SECTION 2: QUALITY AND DELIVERABILITY

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SW2 Enterprise Centre: Final Tender



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SECTION 2: QUALITY AND DELIVERABILITY 2.1.1 SITE

TOWN HALL SITE

Our approach to the design began with a rigorous analysis of the site and the opportunities and risks it presents in relation to the brief. The site context has been investigated and tested through the use of massing diagrams, block plans and 3D models. These techniques demonstrate that our proposals are appropriate and prove that they are deliverable. They will additionally be used to help explain our solution in coproduction with stakeholders during detailed design.

Sitting prominently at the gateway to Brixton town centre, the site is bounded by two busy roads with the Grade II listed Lambeth Town Hall at its apex. The site offers a number of opportunities, having strong frontages to Acre Lane and Brixton Hill, the latter having aspect to the public space of St Matthew's Garden, the Grade II listed church and the recently reinvigorated Windrush Square. The site mediates between the civic scale of the Town Hall and The Electric to Brixton Hill and the residential scale to the west of the site on Porden Road.

The urban grain to Porden Road and the inside of the block to Buckner Road is fragmented and under exploited, it's current use being to provide service access to the Electric Brixton nightclub and Lambeth Town Hall.

In terms of townscape and urban analysis, we have carefully evaluated the massing of the existing buildings and listed elements in terms of their contribution towards townscape and have developed a deliverable solution.

The site and brief offer the opportunity to repair and consolidate the fragmented urban fabric and create a new destination, reinforcing the area as a gateway into Brixton.

OLIVE MORRIS HOUSE SITE

Olive Morris House is situated on Brixton Hill facing a green "finger" of land that runs along the roads eastern edge towards St Matthew's Garden. The western edge of the road is defined by 6 storey mansion blocks that have a very distinct rhythm. To the west of Olive Morris House are streets of 2 storey terraced housing. The houses whose back gardens adjoin with the existing building will be particularly sensitive in terms of overlooking and rights of light. The existing building is a long, 4 storey office building which currently hosts Council offices and the Customer Service Centre. Horizontal stepped banding of heavy brick makes for a monolithic presence and is out of context with other buildings on Brixton Hill and in the surrounding area.

WANLESS ROAD SITE

The site on Wanless Road is a four storey Georgian townhouse facing the railway line; currently it is used as offices with additional structures located on the plot of land behind.

The site is bounded predominantly by the back gardens of two and three storey late Georgian/ early Victorian family homes on Herne Hill Road, Kemerton Road and Cambria Road.

Our approach to this site is to propose low rise two storey family homes with gardens, appropriately set back from the surrounding gardens with minimal impact upon overlooking.





Fragmented streetscape



Heritage assets



Massing





Detached public realm

LAYOUT

At the heart of our scheme is a network of pedestrian routes and a new public space which tie the proposed civic and residential buildings into the wider townscape of Brixton.

From the new public space at the heart of the scheme, there is a clear legibility to all buildings, new and old allowing each to demonstrate a strong identity, creating a buzzing and vibrant heart to this regenerated quarter of Brixton. The mix of uses ensures this new quarter is active throughout the day and evening, extending the vitality of Brixton town centre. The new civic office building is strategically located on Brixton Hill, taking advantage of the aspect over St Matthew's Church and Garden and exploiting the existing massing as it steps up the hill.

The new office and existing Town Hall form civic frontages to Brixton Hill with old and new acting as beacons, animating the prominent corners of the site. A new residential block to Porden Road repairs and completes the residential grain, reinforcing the existing street pattern and defining entrances to into the new public space.

To the Town Hall, a new suite of facilities creates a new accessible modern entrance to the rear, with new office space, customer service centre, registry office and refurbished assembly room.

- 1 Lambeth Town Hall
- 2 New civic offices
- 3 Ivor House: Residential redevelopment
- 4 New residential block to Porden Road
- 5 New entrance to Lambeth Town Hall
- 6 Formal setting for St. Matthew's Church
- 7 The Electric Brixton
- 8 New public realm & The Triangle
- 9 Existing Entrance to Lambeth Town Hall







Framing the view to St. Matthew's



New public realm



Opening up the Town Hall





The Triangle

A NEW FORMAL SETTING FOR ST MATTHEW'S

Our starting point was the creation of a new formal setting for the Grade I listed St Matthew's Church and to connect the site to the public space of St Matthew's Garden, encouraging permeability into the SW2 Enterprise Centre site.

NEW ROUTES WHICH LEAD TO A PUBLIC SPACE

New pedestrian routes from Brixton Hill, Acre Lane and Porden Road lead into the site to a new civic space. Within this new public space, there is a clear legibility to all buildings allowing each to demonstrate a strong identity, creating a buzzing and vibrant heart. Glazed frontages to the new civic offices and new entrance to the Town Hall promote accessibility, transparency and encourage participation and interaction with the local community.

A NEW INCLUSIVE ENTRANCE TO LAMBETH TOWN HALL

Our proposals create a new public entrance to the existing Town Hall. The function rooms, customer service centre and registry office have an aspiration for greater community accessibility and so these facilities are accessed from the public realm at ground floor.

A NEW CIVIC BUILDING ON BRIXTON HILL

The new civic offices are located on Brixton Hill forming a civic frontage to St Matthew's Garden. Utilising the increasing scale of buildings moving up Brixton Hill and open aspect to the park, the office is conceived as a five storey building. This strategic move allows more of the site at ground floor to be given over to residential accommodation the creation of a generous civic realm.

CONSOLIDATING THE URBAN FABRIC

The urban fabric to Porden Road is repaired by a new residential terrace, completing the urban block which mediates between the civic scale of the new offices and the scale of the existing residential fabric to the west of the site.



A new formal setting for St. Matthew's Church



New public routes leading to new public space



A new inclusive entrance to Lambeth Town Hall

Consolidating the urban fabric



New public spaces



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MASSING STRATEGY

By demolishing the later post-war extension to the Town Hall and creating a new efficient office floorplate, we have been able to reduce the quantum of net space required within the new civic offices and have been able to explore further the massing of this element.

The Town Hall, Electric Brixton and civic offices form a composition which addresses Brixton Hill, St Matthew's Church and Garden and also Hill, St Matthew's Church and Garden and also forms part of a wider grouping with Raleigh Hall and the Tate Library. The key views are up and down Brixton Hill and from St Matthew's Church and Garden. The massing and expression of the civic office elevations have developed from the analysis of the surrounding massing and streetscape. The key principles which generated the form of the civic office are:

Existing massing The massing of Town Hall Parade steps up Brixton Hill from four storeys as illustrated on the massing diagram. The massing studies illustrate that the proposed massing of the new civic office is similar to the existing envelope on Brixton Hill.

Strong Cornice Line Both the Town Hall and Electric Brixton have a strong cornice line to Brixton Hill. The new civic office is articulated as a three storey volume with a lightweight two storey top, continuing the precedent of a strong cornice line which steps up Brixton Hill.

Vertical Emphasis The immediate context has a strong vertical emphasis, including the existing Town Hall, St Matthew's Church and Electric Brixton. To the new civic office, overlaid against the strong cornice line, a regular ard of vertical pictrs is organised. These grid of vertical piers is organised. These break up the mass of the building, with the scale of the grid making reference to the grain of the façade of the Town Hall.



Massing: Existing





Massing: four storey with single storey set back



Massing: three storey with single storey set back

0









Brixton Hill elevation: Proposed elevation

ARCHITECTURAL APPROACH

The Town Hall and civic offices form a composition which address Brixton Hill, St Matthew's Church and Garden and also form part of a wider grouping with Raleigh Hall and the Tate Library.

As previously described the new civic office is articulated as a three storey volume with a lightweight two storey top, expressing a strong cornice line. Against this strong cornice line a regular grid of vertical recast stone piers are organised. These break up the structural grid of the building and their proportion makes reference to the grain of the Town Hall.

Glazing is set back to the façade, creating relief and shadow and reinforcing the form of the primary vertical elements. Laid into this is a secondary grid of ventilation panels which have staggered rhythm.

At ground floor, the ventilation panels are omitted to create an active frontage and also to define a base to the building on Brixton Hill. To the prominent corners of Porden Road and Brixton Hill, glazed picture windows provide aspect up and down the hill.

The entrance to the civic office is articulated by a triple height portico, centred on St Matthew's Church. This leads into a double height link, or arcade, which connects to the new public realm on Buckner Road. To respect the residential scale of Buckner Road, the building steps down to three storeys on this elevation.

The crown of the building is articulated as a double storey element. In contrast to the solid grid of recast stone below, this is articulated as a lightweight element with a vertical metal frame and recessed glazed elements. Terraces are cut into this, providing amenity for the office while breaking down the length of the façade.



