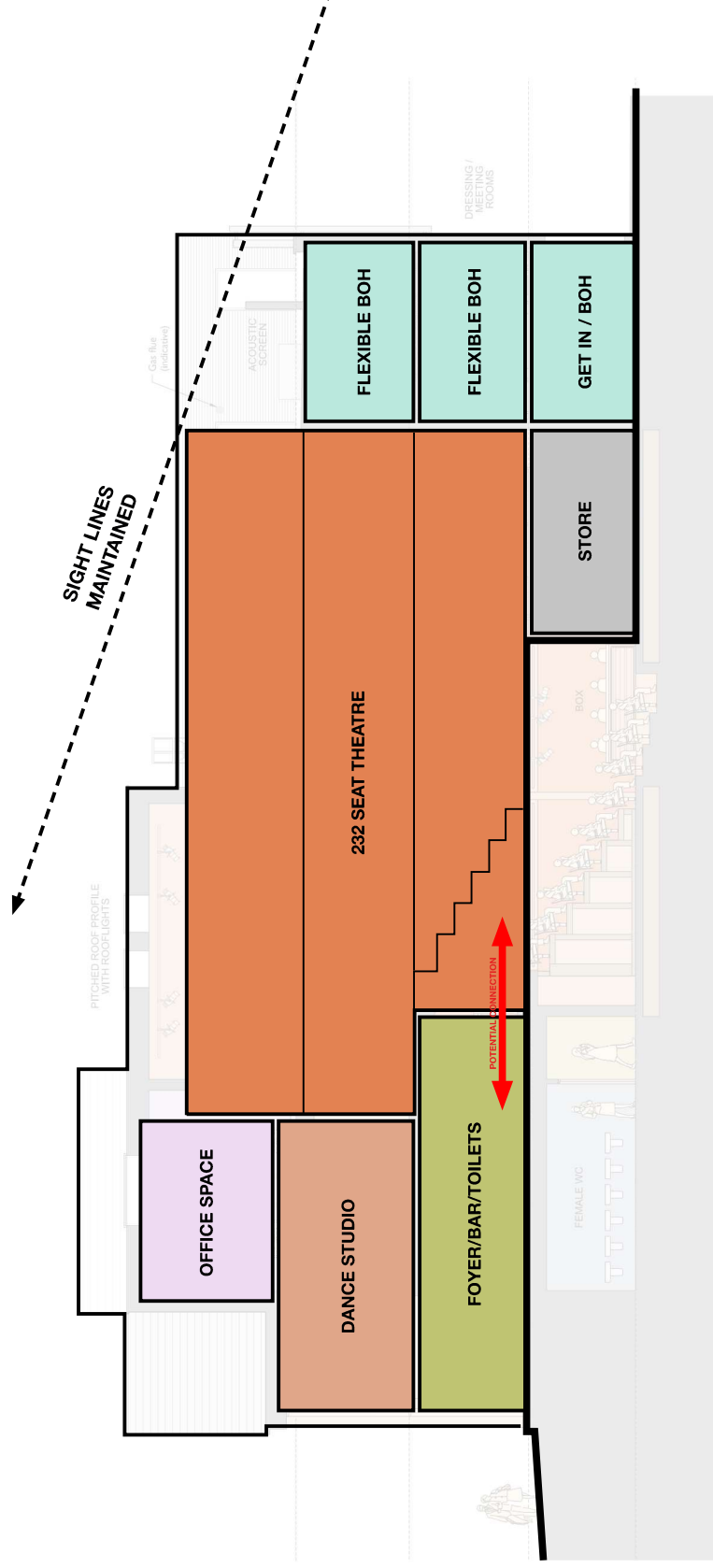
- Minimise excavation by retaining the existing basement footprint
- Push theatre up so stage is at upper ground floor, level with the foyer. Retain original theatre size. This would result in some changes to the rear roof line but this is unlikely to be contentious as it could be done in such a way that sightlines are maintained, meaning the changes could be approached as a non material amendment
- Relocate dance studio to sit above entrance cafe. This simplified the acoustic isolation required between the two spaces
- This option reduces the overall GIA of the proposal, therefore reducing costs, whilst delivering all of the three key programmes.

### Pros:

- Smaller reduction of GIA, but this still results in cost savings
- Delivery of all three key programmes
- Savings through reduced excavation
- Savings through simplified acoustics
- delivery of dance studio in phase 1
- Flexibility maintained
- External envelope language maintained by adapted to work with updated volume
- Connection possible between foyer and theatre for larger events with bleachers retracted

