

A photograph of a modern building with a glass facade, partially obscured by lush green trees. The building has a grid-like structure with large windows and dark panels. The trees in the foreground are dense and vibrant green, with some branches visible. The overall scene suggests a blend of nature and urban architecture.

Friends of Limehouse Green Infrastructure Masterplan

Consultants Summary
Scope and Proposals

ARUP

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Introduction

June 2020

Arup is delighted to present this proposal to work with the Friends of Limehouse (FoL) to undertake a GI audit and develop a Green Infrastructure (GI) Masterplan report, with the overarching aim to improve the Limehouse as a place in which to live, work and visit.

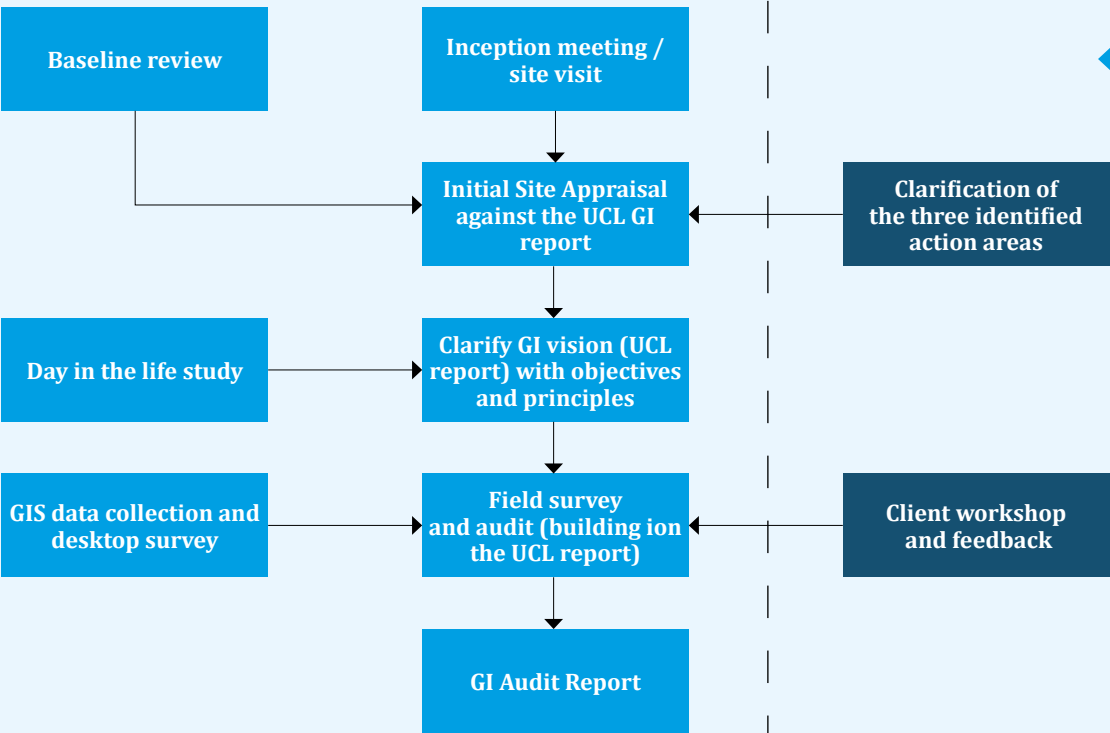
The FoL is located in Limehouse (as defined by the FoL) in the London Borough of Tower Hamlets (LBTH). The project would identify existing GI and the opportunities for further GI interventions within the FoL area at a high level, with the aim to unlock the potential of its streets in terms of their economic, social and environmental potential.

We see the ultimate aim of the project to both safeguard and stimulate regeneration of the public realm, through urban greening, to create sustainable, vibrant and pleasant spaces for residents, local businesses and visitors alike. The masterplan portion of the project would seek to create an overarching vision for a greener more sustainable place. The masterplan (underpinned by the GI audit) and its interventions would provide a baseline and guide to existing and new developers, LBTH and other stakeholders to deliver GI within the FoL.

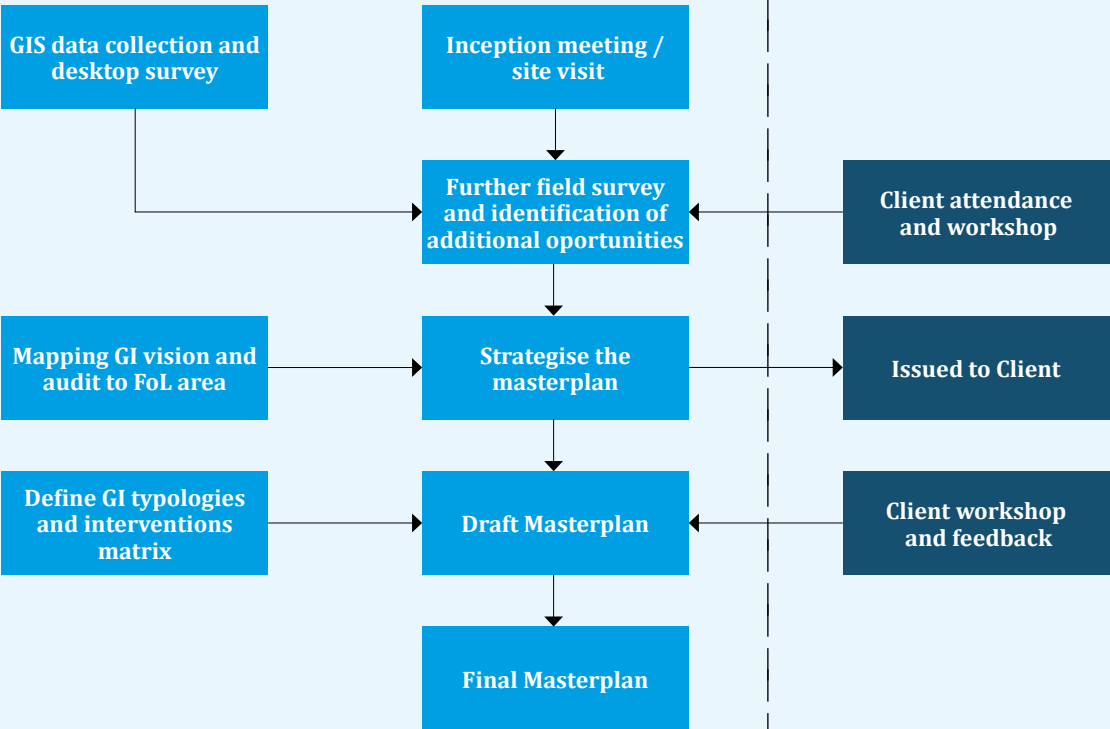
Our team comprises a wealth of experience in GI at a thought leadership level in our Cities Alive work through to pragmatic GI strategies such as the Fitzrovia Green Infrastructure audit, Croydon GI Vision all underpinned by our work in delivering the Green Infrastructure audit best practice guide (2013). This knowledge of GI is intertwined with our work on projects which range from strategic masterplans through to delivery and implementation of high quality public realm. We have the added advantage of a number of specialists within our team including a green wall/roof expert. We have assembled a team who have an excellent understanding of the intricate interactions between people and place in the design of the public realm and the importance of designing and implementing GI within our public realm. Further details on Arups projects and CVs of relevant personnel can be provided on request.