Proposed elevation to Brixton Hill



View down Brixton Hill



View towards Porden Road



View up Brixton Hill

Corner with Porden Road

ARCHITECTURAL APPROACH

The massing and architectural expression was tested and refined through a series of studies looking at the articulation of the new civic offices from key views up and down Brixton Hill and from St Matthew's Church and Garden.

The aerial view illustrates the proposed massing and articulation of the new civic office in relation to the Electric Brixton and Town Hall.



Aerial view of SW2 Enterprise Centre site

CIVIC OFFICE: MATERIALS

The artist's impression illustrates the view of the new civic offices looking up Brixton Hill.

It is proposed that the principle vertical elements are formed from recast stone, making reference to the material and vertical order of the Town Hall. PPC coated ventilation panels form a secondary grid within this allowing the rest of glazing to be fixed, these provide natural ventilation to the office space and can be locally operated to allow users to control natural ventilation.

The fourth and fifth floors are expressed as a lightweight top to the building. The vertical elements are formed from PPC coated metal sections with recessed double-glazed panels, with some openable elements to provide natural ventilation.

The entrance portal is conceived as a PPC coated metal element with integrated signage and lighting, with triple height shop front glazing announcing the main entrance to Brixton Hill.

It is proposed that the recast stone is a light white / grey colour with the ventilation panels providing an element of colour and an opportunity for branding. As a starting point we have suggested that the colour strategy is based on a range of terracotta colours making reference to the Town Hall. The colour strategy is indicative and will be subject to further development in partnership with the Council.

- 1 Re cast stone vertical cladding
- 2 PPC coated Ventilator panels
- 3 Double Glazed units
- 4 PPC coated vertical fins
- 5 PPC coated entrance portal
- 6 Double glazed panel with back painted
- 7 Shop front glazing
- 8 PPC coated capping









PPC coated ventilator panels



PPC coated entrance portal



PPC coated vertical fins

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NEW CIVIC OFFICE

The artist's impression illustrates the new civic office on Brixton Hill, looking towards the Town Hall.

The colour strategy is indicative and will be subject to further development in partnership with the Council.



Artists impression of new civic offices looking down Brixton Hill towards Lambeth Town Hall

SW2 ENTERPRISE CENTRE SITE

The following sections describe the approach to the functional design of the buildings which comprise the SW2 Enterprise Centre site and also the surplus sites.

The plan over illustrates the organisation of buildings on the SW2 Enterprise Centre site and the uses at ground floor.

- 1 Lambeth Town Hall
- 2 New civic offices
- 3 Ivor House: Residential redevelopment
- 4 New residential block to Porden Road
- 5 New entrance to Lambeth Town Hall
- 6 Formal setting for St. Matthew's Church
- 7 The Electric Brixton
- 8 New public realm
- 9 The Triangle



REIMAGINING THE TOWN HALL

The Town Hall is the home of local democracy, the "face" of the Council and is a beacon within Brixton, its Tower clearly identifying the entrance to the Council. Our proposed restoration, modernisation and extension re-imagines what the Town Hall is and its role within the community. Our proposal places the Town Hall firmly back in the role of visibly serving its local community from its heart, as originally intended. The enhancements and improvements will provide a viable resource for residents and opportunity space for local business and enterprise.

The opening up of the Town Hall and the inviting in of the local community, whether to access the Customer Service Centre, for major life events at the Council registry office or to take advantage of the enterprise space for newly formed businesses both through dedicated space and through space potentially shared with the Council, demonstrates the Council's commitment to becoming truly cooperative in dramatic fashion.

We propose to remove the later post war additions and extend the Town Hall to create an efficient three storey modern office space to complement the existing suite of small scale cellular rooms. This new accommodation will architecturally complete the rear elevation of the Town Hall and will define a new front door from the public realm off Buckner Road.

The Town Hall has aspiration for greater public accessibility and we have created a new route at ground floor which connects the existing entrance off Brixton Hill with the new front door to Buckner Road. This new promenade engages a sequence of light wells and atria and the floor finishes from the new public realm will continue through into the new extension in the Town Hall, reinforcing this connection and route.

- 1 Ceremonial Entrance
- 2 Reception
- 3 Secure Line
- 4 Oculus
- 5 Customer service centre
- 6 Assembly Hall
- 7 Registry Suite
- 8 Meeting Rooms
- 9 Light well
- 10 New Toilet / Lift Cores
- 11 Service Access

At the centre of this route the existing brick façade to the Council Chamber is revealed, having previously been hidden by a myriad of later extensions. Contrasting with this is the new extension which is visually permeable and can clearly be read as a new insertion. The Oculus to the Youth Court will be integrated into the design and creating a focal feature within this space at ground floor. This attractive central space is also highly functional, allowing natural



Town Hall: Proposed Ground Floor plan



A new front door



New flexible office floor plate



Opening up the Town Hall

A series of atria

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daylighting into the new open plan offices spaces and into the Council Chamber. The volume of space is also bridged at first floor level, maximising the functionality of the space by providing additional office floor space.

The main reception for the Town Hall is located below the chamber at ground floor and acts as a central reception and control point, with good visibility of all public areas, including Customer Services.

Beyond this central reception and control point, there is access to the suites of meeting rooms, new flexible office space and the upper floors of the Town Hall via the new lift and existing refurbished stair cores. It is envisaged that a proportion of the easily accessible cellular meeting / office spaces on the ground floor will be enterprise space, available for hire to local community groups and new embryonic business start ups. There is also space suitable for additional enterprise space provided in the basement, subject to how the Council chooses to manage the building.

There is also potential to close down the reception space out of hours, allowing the existing entrance from Brixton Hill or new entrance to and from Buckner Road to be used independently. For example, out of hours the entrance off Buckner Road could be opened to allow the atrium to be used to host wedding parties, exhibitions or as a foyer for events at the Assembly Hall.

There is an aspiration to improve accessibility and the suite of facilities associated with the function rooms and Registry to the Town Hall. We propose the creation of a new entrance from the central atrium to access a new suite of upgraded accommodation. The atrium spaces create a dramatic set of backdrops for civic and event photography.

It is proposed that the customer services centre, which has an aspiration for greater public accessibility, is located at ground floor in the Town Hall, engaging with the new route through. We recognise that customer services are often used by some of the most vulnerable residents within the Borough, some of whom may suffer from mental health issues. Discrete cellular space will need to be provided, and that staff safety needs to be considered very carefully. Our proposals provide the opportunity to provide such cellular space, and locating customer services within the Town Hall alongside other services and activities, in close proximity to the main reception and security point, will provide an enhanced level of security to that currently provided at Olive Morris House. We look forward to developing the detailed design of customer services in co-production with representatives from customer services at the next stage.

The newly created, clear and generous route through the Town Hall at ground floor, linking the existing entrance on the corner of Acre Lane and Brixton Hill to the new entrance on Buckner Road, will enable the significant flow of visitors to the Council each day to easily access core functions including customer services and Registry. The Town Hall is a beacon within Brixton, with the iconic clock tower clearly identifying the entrance to the Council. New visitors, accessing Council services for the first time, often without making a prior appointment, will naturally gravitate to this entrance – the front door of the Council – as they do currently. However, instead of being turned away, sent out of the building and directed to another building in Brixton, they can be directed via the central reception to customer services, Registry, meeting rooms and so on as required, within the Town Hall.

Regular visitors to the Council, in particular those who frequently require access to Customer Services, will choose to enter the Town Hall by the most convenient route. Those arriving from the South are likely to use the new entrance from Buckner Road. Those arriving from the North will use the existing Town Hall.

The queues of people observed outside of the existing customer services at Olive Morris House first thing in the morning will therefore be dispersed. Alternatively if desired, this could be managed by the Council through the staggering of opening times of the entrances, encouraging people to queue in the more discreet location of Buckner Road.

Clear wayfinding and navigation will be enabled through the use of consistently branded clear signage, hard and soft landscaping and strategically and logically located central reception facilities in both the Town Hall and the new civic offices. Where appropriate integration of the public art proposals in to the wayfinding strategy will further reinforce the sense of place and help to tie the whole scheme together.

Our proposal establishes a clear legibility between the existing fabric and new interventions. This new extension is physically and visually held off the existing facade of the Town Hall by a new light well, with bridges providing access between new and old. The existing toilets and lifts in the Town Hall will be removed and new central and efficient cores will be created, improving the net efficiency of the building.

In comparison to the cellular, load bearing construction of Town Hall, the new extension is designed as a flexible open plan space which complements the cellular spaces. Together these will offer a range of work space settings in the Town Hall. It is proposed that the existing cellular rooms, which are of heritage value, will be retained and used as meeting rooms, with the flexibility to also be used as executive offices or smaller cellular multi-occupancy office space for project working or for staff who require a more discrete environment to do their jobs. New fat walls will be introduced between some of these cellular spaces to allow vertical service routes through the building, whilst enabling the detail of their interiors to be retained as existing. These will provide a range of meeting rooms and office sizes, catering from 1-6 people.