### Cons:

- Foyer area reduced
- Dance studio auxiliary facilities reduced



# Unknown Works

## Alternative approaches - Community focused arts centre

### Key moves:

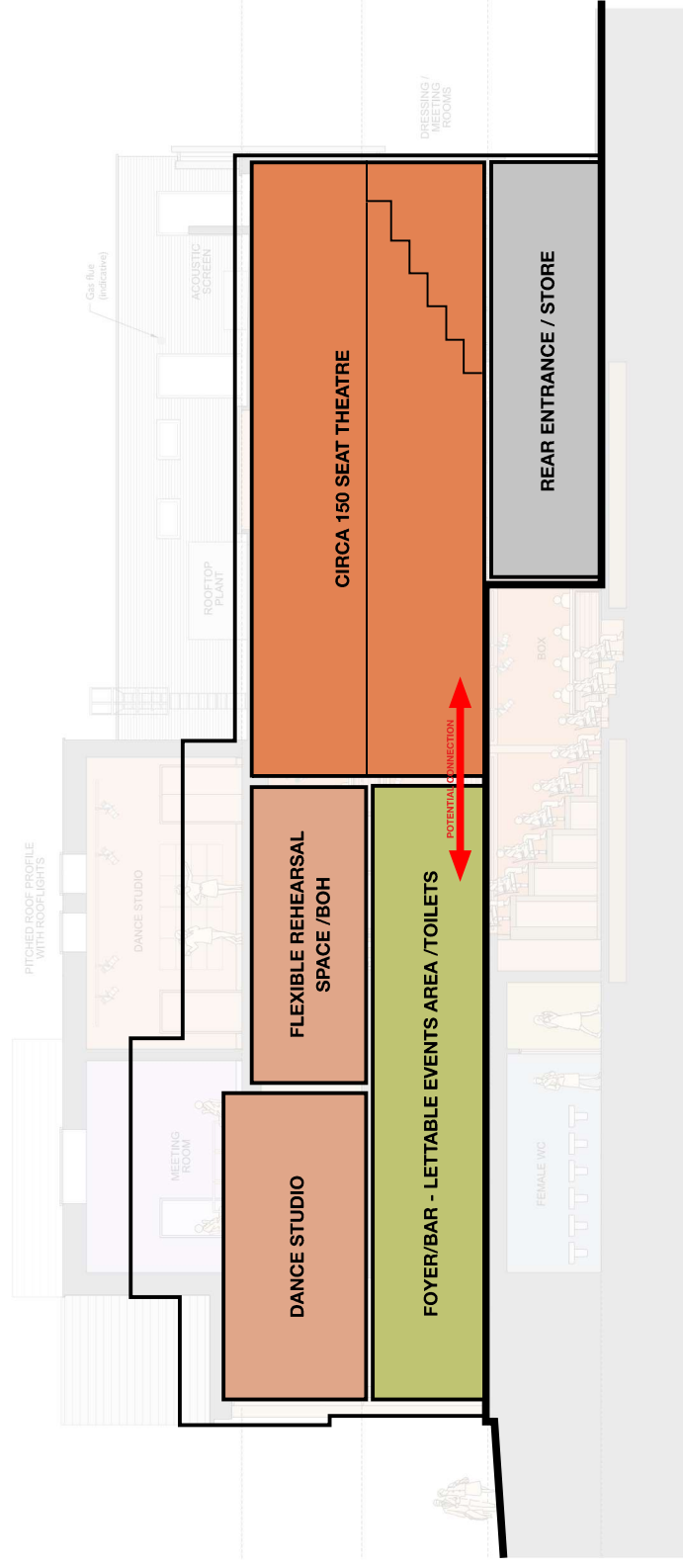
- Adapt offer of building to focus on providing lettable arts spaces and venues to the community.
- Push theatre up so stage is at upper ground floor, level with the foyer
- Role of theatre space changes from a highly technical space with the aim of attracting touring companies to a theatre appropriate for local amateur dramatic societies, local youth groups and schools. This negates the need for dedicated BOH theatre space.
- Space made available for further lettable rooms
- Theatre flipped to allow flexible areas to become dressing rooms when necessary

### Pros:

- Building provides many services and facilities for local community
- Significant rationalisation of expensive technical equipment
- Significant GIA reduction with resulting impact on cost
- Ample foyer/bar area with opportunity for this to be used as an events space, eg open mic nights, comedy
- A greater number of lettable spaces from the outset providing income
- External language can be maintained - opportunity to extend up
- Connection possible between foyer and theatre for larger events with bleachers retracted

### Cons:

- One of the three main programmes is compromised



# Unknown Works

## Alternative approaches - Simplify External Geometry

### Key moves:

- One simple thermal envelope
- Internal organisation freely rationalised
- Internal volumes expressed externally
- Use lightweight, cost effective, simple to use materials with tried and tested details
- Reduce glazing - use other more cost effective translucent materials where appropriate
- Push theatre up so stage is at upper ground floor, level with the foyer

### Pros:

- Efficient internal organisation
- This approach tackles the most complex area of the previous proposal, focusing on improving buildability
- Reduction in area minimised
- Savings through reduced excavation
- Savings through simplified acoustics
- delivery of dance studio in phase 1
- Flexibility maintained
- Scope to reduce size of theatre volume if deemed appropriate
- Allows for future flexibility
- Connection possible between foyer and theatre for larger events with bleachers retracted

### Cons:

- Planning required