Our methodology seeks to make best use of currently available data and information to create a GI masterplan which identifies a series of long, interim and short term objectives, interventions or projects.

Stage 1 Methodology



Stage 2 Methodology



Methodology

Following ongoing discussions with the FoL and their intention for their complementary work to progress Local Neighbourhood Plan (by others) we propose an initial methodology that we believe responds directly to the FoL's needs and provides value, flexibility and defined deliverables for the FoL, LBTH, additional partners and key stakeholders. We propose a two stage approach:

Stage 1 - GI Audit Report

The purpose of this stage will be to deliver a thorough audit of the GI opportunities in Limehouse. The first step will be to revisit and review the UCL report, to which Joe Wheelwright (Arup) supported through mentoring and tutoring sessions with the UCL students who compiled the report. This review and refinement will firmly establish the collective GI vision, its objectives, evidence base, policy context and the three action areas defined. This reflects Step 1 of the GLA best Practice for developing a GI Audit.

The second step will be a detailed audit based on the GLA best practice (authored by Arup) and recorded in GIS (to be confirmed in discussion with the FoL and LBTH regarding resource availability) with description, evaluation and analysis of all existing GI features within the defined study area. It is intended that the audit will build upon and extend beyond the baseline study undertaken by the UCL report.

The GI Audit provides a focus for the FoL, to develop a strategic masterplan identifying opportunities for the targeted implementation of the most relevant and beneficial schemes to meet the objectives of the FoL including the improved appearance of the area, increased biodiversity and improved air quality.

Stage 2 - GI Masterplan

The purpose of this stage second stage will be a more detailed design exercise drawing on the audit report and its findings. The audit report will clarify the drivers for Limehouse to which the masterplan will respond to. The masterplan will be targeted at the areas within Limehouse where, the client and consultant body, think it will provide the greatest economic, environmental and social impact and the greatest synergy with LBTH strategy.

Our approach to the masterplan stage, will incorporate GLA best practice in undertaking Steps 3, 4 and 5. will be underpinned by in-depth knowledge of the area through established liaison with the FoL, our industry leading thought leadership around GI in our Cities Alive work and our experience of delivering both interim and permanent GI projects across London.

We will also undertake internal peer reviews and design charrettes formed of directors from our planning, transport, urban design and landscape teams to ensure that the FoL and its stakeholders benefit from the exceptional expertise and depth of knowledge that Arup hold, to ensure best value and an integrated approach.

Stage 1

GI Audit Report

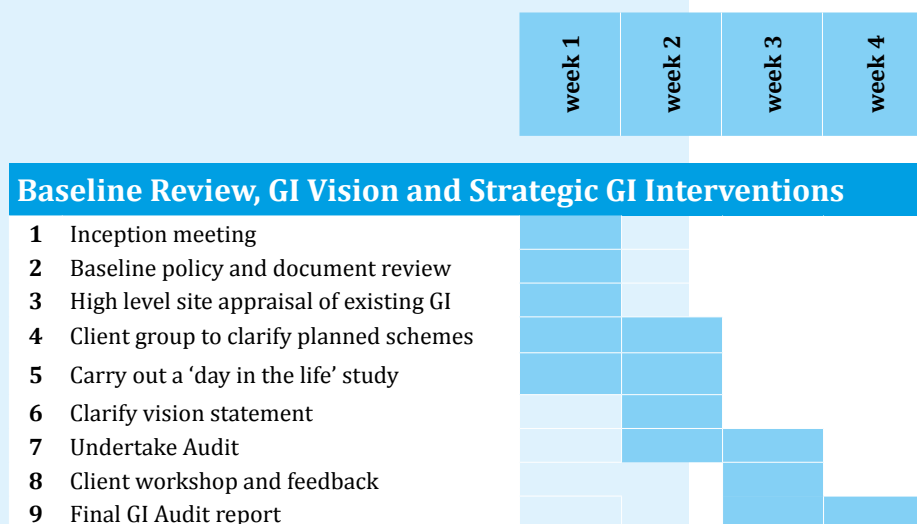
Stage 1 Tasks

- Inception meeting to establish key priorities / site visit with client to gain an understanding of their objectives and gather further information about the local area.
- Comprehensive review covering relevant local policy documents for LBTH and London including All London Green Grid, the New London Plan, LBTH Open Space Strategy and relevant public realm design guidance.
- Undertake a high level site appraisal of areas (as identified in the UCL report) of existing GI to understand the main provisions and the associated functional benefits.
- Map planned developments, public realm schemes and any relevant transport schemes within the FoL area.
- A 'day in the life' study to understand the character, identity and values of the area at a human experiential level to understand how public spaces are used.
- Clarify vision statement GI with client, in support of the neighbourhood plan and its objectives, to ensure audit positively feeds into the creation of a masterplan output.
- Undertake a GI Audit, as 'Step2' of the agreed five step approach, as promoted by GLA best practice and compile information through GIS based system.
- Client workshop to set out findings and present GI Audit.
- Issue Report and agree next steps.