At basement level, the plan is opened up to create further flexible open plan office space and cellular meeting space, which is top lit by the oculus at ground floor above. A new service passage will allow services to run along the perimeter of the building and feed up into the new fat walls which will serve the meeting room spaces in the existing section of the Town Hall. The former youth courtroom has been reconfigured in layout several times including conversion to a dance hall in the 1960's and to a social club in the 1980's. Many of the original fittings have been removed with a large opening formed in wall between the space and former magistrates' court room. There were further alterations in 2004 when the space converted to offices.

Given that the existing layout has been subject to a change of use and remodelled on a number of occasions with limited existing fabric remaining, we would propose to rationalise the existing layout to create open plan space.

The item of key heritage significance, the large circular skylight, will be retained and remodelled to become a feature within the atrium space at ground floor above. For the surviving oak panelling and borough coat of arms we will investigate at the next stage whether this can be incorporated in some way into this space or salvaged and reused elsewhere in the scheme.

The façade of the Town Hall would be retained and exposed as at ground floor.



Artists impression of atrium to Town Hall

NEW CIVIC OFFICES

The main element of civic offices, back of house functions, is accommodated off Brixton Hill over five levels, stepping down to three levels to the Buckner Road elevation. By exploring the potential to locate part of the office brief within the Town Hall, we have been able to reduce the quantum of net office space that needs to be accommodated on this area of the site.

De accommodated on this area of the site. One of the key principles of our proposals is to re connect the SW2 Enterprise Centre site with wider Brixton, encouraging a greater level of access and participation. As ISOS stage we created an external route between Fridge Bar and the civic offices, linking the public realm to Buckner Road to the St Matthew's Church. The proposal for the Fridge Bar to be demolished as part of the project, along with the reduced net office area to be accommodated, has allowed us rationalise the footprint and massing of the civic office element. This has allowed the proposed building line to be pulled back and Porden Road to be widened, thus improving the visual amenity for the residential offer. the visual amenity for the residential offer.

- 1 Main entrance from Brixton Hill
- 2 Reception
- 3 Double height arcade
- 4 Community enterprise space
- 5 Youth Offender Service (YOS)
- 6 Flexible office space
- 7 Central Atrium
- 8 Secure line to atrium
- 9 New public realm to Buckner Road
- 10 Cycle storage



New civic offices: Proposed Ground Floor









Double height arcade from Brixton Hill

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This also allows the route through the civic offices to be centred on the façade of St Matthew's Church. This route takes form of a double storey arcade which engages the central atrium space and connects with the public realm. There is an opportunity for new community enterprise off this route.

At ground floor to Buckner Road, the Youth Offending Service is located, with direct access from the arcade and additional discrete access from Buckner Road. We look forward to developing the design and layout of this part of the offices with representatives from the Youth Offending Service at the next stage.

At first floor and above, the office element of the brief is organised around a central atrium space. The efficient fifteen metre deep floor plates are organised around a central atrium to allow natural light, efficient ventilation and a visual connection though the floors.

The communal elements of the brief, meeting rooms and break out spaces are located within

the atrium bridges between two sides of the floor plate, encouraging co-working and animating the central atrium, adding to its functionality through the provision of usable space at various levels throughout the atrium volume.

At third floor, the elevation to Brixton Hill steps back to allow unobstructed views of the tower to the Town Hall and a terrace is created as an amenity space. To Buckner Road, a community allotment is created at third floor which addresses the new public realm and residential context. This is serviced by a goods lift to allow gardening materials to be easily transported.

The proposals for the civic offices offer a highly efficient and flexible space for the Council. Indicative layouts are provided and further detail is included within 2.1.5 Flexibility. Actual layouts will be developed in partnership with the Council and staff in detailed design. There are almost infinite options as to how the space can operate, depending on furniture choice, storage requirements, ICT, hot desk areas and so on.



Artists impression of atrium to new civic office

SECTION 2: QUALITY AND DELIVERABILITY 2.1.3 FUNCTIONAL DESIGN - THE TRIANGLE

A VENUE FOR EVERYONE

'The Triangle' sits in the centre of the scheme. With its indoor and outdoor area 'The Triangle' offers the flexibility that is needed to attract a variety of different types of events making the public area at the rear of the Enterprise Centre a buzzing heart of the scheme linking all the functions of the development. 'The Triangle' is the potential venue for private parties, educational creative sessions, exhibitions, cultural events etc.

The building is located to the north of the triangle site to offer good daylight qualities to the inside as well as the outside spaces. Towards the terraced houses to the west of the site a storage wall is proposed. This can store chairs, tables and other equipment relevant to the events happening at the Triangle as well as creating a barrier between the square and the private gardens.

The Triangle is a focus point of the pedestrian routes that attracts, excites and activates the public space. The building's iconic, triangular facade is visible from the passage through the Town Hall. Together with the light of the pavement the roof element of 'The Triangle' gently lights up the pedestrian areas and increases safety at night.

The square has been designed with sliding panels so it can be closed off to prevent intruders at night as well as offering the possibility of private events to happen.

The project offers the opportunity for many community functions and events and will become a 'place to see and be seen' in Brixton. The striking aesthetic and flexible function make this a place that will become known to the people of Brixton and surrounds; creating a communal link between cultural experience and the functions of the enterprise centre.







SECTION 2: QUALITY AND DELIVERABILITY 2.1.3 FUNCTIONAL DESIGN - THE TRIANGLE





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SECTION 2: QUALITY AND DELIVERABILITY 2.1.3 FUNCTIONAL DESIGN - THE TRIANGLE

1 Alu golden cladding

- 2 Sliding door system
- 3 Granite paving



SECTION 2: QUALITY AND DELIVERABILITY 2.1.3 FUNCTIONAL DESIGN - RESIDENTIAL

HOUSING OBJECTIVES

All of the surplus residential sites are designed with a common approach underlying the varied built forms and aesthetic that each proposal takes. There is a common ambition across all of the sites to:

- maximise deliverable site value,
- to embrace the sustainable living principles set out in the One Planet Living manifesto and the standards required by BRE,
- to meet as a minimum the requirements of the London Housing Design Guide, and
- to generate an exemplar approach for each building.

REDUCING THE CARBON FOOTPRINT

Each scheme is assessed on the merits of value generation versus sustainability with a strong desire to achieve the minimum possible carbon footprint. Although not measured through any BRE assessment, the decisions to retain Ivor House and International House provide significant carbon savings beyond those required by the Code for Sustainable Homes.

SUSTAINABLE TRANSPORT

All homes are provided with cycle storage with a range of types available from double stacked wall mounted storage to more traditional Sheffield hoops. Cycle storage is a prominent part of each building and is easily accessible from the entrances.

LOCAL AND SUSTAINABLE FOOD

Olive Morris House and Porden Road proposals include communal gardens that providing amenity space above and beyond that required in the GLA housing design guide. This is intended to promote on site allotments for the buildings encouraging local food production.

ENCOURAGING BIODIVERSITY

The Code for Sustainable Homes requires a small amount of habitat creation for local species, however the over provision of amenity space will provide additional habitat areas. Green façades and vertical planters will also help encourage insects to a level beyond that required by the BRE.

HEALTH AND HAPPINESS

Each of the new build proposals include a mix of tenure and dwelling types that will move the development away from the single tenure council housing of old. Instead houses, apartments and duplexes all form part of a varied residential offer that includes social rented, shared ownership and private market housing, creating diverse new communities in these key sites in Brixton.

- Porden Road
- 2 Ivor House
- 3 Olive Morris House



VISION

The design for Porden Road re-envisions the London terraced street to provide modern, high density and sustainable urban homes. At ground and first floors, the Porden Road building will echo the traditional terraced house typologies on the northern end of the existing residential street. Above this dual aspect apartments are provided.

Porden Road is a terrace of two storey brick houses. These early 20th Century buildings form a historic setting to Lambeth Town Hall and are typical of Brixton's intimate residential streetscapes. Front gardens and large bay windows combine to create a domestic and human scale. These houses are continued within the new building and set between them are cores allowing access to the apartments above.

The challenge has been to create a building that responds to the varied constraints defined by the site and adjacent buildings, in particular keeping an adequate distance from adjacent buildings whilst maintaining an efficient floor plate. The narrow site runs from east to west creating a portion of the building with a north facing façade. The building is limited in depth to create a series of two to three aspect apartments, some spanning the width of the building from the northern façade to the southern façade all arranged around 3 cores.



Sketch looking south east along Porden Road



Porden Road elevation

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Proximity to the new civic offices is a key constraint that informs the potential value derived from the site. The building strikes a balance between creating an efficient building and allowing adequate light levels into the homes. This will be studied, and improved where possible, during detailed design at the next stage.

The building steps from four storeys at its northern point, adjoining the existing houses, to six at its centre and then nine storeys to the Brixton Hill end. This stepping allows for green terraces on the roofs that serve as residents' amenity space, while the end nine storey block give punctuation to the switch from residential to civic typologies on Brixton Hill.

AREA	
Residential	NIA = 5296 m2
Commercial	NIA = 144 m2
RESIDENTIAL SPLIT	
Studio	8
1 bed	41
2 bed	24
3 bed	5
2 bed house	2
3 bed house	3
TRAVEL	
Cycle spaces*	148
Car spaces	0
* In line with CFSH 2 point	S









Levels 04 - 05



Levels 06 - 08



Cross section through middle section of building

Level 01



Levels 02 - 03

New civic offices

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Sketch of Porden Road looking south down Brixton

CONSTRAINTS

Due to the slender nature of the site along Porden Road, it was a primary concern to ensure that most apartments had at least two aspects. This is to ensure that all homes have provision for cross ventilation and adequate light levels.

In line with Lambeth planning guidance that all homes be dual aspect (constraints allowing), only 8 studios, along the north eastern edge of block A have one aspect. The 'one room' nature of studio apartments makes this acceptable. 3 of these studios are above the height of the new civic offices and so will be afforded greater light levels. Light levels within the further 5 studios can be increased by high ceilings or the introduction of recessed balconies.

The further 71 homes within the Porden Road building have either two or three aspects. Effective use of amenity spaces that are set within the building form, gives many apartments the desired second aspect. This corner aspect configuration is in line with the GLA definition of dual aspect as set out in the London Housing Design Guide. This combined with the efficient planning of the apartments will provide excellent interior environments



VISION

As a locally listed building Ivor House has an important place in the architectural heritage of Acre Lane. Respecting this heritage by retaining the existing facade will add to the richness of architectural styles within the wider development on the site.

The constraints of maintaining the existing floor plate and main façade creates the opportunity for unique apartments, each with generous open plan spaces for contemporary loft style living.

As the main façade is north facing each home needs to be dual or corner aspect. To facilitate this, a courtyard is created behind the building that will provide vertical access to the dwellings, which will be reached via walkways. This courtyard space will expose the movement that comes with the new homes as people come and go from the building. The courtyard is visually connected to the new public space to the south to add to the sense of community and ensure the building offers an active façade to the new public space.

A flexible commercial space is created on the ground floor and to the basement, creating an animated street front and offering the an animated street front and offering the potential for the creation of a GP practice and associated pharmacy, an opportunity that will be explored further at the next stage. Public consultation and an initial review of current provisions indicate that this would be a widely welcomed facility. The entrance to the residential floors of the building is located on the western edge of the building from Porden road.

A further level of residential is added to top of the building, set back from the line of the main façade maintaining and respecting the original form of the building including the existing mansard roof. This new level is conceived as a lightweight addition to the structure and will make use of rooftop planting to create a subtle profile maximizing the potential of a subtle profile, maximising the potential of Ivor House whilst respecting its history.

The building is extended to the south to create a positive face to the new public realm and triangle site.

SUSTAINABILITY

The lack of survey information at this stage makes it difficult to predict with certainty if Code for Sustainable Homes Level 4 is achievable, particularly given the importance of retaining the appearance of the facades. If it is commercially and practically possible, we will seek to achieve this standard. The assessment criteria for a project of this sort falls under BREEAM'S Domestic Refurbishment scheme.





Ivor House existing

Confidential

AREA	
Residential	NIA = 2421 m2
Commercial	NIA = 1559 m2
RESIDENTIAL SPLIT	
Studio	3
1 bed	4
2 bed	24
TRAVEL	
Cycle spaces*	54
Car spaces	0

Commercial Space Studio Apartment 1b Amenity space / Garden Core / Circulation / Cycle Apartment 2b Apartment 3b Plant . Site Boundary

GROUND FLOOR PLAN

Flexible commercial space located along Acre Lane, the main entrance to the residential floors is located on Porden Road, with the potential to be a GP practice and associated pharmacy.



1ST FLOOR PLAN

The existing floor plate and structure is retained, while the new apartments are designed to take advantage of the unique features of the original architecture.

EXTENSION FLOOR PLAN

The new extension to the roof is set back to provide balcony space and green planting areas around the perimeter and take advantage of views to the north.

SECTION

The lines of the existing façade, including the existing mansard roof are maintained. Flats are accessed via walkways along the courtyard facade. These are lined with greenery that helps obstruct views into the neighbouring properties.





1st floor plan (typical upper)

Extension floor plan (proposed 4th floor)



Cross section



Confidential



CONSTRAINTS

The scheme for Ivor House creates a green planted gallery that provides access to the regenerated existing building. All homes are dual aspect and The planting on the gallery and level 01 garden helps to obstruct direct views into the gardens of the neighbouring Porden Road properties.

The apartments facing neighbouring properties have main views to Buckner Road and rear facade is 19 - 20.5m from the neighbouring rear windows which exceeds the 18m considered appropriate

Any existing morning sunpath from the east to the Porden Road properties is maintained past the SE rear extension to Ivor House.





Section showing obstruction of views into neighbouring properties

EXISTING BUILDING

Olive Morris House is situated on Brixton Hill facing a green "finger" of land that runs along the roads eastern edge towards St Matthew's Garden. The western edge of the road is defined by six storey mansion blocks that have a very distinct rhythm.

To the west of Olive Morris House are streets of two storey terraced housing. The houses whose back gardens adjoin with the existing building will be particularly sensitive in terms of overlooking and other neighbourly issues, further detailed design development will seek to mitigate these.

The existing building is a long, four storey monolithic block with stepping brick bands which currently hosts offices for Council and Customer Service Centre.

PROPOSED BUILDING

The new residential building looks to create an exciting piece of architecture that sensitively appropriates to its context. The proposal continues the street mass and rhythm along Brixton Hill and sits within the footprint of the existing building. In addition, through minimising the depth of the floor plate, potential issues of overlooking to the houses to the west are reduced.

The massing of the building is a response to the surrounding context whereby most buildings are six storeys. This monotonous upper datum is articulated so that the building steps up from two storeys on Sudbourne Road and Hayter Road to a general height of five storeys on Brixton Hill with some elements rising higher to seven storeys in places.

The building is accessed by two entrances at ground floor. Duplex housing is proposed at intervals between these entrances helping to normalise the ground level street frontage. All apartments have either two or three aspects as a product of the articulated block formations and the introduction of light wells at the lower levels. This along with the efficient planning of the apartments, ensures excellent interior environments.

The building also features large communal roof terraces and private balconies that are linked through vertical vegetation that meet a light arbour covering the roof garden which also supports various plants. These terraces and the use of greenery helps to create a more engaging presence on Brixton Hill and provides the residents with a large amount of amenity provision. In dialogue over the next stage, it may be desired to introduce balconies to the rear edge of the building.



Sketch of proposed Brixton Hill elevation





AREA	
Residential	NIA = 7580 m2
RESIDENTIAL SPLIT	
1 bed	36
2 bed	56
3 bed	8
3 bed house	6
TRAVEL	
Cycle spaces*	48+
Car spaces	0



Commercial Space Apartment 1b Menity space / Garden Core / Circulation / Cycle . Site Boundary





MASSING

01: Describes the current condition where the existing Olive Morris House is completely out of context. Horizontal banding out of heavy brick makes for a monolithic presence on Brixton Hill.

02: Shows a new Olive Morris House that echoes the six storey massing along Brixton Hill. This massing would be detrimental to the light levels of the neighbouring properties behind.

03: The proposed building that matches the vertical rhythm of the sites context. The new massing is more in keeping with the residential nature of Brixton Hill. Fluctuating between five and seven storeys helps to articulate even further the mass of the building. The split massing of these forms allows for light permeation to the neighbours behind.



01: Olive Morris House existing

02: Olive Morris House echoing existing massing



03: Olive Morris House matching the vertical rhythm of site context

Cross section looking north





DAYLIGHT STUDY

The diagrams show the path of daylight set by the existing Olive Morris House building.

This path is drawn from the windows at the back of the neighbouring buildings to the vertical extent of the existing building. This plane is overlayed on the massing of the proposed building. The mass of the building is split into higher and lower sections to reduce any impact on daylight to the buildings behind. The split massing of the new building allows for increased light permeability. The 7 storey elements poke above the path set by the existing building and the diagrams show that the 5 storey mid sections of the building are fully under this path.