Stage 1 Deliverables

- GI Audit Report (Electronic PDF and 3 hard copies) incorporating all of the tasks and summarised in a concise presentation.
- Programme: 4 weeks
- Total staff time: 23 days (approx)

Programme - Stage 1



Stage 2

GI Masterplan

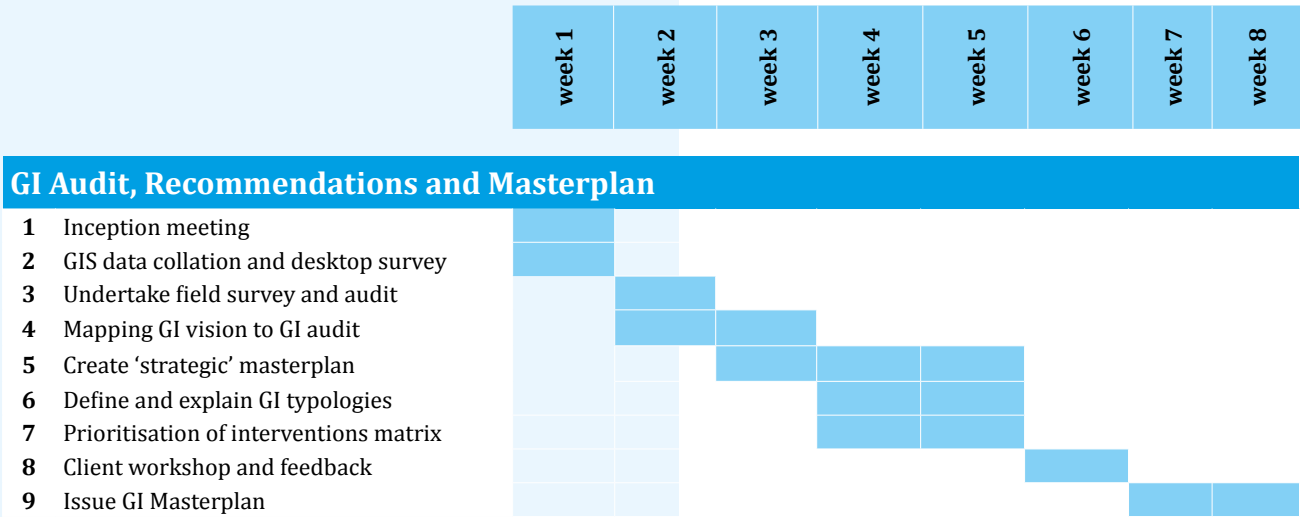
Stage 2 Tasks

- Inception meeting with the client to establish the Stage 2 process. Identify from the GI audit report key opportunities areas to be developed for the masterplan.
- Obtain extra GIS data sets including GLA open space and habitats as required to underpin mastreplan proposals.
- Undertake additional site audit and mapping of key opportunity areas as identified at the inception meeting.
- Map GI Vision to the audit and investigate opportunities for these spaces and areas to combine other functions and uses and or scaling up and improving existing GI assets.
- Create ‘strategic’ masterplan identifying the key sites and opportunity for GI, defining typology of GI opportunity e.g. green roofs/walls, street trees, swales/rain gardens and pocket parks and how they can be combined.
- Unpack GI typologies with the use of precedents and diagrams to illustrate and define the function of the GI and set out high level considerations for each including; scale, permanent/temporary, timing, complexity, maintenance implications and indicative cost estimates.
- Make recommendations and score each of the proposed GI interventions to prioritise the roll out of new GI projects.
- Client workshop to present draft masterplan for GI.
- Issue GI Masterplan and agree next steps.

Stage 2 Deliverables

- GI Masterplan and Report (Electronic PDF and 3 hard copies) incorporating all of the above tasks and summarised in a concise presentation.
- Programme: 8 weeks (aprox) (To marry with FoL, LBTH and LIF approach to the Neighbourhood plan and funding schedule - tbc)
- Total staff time: 58 days (approx)

Programme - Stage 2



Project Team

Joe Wheelwright Project Director



Joe will be project director, providing strategic input into the project. He is a highly experienced landscape architect whose work encompasses today's sustainability challenges; creating more liveable cities, designing-in resilience to climate change, promoting green infrastructure, biodiversity and well-being. Joe was responsible in Arup's award winning work on developing the London 2050 Infrastructure Plan for the GLA, in particular 'Enabling Infrastructure: Green, Energy, Water & Waste Infrastructure to 2050' and the subsequent Green Infrastructure Task Force report, which has directly influenced the focus of the Draft London Plan to incorporate specific policies on Urban Greening and its integration into the city as piece of recognised infrastructure.

Emily Woodason Project Manager



Simon will lead the design input for the project. He has a passion for designing and delivering authentic and memorable public spaces and is able to work collaboratively and effectively across a range of disciplines. Emily believes that a collaborative approach to design is integral to creating communities that are resilient to climate change, infrastructure ready, environmentally sensitive and supportive of local economy. She is a natural integrator, capable of bringing together the relevant people and skills to deliver innovative solutions to complex projects, such as our pioneering and award winning work with the Wild West End project.