The back of the proposed building is set 24m from the back of the neighbouring buildings to avoid issues of overlooking.





Cross sections looking north through existing building





Cross sections looking north through proposed building

EXISTING BUILDINGS / SITE

The site on Wanless Road is a council owned, four storey Georgian townhouse facing the railway line, currently used as offices with additional structures located on the plot of land behind.

The site is bounded predominantly by the back gardens of two and three storey late Georgian / Early Victorian family homes on Herne Hill Road, Kemerton Road and Cambria Road.

PROPOSED BUILDINGS

The design team propose to keep the main building, to be sold for conversion back to a single family house, and re-design the grounds into a small mews style development consisting of four, three bedroom, double storey townhouses. The site itself is conceived as a miniaturised street where the form of the houses articulates the streetscape, by giving it an undulating edge.

The houses are approached from a large corner glazing unit, overlooking the entrance. This modern-day bay window provides added security and surveillance over the front of the property while optimising sunlight into the kitchen / dining area of the house.

The dominant material used on all typologies is a buff coloured brick. This is a natural hue that will sit comfortably alongside the existing building. The brick material has been chosen for its traditional appearance and the robust lifespan that ages gracefully. The bricks are complemented by black roof tiles and timber cladding.

The homes are dual aspect with orientation to the southwest taking advantage of the natural light.

AREA	
Residential	NIA = 432 m2
RESIDENTIAL SPLIT	
3 bed house	4
TRAVEL	
Car spaces	5



House 3b
Amenity space / Garden
Site Boundary
SECTION 2: QUALITY AND DELIVERABILITY 2.1.4 ACCESSIBILITY

PEDESTRIAN ACCESS

Engaging the public is at the heart of the Council's vision for a cooperative council, and our scheme creates a series of new pedestrian routes encouraging access into and through the site making a positive contribution to the way people move around and understand the place.

Entrances to the new civic offices, Town Hall including Customer Services and residential will be from these easily legible new routes, and their associated attractive public realm, creating active frontages to provide natural surveillance.

All buildings will provide step free access and the new entrance to Lambeth Town Hall from the new public space will provide a new modern and inclusive entrance for all users.

The newly created, clear and generous route through the Town Hall at ground floor, linking the existing entrance to the new entrance on Buckner Road, enables the significant flow of visitors to the Council each day easy access to core functions such as Customer Services and Registry providing a clear distinction between the public and private space.

The Town Hall is a beacon within Brixton, with the iconic clock tower clearly identifying the entrance to the Council. New visitors, accessing Council services for the first time, often without making a prior appointment, will naturally gravitate to this entrance – the front door of the Council – as they do currently. However, instead of being turned away, sent out of the building and directed to another building, they can be directed via the central reception to Customer Services or Registry as required, within the Town Hall.

Regular visitors to the Council, in particular those who frequently require access to Customer Services, will choose to enter the Town Hall by the most convenient route. Those arriving from the South are likely to use the new entrance from Buckner Road. Those arriving from the North will use the existing entrance.

The queues of people observed outside of the existing customer services at Olive Morris House first thing in the morning will therefore be dispersed. Alternatively if desired, this could be managed by the Council through the staggering of opening times of the entrances, encouraging people to queue in the more discreet location of Buckner Road.

The Youth Offenders Service (YOS) area will be accessed off the new route at ground floor through the civic offices and also has more an informal and discrete entrance off Buckner Road to allow managed access for regular users.

Clear wayfinding will be enabled through the use of signage, hard and soft landscaping and strategically and logically located central reception facilities in both the Town Hall and the new civic offices.

VEHICLE ACCESS

Pedestrian and traffic access has been clearly separated, with vehicles circulating around the perimeter of the site on Acre Lane, Brixton Hill and Porden Road as illustrated on diagram adjacent.

SERVICE ACCESS

It is intended that the new public space is designed as a shared surface to allow properly managed deliveries to The Electric, new civic offices and Town Hall and to allow fire tender access as illustrated. The Buckner Road and Porden Road corner location for servicing the new civic offices will also provide one car parking space for the mayoral car.

In collaboration with the Council after selection, we will develop and agree, through dialogue with The Electric, a strategy and solution for the servicing of that will include frequency, volume, timings and vehicle tracking for the largest anticipated vehicles servicing The Electric and where such vehicles will lay up. We are aware that a big issue currently for Porden Road residents is that some of the vehicles servicing the Electric are too large for Buckner Road and so attempt to access the Electric from Porden Road, against the flow of the one-way system that is currently in place.

CYCLE PARKING

Secure cycle parking is located in the civic offices and cycle parking will be distributed through the new public open space. The residential developments are provided with cycle storage with a range of types available from double stacked wall mounted storage to more traditional Sheffield hoops. Cycle storage is a prominent part of each building and easily accessible from the entrances.

RESIDENTIAL CAR PARKING

There are no proposed additional parking spaces proposed as a result of this development. We are aware of the significant issues that residents of Porden Road currently face as result of antisocial behaviour, often all through the night, as a direct consequence of patrons of The Electric using Porden Road to park their cars.

Porden Road is unusual for a London residential street of terraced family housing in that it has a very low percentage of car owners living there, with currently only three households owning a car. This means that there are significantly more parking spaces than there are resident's cars, leading to the area becoming the place to park for patrons of The Electric and Fridge Bar during the night. We believe there are opportunities to introduce car club vehicles into this street, this would be to the benefit of residents of the new developments, and also for existing residents, in terms of both amenity and in reducing the availability of parking spaces during the night and so the associated anti-social behaviour.





Vehicle access



Service routes





Proposed pedestrian access

SECTION 2: QUALITY AND DELIVERABILITY 2.1.5 FLEXIBILITY

NEW CIVIC OFFICES

Our integrated design team has worked closely to establish a flexible office plan that will allow a significant variety of fit out styles and layouts to be developed during detailed design to suit the Council's requirements. Its principal features are large spans, flexible floor plates, operable natural ventilation, large volumes and robust construction.

The adjacent diagrams also suggest the potential flexibility, adaptability and transformation of the office spaces and flexibility of structural and servicing strategy.

Significantly, the flexibility of our design proposals will enable the Council to sublet all or part of any floor within the new civic offices in future, should the Councils occupational requirements reduce over time or the nature of delivery of Council services, e.g. Customer Services.

TOWN HALL

Our proposals for the Town Hall significantly improve the flexibility of the building.

The new lift and toilet cores servicing the building will enable ease of staff movement between basement, ground, first and second floors and flexibility of use for each floor.

The new open plan office space, linking across the atrium in the new extension, creates flexible working space and provides efficient circulation routes around the building.

On the ground floor and in the basement, office, meeting room and space for other potential uses is proposed for Council, enterprise and community use. The use of this space is flexible and can change and adapt over time according to demand.

The cellular rooms within the Town Hall have the flexibility to function as meeting rooms, single executive offices and multiple occupancy office space and as workshops for Council and community enterprise use.

Movement through the building and into office and meeting room space beyond the secure line of the reception will be controlled by use of proximity readers on doors to provide flexibility, security and control.

INCOME OPPORTUNITIES

Our design creates a number of opportunities for the council to increase its income and also enhance community and local business involvement. These include:

New retail and café space

Brixton is well known for its range of independent and niche traders and there is potential for the café and retail outlets to be rented to local enterprises or community ventures, reinforcing the council's Cooperative ethos and generating a new revenue stream.

Enterprise and community space in the Town Hall

We would anticipate that the Council will charge a rent for enterprise and community space, whether this is by the hour, day, week or month, and that



SMART

SERVICES

SENSIBLE

PASSIVE

FACADE

STRUCTURE

Principles of flexible office space





Glazing where

desks.

necessary i.e. above





Minimal provision of kit Maximise passivo systems - daylight & natural ventilation

Increased natural

daylight penetration





Improved temperature

comfort kivels



Efficient and even

distribution of lighting



% of glazing varies with orientation i.e. more to north less to south



Necessary and

west elevations

contextual response to

shading: south/east &

Potential for split tenancy/ departments

Potential for options voids to link departments.

Operable windows

for users



Exposed concrete durable, with minimal decorating and repair. Contemporary and pleasing aesthetic



Minimise carbon footprint through use of GGBS concrete etc.



Compact central core provides evenett to gross floor ratio & wall to foor ratio



Concrete upstand to perimeter of building can increase structural space and eliminate perimeter columns to the facade





Cafe / retail and work units to new public space



New setting for functions linking amenity & public realm



Renting of serviced office suites

Income opportunities

SECTION 2: QUALITY AND DELIVERABILITY 2.1.5 FLEXIBILITY

whilst the rent may vary according to the nature of the organisation, it should be set as a minimum to cover the costs of servicing the space.