Sasha Brogini Senior Landscape Architect



Sasha will manage the project on a day to day basis. She has developed her skills as a naturally creative person in order to lead projects from the early concept development and design stages, through to detailed design and completion. Through her work as a landscape architect Sasha strives to create places that inspire and enrich communities. She views landscape architecture as a key discipline in creating a sense of place where communities can thrive and where commercial and economic activities can prosper. She worked on the Croydon GI Vision, HS2 Landscape Design Approach and Hackney Wick Design code and is currently working on the HS2 Public Realm Design specification.

Bernd Saliger Green Roof specialist



Bernd has worked on a wide range of interdisciplinary projects in the public and private sector. These cover large scale master plans as well as small scale urban landscape projects, from concept design through to project implementation. He has significant design skills and focuses on delivering social, economic, environmental and cultural sensitive planning solutions for complex situations. Bernd has wide practical and theoretical experience in the Green Roof and Façade Greening business and exceptional skills and interests in soft landscape architecture.

Thomas Weake Landscape Architect

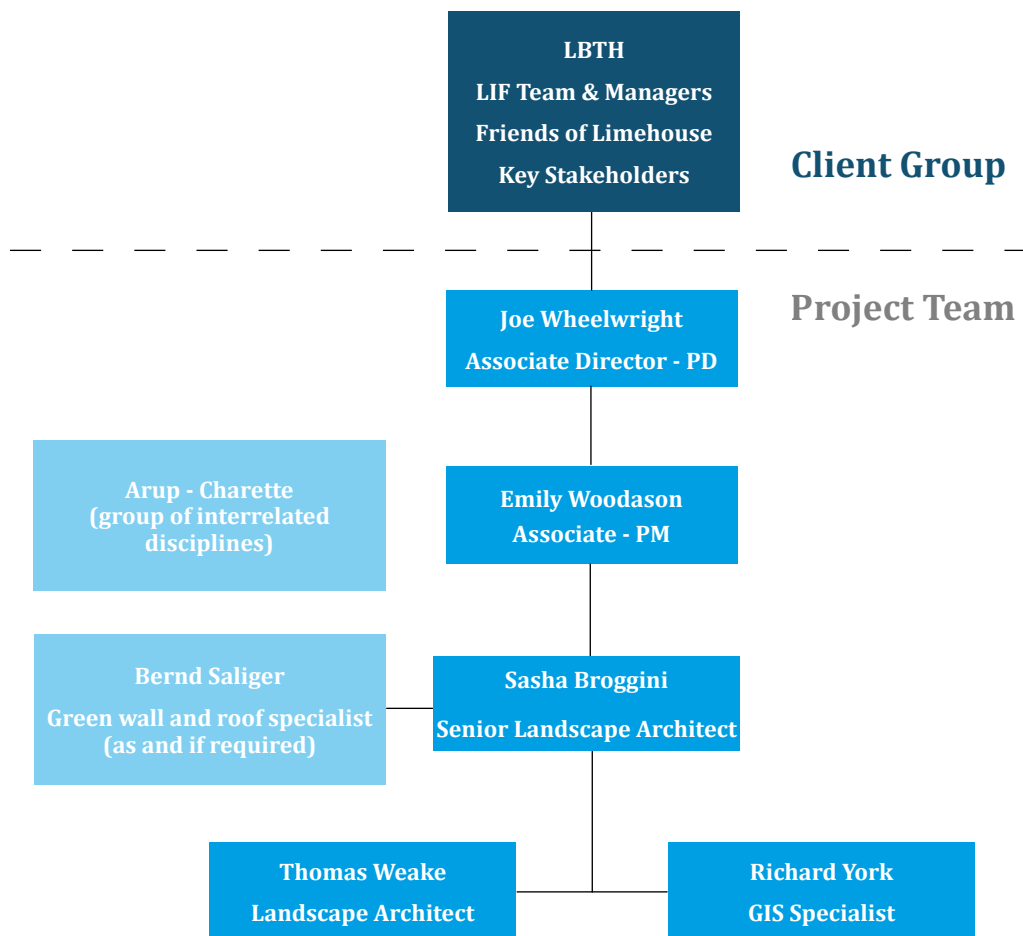


Thomas works in landscape architecture with a background in urban design, and has developed a holistic perspective to creating better places that respond to their unique contexts and pressures. Tom has an interest and experience in developing schemes and proposals at a range of scales that better connect with their unique social and physical contexts through a more comprehensive understanding of place narratives.

Richard York GIS specialist



Richard provides support to Arup's large landscape, urban design and planning projects including visibility analysis, landscape terrain analysis, data collection, management and mapping. Richard has produced detailed GIS mapping for masterplans, green infrastructure plans, landscape and visual impact assessments and landscape character assessments for projects in the UK including Croydon, Fitzrovia and the Wild West End project.



Quotation

The following fees will be payable:

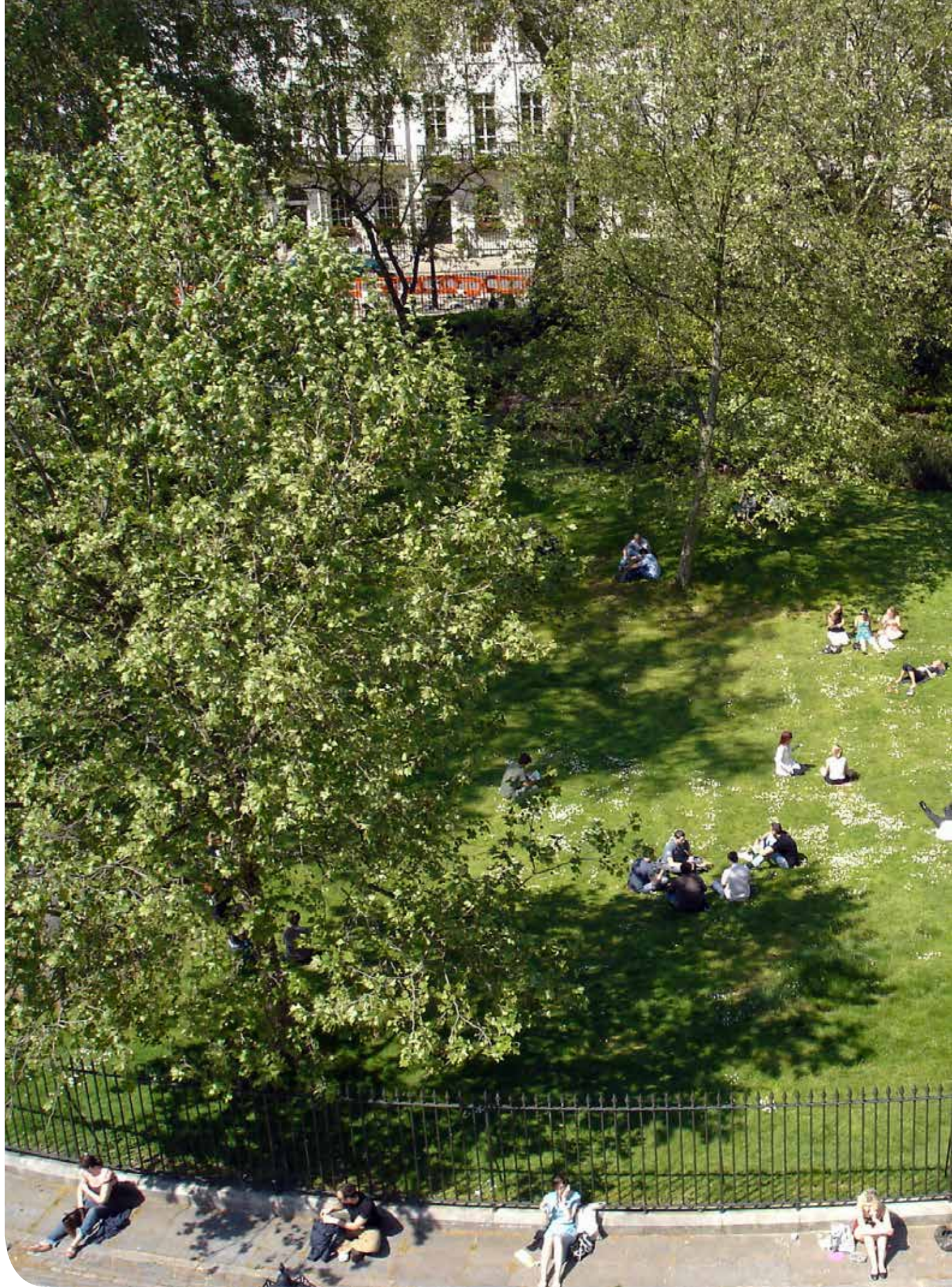
Stage 1: £8,500

Stage 1: £11,500

Total cost including expenses, excluding VAT: £20,000

- For programme management, we propose a time and cost fee of £20,000 excluding VAT. This fee is inclusive of expenses. This quote is valid for 90 days from the date of this proposal.
- In the event of any agreed extension in scope or any extension in the duration of our work beyond the anticipated period then the additional time incurred will be agreed with you beforehand. Our standard daily rates are disclosed in the table below.

Role	Day rate
Director	£1350.00
Associate Director	£1070.00
Associate	£850.00
Specialist	£725.00
Senior	£625.00
Junior	£410.00



Standard Terms and Conditions

General

1. These terms and conditions form part of our formal proposal. In the event of any conflict between these terms and any other terms proposed these terms shall apply.

2. We will use reasonable skill, care and diligence in the performance of the services and will be liable only to the extent that we have breached this obligation. Our liability shall be limited to such proportion of your losses as is fair and reasonable having regard to the extent of our responsibility for the same.

3. When the fee is a lump sum this is based on the assumptions/criteria set out in the proposal. Should one or more of these assumptions/criteria change resulting in additional costs to us, an appropriate adjustment to the fee shall be made by such sum as is fair and reasonable. If we are required to modify and/or revise any completed designs, specifications or reports and/or are delayed or disrupted (in either case for reasons other than our default) then you will pay us such sum as is fair and reasonable. Unless otherwise agreed, the sum will be calculated in accordance with the schedule of rates set out in the proposal (or, if none stated, in accordance with our standard schedule of rates) to cover the additional resources employed by us in respect of such additional work.

4. Notwithstanding any other term of this agreement our total liability under or in connection with this agreement whether in contract, tort (including negligence), for breach of statutory duty or otherwise shall be limited to £250,000. We will commit to maintain a commensurate amount of professional indemnity insurance. We shall have no liability under or in connection with this commission after the expiry of six years from the date of our proposal.

5. Copyright and all intellectual property rights arising out of our services shall vest in us. Subject to payment of all fees properly due we shall grant you a royalty free, non-exclusive licence to use such intellectual property for any purpose connected with the project, save that our prior written consent is required in each instance for use of our name or logo in any publication or media communication. We shall not be liable for the use by any person of any drawings or documents for any purpose other than that for which they were provided.

6. The detailed content of our proposal is the copyright of Arup, is confidential, and may be used by you only for the purposes of considering the proposal. The proposal remains valid for 3 months from the date of the proposal.

7. If you fail to make payment in accordance with the terms of our proposal we may, upon seven days' written notice to you, suspend performance of services until such outstanding amounts are paid in full. We shall have no liability for delay or damage caused by such suspension.

8. Neither we nor you may assign our rights under this commission and no term of this agreement confers on any third party any benefit or right to enforce any term of this agreement. Unless otherwise agreed, any report is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party for it.

9. Our agreement with you shall be subject to English law and any disputes referred to the English Courts.

Payment

10. Time basis rates are subject to review each year on April 1 and will be adjusted in line with salary inflation. Save for any items which are included in the fee (as stated in the proposal) disbursements and expenses will be charged separately at cost. Our fees are net of all taxes, levies, imposts or other duties. Invoices for any lump sum will be submitted in accordance with the schedule referred to in the proposal. Invoices for time basis services will be submitted for payment on a monthly basis unless otherwise stated in the proposal. Payment is due on presentation of our invoices and final date for payment shall be thirty days thereafter. Interest at the statutory rate will be charged on any overdue amounts.