The Triangle This space has the potential to attract exhibitions, pop up cafes, and use as performance space as well as providing an additional venue for hire for social events.

Co-location of Registry and Assembly Hall Our proposal to move the Registry function of the Council to the Acre Lane side of the Town the Council to the Acre Lane side of the Town Hall, adjacent to the refurbished Assembly Hall and associated facilities, will create a viable and attractive place for weddings and wedding receptions, whilst allowing the other Registry functions to continue to function normally. Further event and function space, perhaps for larger conferences and training, can be provided within just the Assembly Hall independent of the Registry.

Potential event space within the Town Hall The Town Hall will have the potential to accommodate multiple functions outside of accommodate multiple functions outside of normal hours of business at ground floor in the two atria as a result of the proposed new entrance sequence. The zoning and movement controls of the building allow for out of hours use of any number of the available spaces.

Subletting space The new civic offices have been designed to permit the subletting of all or part of any floor in future, should the Council's accommodation requirements change and reduce over time.

For further information on income producing opportunities please refer to Section 3.2.









Example layout options in new civic offices

iIKAJIMA

SECTION 2: QUALITY AND DELIVERABILITY 2.1.6 ART

NARRATIVE ENVIRONMENTS

Kajima propose a holistic approach to the design and architecture of the SW2 Enterprise Centre, which embraces graphics, art, branding, and furniture & fittings. The additional synergy art brings to architecture is inspiring to discover in the commissioning process and again when occupants and visitors experience it.

PROPOSED ART AND AESTHETIC IMPACT STRATEGY

As a team we have worked on a variety of projects over the years which have been configured in particular ways to accommodate public art, private collections or specifically commissioned works of art some of which are illustrated adjacent.

As part of our proposals, in addition to the allowance for graphics and wayfinding signage, we have allowed £30,000 within our bid for the development of the public art in the civic offices and Town Hall.

Through the involvement of the local community, highlighting the Council's commitment to them and engendering a sense of ownership, wherever possible, artworks will be 'made in Brixton'. Working collaboratively with the Council's Arts Officer and through co-production with local artists, Made in Brixton and potentially students from City & Guilds of London Art School, the School of Communication Arts and Lambeth College, a detailed public art and aesthetic impact strategy will be established.

Studio Myerscough, our proposed art consultant, will a have a curatorial role, maintaining the overall view of how the public art, wayfinding, signage and branding coordinate and integrate across the SW2 Enterprise Centre site.

As a starting point we have suggested several opportunity areas for public art, and will confirm these and identify further locations in discussion with the Council. In the Town Hall; a stained glass installation or development of enclosure to the oculus as a feature bench or seat. In the civic offices; art pieces to walls of new arcade at ground floor or suspended from high level.

We would also like to understand whether there is potential for any of the Council's collection of artwork to be displayed within the Town Hall and new civic offices to benefit staff and visitors, in addition to the utilisation and display of any heritage assets within the Town Hall that are currently hidden away from view.

Hanging space within circulation areas and atria could also be integrated to allow local artists to exhibit their work on a rolling basis. There are further opportunities for permanent art integrated within the public realm, and The Triangle provides an ideal venue for cultural exhibitions.















Confidential





1







SECTION 2: QUALITY AND DELIVERABILITY 2.1.7 INTERIOR DESIGN

INTRODUCTION

The interior design strategy will be developed with the benefit of stakeholder engagement during the detailed design process. Our proposals at this stage illustrate how the flexibility of the spaces created will support an almost unlimited range of options in terms of furniture type and layout, partition type and layout, colour schemes, lighting, floor finishes, storage and so on to enhance the environment. These details will be developed collaboratively with the Council after selection.

TOWN HALL

The proposed strategy is to contrast the solidity of the existing fabric along the original wings of the Town Hall, council chambers and assembly room with a new lightweight glazed infill office.

The new elements, including a glazed bridge connection between old and new, will be transparent and lightweight in terms of structure and façade. Two new cores will sit either side of the chambers providing a material change and flanking the new public space created at ground floor. A new lattice glazed roof will naturally light both the new atria and old reception entrance providing nature daylighting into to the surround office spaces and corridors.

The public realm runs through into the common areas off the new pedestrian route, visually connecting the public realm via materials and clear wayfinding creating a welcoming environment. The ground floor houses Customer Services and Registry, and adjacent to the central reception area is 'The Oculus': a circular bronze seat and roof light to the lower ground office.

NEW CIVIC OFFICES

Proposed office areas will have exposed concrete soffits and minimal applied finishes, allowing an enhanced specification to atrium and common areas. The large, light filled open plan office floor plates provide the flexibility to permit an almost unlimited series of permutations of layout and interior design.

Further development of the interior design of the Town Hall and Civic Offices, including graphics, public art and FF&E, will form part of the RDD process and this is set out in section 2.1.20 of this document.



Proposed customer service centre at ground floor of Town Hall





Oculus seating





Transparent public route through new civic offices

Lattice glazed roof

INTRODUCTION

Our aim is to create a new and distinct public space in Brixton and a unique destination in London; a place that complements the neighbouring Windrush Square, reflects the distinct character of Brixton and the aspirations of Lambeth Borough Council.

THE CIVIC GARDEN

The landscape concept is to develop a 'civic garden' set within the Town Hall site. This garden space will be a combination of luxuriant planting and a rich paved 'carpet' that runs through the site.

Our aspiration is for this paved surface to extend from the heart of the site and across Brixton Hill together with a new pedestrian crossing, focusing on St Matthew's Church, and physically link this island site with the wider area, reinforcing the perception of the Town Hall as the centre of this civic hub.

A carpet of red brick and pale limestone paving creates a shared surface for pedestrians and cyclists, terraces for seating, opportunities to integrate artwork and lighting, and linear seating edges.

A line of green wall panels recalls the former Press building and encloses 'The Triangle'. A specimen tree forms the focal point to this space. Additional green walls are located on the new civic office building to enhance the greening of the area.

Espalier trees, mixed perennial groundcover planting and green walls provide a productive and sensory enclosure to the public space. These areas, combined with biodiverse roofs and potential rooftop community market garden, offers a huge increase in green infrastructure and the many benefits they bring to the quality of urban living.

We want the civic garden to become loved and cherished by the whole community. The success of the maintenance and management of the garden will crucial. We see the potential to involve council staff and wider community under the guidance of a 'head gardener' based on the site.









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THE CIVIC GARDEN: KEY MOVES

- Wrapping the site with a paved carpet that weaves and changes character with orientation and adjacencies
- Bring the external palette indoors
- Opportunities for pop-up restaurants, theatres, exhibitions and so on
- Green walls and native planting
- Integrated seating
- Creating flexible spaces that will support civic functions and activities
- Opportunity for contemporary art and light installations
- Creating a new distinctive identity for the site
- A new memorable local destination
- A place that nurtures growth and community
- Creating vibrant garden spaces with distinct character and use
- Photo opportunities
- Creating a favourable microclimate
- Opportunity to integrate art and performance
- Integration of an artwork inspired green wall



THE CIVIC AND DOMESTIC

Conceptually the site is divided into two distinct areas in order to respond to the adjacent buildings and activities; the civic garden associated with the Town Hall and Enterprise Centre and a 'green street' for the residential parts.

GREEN STREET: KEY MOVES

- Providing urban greening of a civic quality that enhances the setting of the spaces
- Creating a 'green street' that clearly defines the public routes and private thresholds to dwellings
- Potential to extend into the existing residential street creating a complete block







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THE GARDEN

- Creating a new distinctive identity for the site
- A new memorable local destination
- A place that nurtures growth and community
- Creating vibrant garden spaces with distinct character and use
- Photo opportunities
- Creating a favourable microclimate
- Opportunity to integrate art and performance
- Integration of an artwork inspired green wall



TAKING AN HOLISTIC APPROACH

Maximising green infrastructure benefits:

- Filter air particles and absorb air borne pollutants
- Reduce summer temperatures through shading
- Improving the summer micro-climate through plant evapo-transpiration
- Habitat provision through the use of native species
- Attenuation and storage of rainwater for irrigation etc.
- Improved sense of well-being
- Provide productive urban garden spaces for growing food, keeping bees, etc

















CIRCULATION

- Legible hierarchy to streetscape
- Shared space approach to street crossing points
- Increase permeability for pedestrians and cyclists
- Increase passive surveillance of routes and spaces
- Introduce a main pedestrian link from Brixton hill to Acre Lane
- Cycle storage provision
- Removal of parking spaces available to patrons of the Electric during the night, which has become a significant cause of anti-social behaviour for local residents





Street furniture









Sculptural lighting and artwork













Confidential



Planting











Living roofs











Confidential

STREETSCAPE

- Opportunity to create a unifying edge treatment for the site
- Opportunity to increase street tree planting to create a more cohesive green network
- Potential to de-clutter the streetscape

SECURITY

Our proposals ensure that there are no opportunities for unobserved spaces that would permit anti-social behaviour, and will alter the nature of Buckner Road and Porden Road from being a service road and back door, to being the heart of a new civic and residential quarter of Brixton.



SECTION 2: QUALITY AND DELIVERABILITY 2.1.9 WAYFINDING STRATEGY

INTRODUCTION

Our design for the SW2 Enterprise Centre project creates a series of strong, clear and dynamic architectural forms. This gives legibility to the site and also provides a strong identity externally which conveys the Council's ethos and aspiration to the wider community. The scheme has a clear architectural detrates used this has a clear organisational strategy and this naturally creates a sense of place, 'wayfinding' is therefore inherent in the architecture.

NARRATIVE ENVIRONMENTS

We propose a holistic approach to the design and architecture of the SW2 Enterprise Centre project and which embraces graphics, branding, furniture & fittings and art.

Graphics add an extra layer of identity, pragmatic functionality, visual stimulation and emotional response, intensifying the overall architectural experience. The bold use of graphics with the architecture will reinforce the identity and branding of the SW2 Enterprise Centre site.

To develop the graphics and wayfinding strategy we propose to appoint Studio Myerscough, We propose to appoint Studio Myerscougn, environmental designers, to develop a family of graphics across the SW2 Enterprise Centre site. The images illustrate the family of graphics that we would look at developing as part of the branding and wayfinding strategy. These will be designed to enable a range of building users including staff, customers, visitors and those with special peeds and disabilities to engage with special needs and disabilities to engage with and navigate the SW2 Enterprise Centre site.

ENGAGEMENT STRATEGY

The elements of the family of graphics will be designed through co-production with the Council. There is also opportunity to involve a wider group of stakeholders, including local artists and poets in the design of the narrative pieces through workshops with Studio Myerscough, reinforcing their connection with and sense of ownership of the SW2 Enterprise Centre.

In terms of maximising life cycle and minimising maintenance, there are a number of methods which can be explored including the use of vinyl, wallpaper, paint or applied graphics and which will be considered in more detail at the next stage.



Identity



Identity





Place making







Narrative



Room naming



Directional

GRANADA TELEVISION



52





Entrance



Narrative

Room numbering

SECTION 2: QUALITY AND DELIVERABILITY 2.1.10 M&E STRATEGY - FIRE

FIRE STRATEGY

For the purpose of developing RIBA stage C design proposals for the SW2 Enterprise Centre, we have consulted with Arup Fire whom we have worked in the past and are currently working with on a major office refurbishment and redevelopment in the City.

Arup Fire's initial comments have already influenced the design in terms of the treatment of atria, travel distances and smoke attenuation within our design.

Upon selection and prior to the detailed design stage starting, Arup Fire will be formally appointed to our team and will develop a full fire strategy for the project that will guide the design team through the detailed design stages.

iiikajima

SECTION 2: QUALITY AND DELIVERABILITY 2.1.11 M&E STRATEGY - ENERGY MANAGEMENT

ENERGY MANAGEMENT, MONITORING AND PREDICTIVE MAINTENANCE

Preliminary investigations with the companies for the Triangle site indicate that the existing site power and gas infrastructure will be sufficient for the development without significant reinforcement and it is intended that the existing substation on the site will be retained. Detailed negotiations will be entered into when the project moves forward.

The proposed energy system for the development includes a packaged CHP plant running on biofuel (diesel) from local waste oil recovery. This proposal will be developed with the client as the design progresses to ensure that this remains the optimum solution and that alternative fuel sources are considered.

The Town Hall rooms will be heated, cooled and ventilated by new fan coil and fresh air systems integrated into the new partitions as described in the M&E Strategy section. The atrium space will be conditioned by a ventilation and comfort cooling system fed from a high performance all-air system based on an indirect evaporative (adiabatic) cooling unit, the same as that described for the Enterprise Centre comfort conditioning. The unit will contain a double pass plate reciperator heat exchanger for up to 90% heat recovery efficiency on exhaust air in the winter. The Council Chamber and surrounding meeting/conference rooms will be positively pressurised to encourage migration of air from these areas back to the atrium.

Air handling equipment will typically be manufactured by Menerga Ltd (or equivalent) and will incorporate integrated fault diagnostics with call-out via a network connection to ensure that failure downtime is minimised.

An integrated Building Energy Management System will allow remote monitoring of energy use of the buildings through submetering and fault identification, while providing close control of all active plant and systems. This in turn provides the opportunity for the facilities management team to maximise energy efficiency.

The systems will allow for future climate change adaptation as well as future flexibility of use by including the future infrastructure and space requirements for zoning of systems to allow future tenancy areas additional cooling provision in case of higher temperatures.



Kroon Smart Meter



BMS screenshot



SECTION 2: QUALITY AND DELIVERABILITY 2.1.12 M&E STRATEGY - SOLAR SHADING

SOLAR SHADING STRATEGY

Façade studies have been carried out on the SW2 Enterprise Centre site to assess the solar performance and to develop proposals for solar control. The principal exposed facades face east and west and protection from low angled sun is necessary. The strategy that has been adopted for the SW2 Enterprise Centre is to avoid external shading as much as possible due to the issues of cleaning and maintenance in this busy urban location where atmospheric particulate levels (mainly from diesel vehicles – buses and taxis) are high. Instead the proposal is to use high performance glass with selective coatings designed to control solar gain (infrared) while allowing visible light through to provide good daylighting. Target glass performance properties are 60-65% VLT with a solar heat gain factor of 30% or less. Internal blinds will control glare, provide additional protection from radiant heat gain and are a requirement to meet the glare parameters in BREEAM.

Where brise soleil are required, they will be designed to complement the architecture and will be arranged to be easily cleared and maintained.



Site opportunities: Sun path and prevailing wind direction

SECTION 2: QUALITY AND DELIVERABILITY 2.1.13 M&E STRATEGY - ACOUSTIC STRATEGY

ACOUSTIC STRATEGY

As part of the comprehensive package of surveys and investigations that will take place after selection and before detailed design begins, it is our intention to appoint Arup as Acoustic Consultant at the next stage to conduct an acoustic survey of the Town Hall triangle site in order to establish the current acoustic conditions. Arup will then be retained to advise the team with regard to acoustic design ensuring that the SW2 Enterprise Centre complies with the Employer's Requirements and building regulations with regard to acoustic performance.

Our design has already taken into account the challenging noisy environment surrounding the triangle site. Our ventilation strategy, whilst permitting natural ventilation to all parts of the new civic offices and incorporating acoustic baffles into the ventilation panels, already assumes that in certain areas, particularly the lower floors on Brixton Hill, the current acoustic environment may require these areas to be mechanically ventilated while traffic noise remains an issue in the medium term.

ICT STRATEGY

The ICT strategy will meet the requirements of the report, "ICT Strategy document 2012-2015: Any device, anywhere, anytime" and project specific strategy document. The IT strategy for the buildings will aim to provide a more personal computing experience. The IT infrastructure for the buildings will connect to the Council wide strategy and provide equipment and systems that the Council can use effectively and efficiently for information delivery and enable collaboration on "any device, anywhere, anytime".

We have provided below the ICT specification set out as a schedule that identifies those elements that are included in the CATB costs and those that will be funded through the £4.5m LBL allowance for IMT.

SW2 Enterprise Centre

IMT_requirements_detailed_v_2_0 (as received 22 July 2013) - Kajima written response

Please confirm that your submission is compliant with the attached ICT specification. Responses should be treated in the same way as responses to the Employers Requirements, but indicating which elements are deemed to be covered in the CATB FF&E costs and which are deemed to be covered by the £4.5m LBL allowance

1	Introduction	
	This document is the draft IMT requirements document for the SW2 Enterprise Zone. Full technical requirements will be provided after further analysis has taken place around how the Council will operate in the future and what impact new ways of working will have on technical requirements.	
	Examples of possible future requirements are as follows:	
1.1.1	Security control and access. Currently, Lambeth only have solutions which provide secure door entry. A number of organisations are using proximity solutions for multiple areas which Lambeth may or may not require for the SW2 Enterprise sites. The solution may be used for: secure access; printing; location awareness; document security; payments; health and safety.	Note
1.1.2	Audio Visual requirements. Requirements may include: streaming directly to AV screens from tablets, laptops or mobile phones; interactive meeting room glass; other forms of interactive technology.	Inclu
2	Information & Management Technology Requirements	
2.1	Design Goal and Philosophy	
2.1.1	The Council requires a modern flexible, resilient and secure ICT infrastructure that will service the needs of current and future applications. A variety of user communities will require access to networks, applications, user devices, services & data. They will connect to the infrastructure using wired and wireless connections and will increasingly be operating on a location independent basis making their ease of connection physically and in terms of logging in to networks, of critical importance.	Note
2.1.2	The core infrastructure WILL use standard components and WILL comply with industry best practice in terms of utility, durability of the installation, ease of maintenance and expansion.	Note
2.1.3	The obvious goals of variety reduction and standardisation MUST be underpinned by the adoption of ubiquitous technologies and components which may be multiply sourced so that the risk of obsolescence due to specific manufacturer's proprietary components becoming un-available is minimised.	Note
2.1.4	Key components WILL be provisioned on an 'N+1' basis so that in the event of component failure, there is at least one independent backup component.	Note
2.2	Purpose and scope	
	This document outlines the minimum technical requirements, procedures and standards which impact upon the design and build of new buildings or refurbishment of existing buildings for Lambeth Council. Please refer to numbers in the main requirements document for anticipated use of space and numbers of staff and external organisations.	