**Additional experience and CVs
can be provided upon request**



Contact details

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Experience

Fitzrovia and Marylebone Public Realm Vision Plan, London

Client: Westminster Tree Trust and Portland Village Association

The Westminster Public Realm Vision creates a coherent strategy for a suite of short and more strategic long term landscape and public realm interventions that will transform the quality and experience for residents, visitors and workers in Fitzrovia and East Marylebone. The concept was to tap into the substantial change and private investment taking place within the study area, to transform the physical condition of the areas' streets and spaces, in turn improving quality and connectivity. Arup are currently working with local businesses and stakeholders to investigate potential for introducing pocket parks and temporary uses such as pop-up food, exhibitions, performance and other events to serve local residents, businesses and the University of Westminster.



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Experience

The West End 'Weave'

Client: New West End Company, TfL and Westminster City Council

Key collaborators: Publica

The public realm in the West End needs to be adapted to cope with increased visitor numbers resulting from continued population growth, additional rail capacity and changing movement patterns with the arrival of Crossrail, whilst also providing a world class environment that supports and promotes economic growth.

Arup were commissioned by the New West End Company and its partners Westminster City Council and TfL to examine the public realm strategy for the West End in preparation for the arrival of Crossrail in 2018. The study proposes the 'Weave' - an incremental and flexible framework that ensures the streets and spaces of the West End are ready for the additional volumes of people arriving and departing from Tottenham Court Road and Bond Street Crossrail Stations.

A multitude of different scaled public realm projects and recommendations are envisaged and it is intended that this will lead to a step change in the provision, quality, modal priority and the environmental performance of the streets and public space network ensuring the continued success of the West End for residents, visitors and businesses.



Experience

Fitzrovia Green Infrastructure Audit (GIA)

Client: The Fitzrovia Partnership

The GIA focuses on The Fitzrovia Partnership's objectives: enhancing existing features; improving air quality; creating pedestrian friendly environments and identifying new green infrastructure features.

Arup undertook the GIA to help plan improvements to the area. The audit reviews existing green infrastructure assets and identifies opportunities for enhancement, as well as identifying locations for new features across the public realm, streets and buildings of Fitzrovia.

The GIA for Fitzrovia provides an evidence-based action plan that will be a catalyst for growth through social, environmental, aesthetic and economic enhancement of the area. It presents analysis on data about the area to empower local businesses, residents and land owners to create beneficial change within a structured and planned framework.



Experience

Croydon GI Vision

Client: Croydon Business Improvement District (BID)

Arup developed Vision that identifies existing Green Infrastructure (GI) together with opportunities for further improvements within the Business Improvement District (BID) area. A key aim is to stimulate regeneration of the public realm to create sustainable, vibrant and pleasant spaces for residents, local businesses and visitors alike.

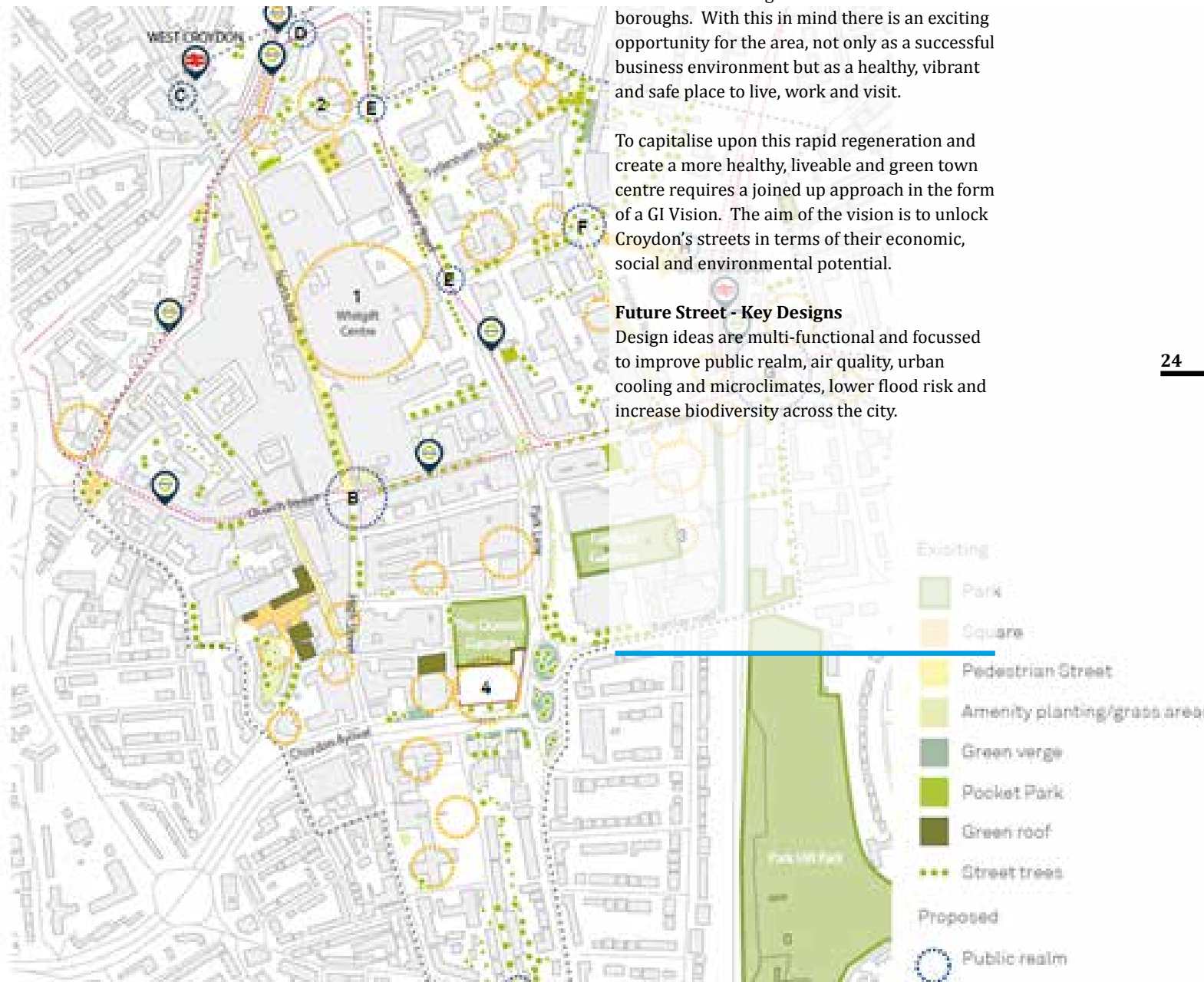
Commercial Centre

Croydon is fast becoming one of the UK's main commercial centres with the benefit of being one of London's largest and best connected boroughs. With this in mind there is an exciting opportunity for the area, not only as a successful business environment but as a healthy, vibrant and safe place to live, work and visit.

To capitalise upon this rapid regeneration and create a more healthy, liveable and green town centre requires a joined up approach in the form of a GI Vision. The aim of the vision is to unlock Croydon's streets in terms of their economic, social and environmental potential.

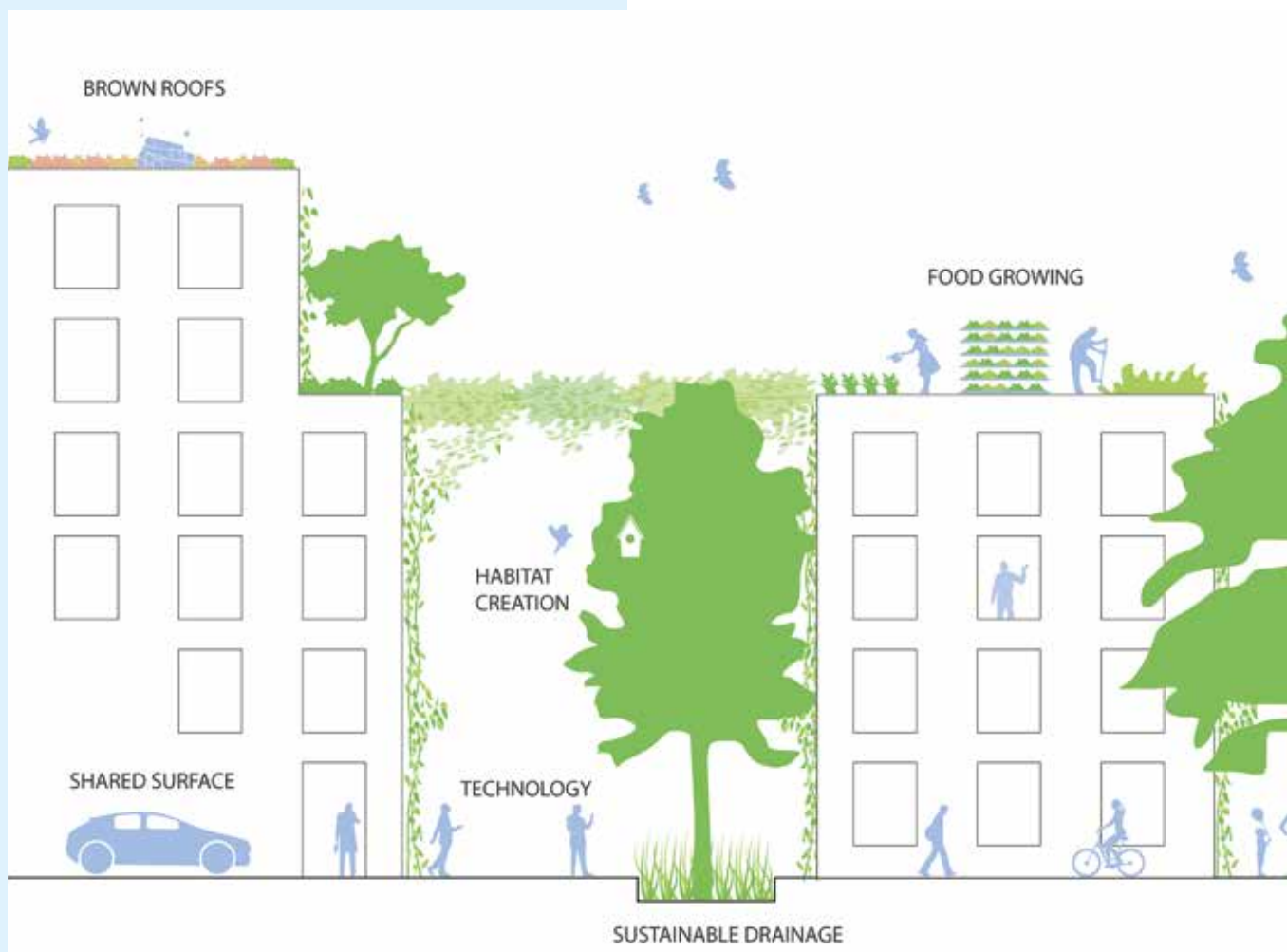
Future Street - Key Designs

Design ideas are multi-functional and focussed to improve public realm, air quality, urban cooling and microclimates, lower flood risk and increase biodiversity across the city.





Ecology masterplan vision



Regent Street green infrastructure strategy

Experience

The Crown Estate Ecology Masterplan, London

Client: The Crown Estate

The objective of the masterplan is to create a green corridor along Regent Street comprising a network of multifunctional green spaces and interventions.

Arup have been commissioned to develop an ecology masterplan for the Crown Estate's Regent Street portfolio. The vision seeks to strengthen green infrastructure connections along Regent Street to create an ecological corridor between the Royal Parks (Regent's, St James and Green Park).

Through a series of interventions across the Estate, comprising roof gardens, public spaces, streets and courtyards the Masterplan seeks to enhance biodiversity, improve health of the local environment, attract tenants and visitors and contribute to the value of the portfolio.





Experience

Wild West End

Partners: The Crown Estate, Grosvenor Britain & Ireland, The Howard de Walden Estate, The Portman Estate, Shaftesbury

Strategic Partners:
The London Wildlife Trust
Greater London Authority

Wild West End is a partnership between large property owners in London, aiming to: increase connections to green space and nature for residents, workers and visitors; enhance biodiversity and ecological connectivity; and raise awareness and promote the benefits of green space in urban areas.

As the technical partner, Arup plays a supporting role to the partnership, helping the Estate's to develop a objectives, implement proposals and monitor progress against the targets set.

"There is absolutely no doubt that parks and green spaces in urban areas improve people's wellbeing and quality of life. Through the Wild West End we look forward to transforming a part of the city for thousands of residents, workers and tourists to enjoy even more." Mayor of London





Experience

InMidtown

Client: InMidtown Business Improvement District

Arup provided a cross-cutting, integrated programme of services on behalf of InMidtown, the Midtown BID in London. The BID focuses on supporting the sustainability and business environment for one of the busiest business and tourist areas in the city. As the programme manager, we are providing a range of services—such as electric vehicle charging, freight management, reducing energy consumption and improving lighting—and combining them in the planning and implementation to build synergies among projects, reduce duplication and waste, and bring added value to the client and its members.

Energy Asset Mapping

InMidtown commissioned research by Arup to help understand the BID's energy demands and assets, to help inform how BID members could improve their energy performance. The analysis identified businesses with high energy consumption and opportunities for the members to improve performance; including demand response and energy efficiency programmes. This work was also shared with UKPN to identify possible joint project opportunities.

Future Street Incubator

Arup have been appointed to help InMidtown reduce commercial vehicle trips in Midtown, as air pollution and congestion are major challenges for the area. Arup will help develop an implementation plan to consolidate deliveries, create a micro-consolidation centre and create a web-based platform for preferred suppliers for InMidtown BID members. TfL awarded funding to InMidtown as part of their Future Street Incubator programme.





Streets for People - Fitzrovia

The Cities Alive vision was delivered from a carefully planned Arup investment programme, designed at realising our mandate to “create a better world” and ensure our staff remain at the forefront of innovation within the industry. The initial publication was delivered in line with a tightly controlled budget and programme, with the following publications all demonstrating their added value prior to additional funding being released.

Key to the whole ethos of the vision is in its real life delivery on the streets of London and the other cities and towns in which Arup works. Practical delivery is focused on an incremental process of trials and temporary installations to ensure money is being spent in the most effective way, with value maximised and risks clearly planned and mitigated. It also ensures delivered spaces can adapt to the needs of the people, providing a changing platform for engagement and activity. This is particularly evident in Fitzrovia where we are delivering temporary parklets in current car parking spaces, testing the value of the open space against the revenue streams of parking. In New York, the same principles are delivery visions for downtown Jamaica and Broadway.



Experience

Cities Alive

Client: Arup University

Partners: A collaboration between

Arup Landscape, Planning and

Foresight+Research+Innovation teams

Cities Alive was initiated to demonstrate that increasing Green Infrastructure (GI) is the most cost effective and resilient way to address the challenges of rapid population growth and climate change within our cities. Through an evidence based approach it identifies the economic, social and environmental benefits for investing in greener, people - centric public realm, open spaces and streets. The initiative has placed Arup at the forefront of GI planning, with praise from across the globe including Australia, Germany, East Asia, New York and Cape Town.

Cities Alive promotes a GI led design approach, through the provision of connected city ecosystems, that create healthier, socially cohesive, biodiverse environments, which benefit people and wildlife, whilst embedding resilience against climate change through storm, flood, heat, drought and pollution protection.

The report identifies key GI components (open space, natural areas, urban woodland, parks, green streets, squares, public realm, sustainable drainage (SuDS), waterways, cycleways, green roofs and façades) which can provide resilient, attractive new and upgraded city environments, by building on, strengthening and linking existing GI components such as parks, verges and canals. Over time these networked “city ecosystems” would generate substantial social, environmental and economic benefits (such as increased land value), and protect against the effects of climate change. Multifunctional contextual design is another key component (where a range of benefits are provided in one area through careful planning, integrated design and management) to deliver further benefits.







Experience

Vertical Meadow

Client: Grosvenor Estates

Partners: Green Fortune

Vertical Meadow (formerly known as Living Wall Lite) is an innovative and cost effective living wall system for temporary applications such as construction site scaffolding and hoardings.

It has been developed by Arup in partnership with Green Fortune, a living wall provider with a track record of over 300 living walls across Europe.

Plants and flowers are grown from seed in-situ on a temporary mat that is easily fixed to any scaffolding or hoarding. Within two or three weeks the first shoots start to appear, before growing into a verdant vertical meadow - turning any unsightly hoarding or scaffolding into something remarkable.

This is the future of temporary works, improving our cities by increasing natural capital.

Key features:

Flexible and adaptable - The system can be applied as a hoarding or scaffolding wrap. A broad and adaptable seed mix ensures that each Vertical Meadow thrives in a range of varied site conditions.

Cost effective - The system has lower capital cost than alternatives and is cheap to run and maintain, enabling greenery at a larger scale.

Simple installation - The mat arrives to site in rolls. The site team can carry out the mat installation, with Green Fortune overseeing the process and installing the irrigation system.

Low maintenance - Basic monitoring and maintenance is quick and simple, and the site team can be trained to carry it out themselves.

Low-embodied impact - The system uses materials with low embodied energy, and because plants are grown from seed in-situ, there is none of the energy usage associated with growing plants in greenhouses off-site.