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Ref.	SW2 Enterprise Centre: LBL Draft IMT requirement v2	Kajima response
	The following elements are defined as within the infrastructure package scope of works:	
2.2.1	Structured Cabling, including copper and fibre	Included in CATB FF&E costs
2.2.2	All patch panels for the structured cabling, including 8P8C termination panels in cabinets, 8P8C termination in floor boxes, 8P8C termination in Dado and all other 8P8C outlets	Included in CATB FF&E costs
2.2.3	Cabling cabinets, including cable management, PDUs, and fan trays	Included in CATB FF&E costs
2.2.4	Cabling for any audio-visual requirements	Included in CATB FF&E costs
2.2.5	Analogue, digital and satellite signal reception devices	Included in LBL £4.5m allowance
2.2.6	Provision for Telco services	Included in LBL £4.5m allowance
2.2.7	The supply of all goods, installation, testing and proving as outlined in Technical Standards	Noted
2.2.8	Items specifically excluded from the scope at this stage, requiring further evaluation, are:	
	 Active audio visual equipment e.g. whiteboards, projectors 	Noted
	 Proximity card readers and access control systems 	Noted
	General building management systems e.g. fire alarms	Noted
	All other loose ICT	Noted
	Full Disaster Recovery solution	Noted
2.3	Assumptions	
	The following assumptions are made:	
2.3.1	Hot desking will apply where practical.	Noted
2.3.2	There will be a main reception area which will provide a single point of contact for all appointments.	Noted
2.3.3	Lambeth will provide all network hardware, desktop equipment, servers and telephones.	Noted
2.3.4	Lambeth will be responsible for the installation and management of the telephony service and systems.	Noted
2.4	Reference Documents	
	This document SHOULD be read in conjunction with the following documents:	
	 Lambeth ICT Strategy 2012 – 2015: www.lambeth.gov.uk/ictstrategy 	Noted
	Brixton Campus Private Ducts.pdf	Noted
2.5	Network services connections	
2.5.1	Facilities will be provided to allow analogue and digital communications services to enter the building. A total of 8 ducts of 100mm dedicated to the building MUST be installed, split between two locations. Two diverse routes will be	Included in CATB FF&E costs

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	SW2 Enterprise Centre: LBL Draft IM1 requirement v2	Kajima response
2.5.2	For external ductwork, there MUST be pits where the route changes alignment and these MUST NOT be buried bends. The pit lids MUST be labeled 'L.B. Lambeth' and all duct entry points into the buildings MUST have gas and rodent seals. No pits are to be in the carriageway. The duct colour SHOULD be purple not green.	Included in CATB FF&E costs
2.5.3	Please refer to Appendix 1 for information on Brixton Campus Private Ducts	
2.6	International House Rooftop equipment – for information	
2.6.1	Please see Appendix 2 for a list of rooftop equipment on International House. A separate budget has been allocated for this work.	Noted
2.7	Communications Rooms Specification	
	This section describes the technical standards and requirements for communications rooms.	
	The main communications room for Lambeth is hosted on the second floor of lvor House.	
	Provision must be made for Lambeth to access the site 6 months prior to completion of the building works. Lambeth WILL be responsible for the relocation of existing communications rooms and WILL work closely with the developer to ensure any downtime does not affect the provision of Priority 1 services in Lambeth. The list of Priority 1 services is available on request from Lambeth.	
	The current room:	
	 Is a hub point for private fibre 	
	 Is a hub point for 250 dsl lines (includes links to other buildings in Lambeth). Please refer Appendix 1 for further information. 	
	 Is a point of presence for the internet 	
	Hosts the LGFL and PSN links	
	The communications rooms are to be provided as necessary to suit the needs of each building.	
	The Developer shall liaise with the Council's ICT department to determine full details of their requirements, including the following considerations:	
2.7.1	The number of communications rooms MUST be determined by the size of the building, the 80m cable requirement and the density of staff.	Noted
2.7.2	All rooms MUST be located close to the main building's conduit paths and a safe distance from workspaces to protect from the high levels of noise generated by equipment. All rooms MUST be sound proofed.	Noted
2.7.3	Each floor MUST have sufficient numbers of communications rooms to service all data outlets within a maximum 80m reach.	Noted

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2.7.4	The main communications room MUST be able to house 4 cabinets of 46U by 1000mm (depth) 800mm (wide), install a small desk and appropriate air conditioning units. Hub rooms/smaller communications rooms MUST be able to house one 46U cabinet.	Inclu
2.7.5	Racks MUST NOT be more than 30% populated after all structured cabling and vertical rising cabling has been terminated.	Note
2.7.6	Racks MUST NOT take up more than 30% of all usable floor space.	Note
2.7.7	Communications rooms MUST NOT be located in basement areas.	Note
2.7.8	Non ICT equipment MUST NOT be installed within Communications rooms. Additionally high electromagnetic field generating equipment MUST not impede the performance of the Category 6a cable.	Note
2.7.9	Communications rooms MUST be located adjacent to the communications riser. If this not the case then resilient routed fibre cabling and interconnects MUST be provided.	Note
2.7.10	Containment MUST be installed to support fully populated cabinets.	Note
2.7.11	Raised module floors of medium/high density MUST be installed to BSEN 50173- 5. Raised floor requirement - minimum 450mm TA 569. A frame ground grid shall be installed in communications rooms with a maximum cell size of 2 metres in each horizontal direction. The minimum cross-sectional area of the conductors that create the frame ground grid shall be 10 mm ² min. The frame ground grid shall be connected to the earthing network at multiple points. Electrostatic discharge MUST be bled off by use of an appropriate solution	Note
2.7.12	Where cable is susceptible to damage from normal operational activity it MUST be protected by an appropriate covering agreed with Lambeth's ICT representative. As an example where cable is exposed at floor level and may be susceptible to damage by being trodden upon, the cable SHOULD be appropriately shielded.	Note
2.7.13	All rooms MUST be constructed with walls and or partitions going from slab to slab to form a fire resistant barrier.	Note
2.7.14	Any object piercing this structure MUST be properly sealed to be fire resistant.	Note
2.7.15	Communications rooms MUST NOT have a ceiling grid installed.	Note
2.7.16	All Communications rooms MUST have reinforced flooring.	Inclu
2.7.17	All floor coverings MUST be anti static.	Inclu
2.7.18	Communications room walls and soffit installations MUST be sealed, exposed brick work or unfinished surfaces are not allowed.	Inclu
2.7.19	Windows MUST be blocked out.	Inclu
2.7.20	All rooms MUST be secure enough to prevent unauthorised access by any means including wall penetration. The doors MUST be secured with swipe and pin magnetic locks	Inclu

2.7.21	One double power outlet and 2 data outlets MUST be mounted on the ceiling in a position where a CCTV camera can observe the door.	Include
2.7.22	Each communications room requires an earth bar with disconnecting 10mm links to each cabinet as well as to the frame ground grid in the master communication room.	Include
2.8	Air conditioning to all ICT Communications rooms.	
2.8.1	A minimum of two air conditioning units MUST be installed in each Communications rooms. Each air conditioning unity MUST have of sufficient capacity to deal with maximum rated heat output from active electrical and ICT equipment, together with any solar gain. CRAC units MUST ensure an evenly distributed temperature in all areas of the communications rooms. All rooms MUST be well ventilated and have a provision of clean air supply at regular intervals.	Include
2.8.2	Air conditioning units MUST be sized to accommodate any loss in performance over time and MUST meet specification at end of life.	Include
2.8.3	A maximum 6KW heat load per cabinet is assumed.	Include
2.8.4	The a/c units MUST have diverse electrical supplies to enable cooling to function in the event of a breaker or cable failure.	Include
2.8.5	Where ceiling mounted a/c are installed these MUST not be positioned above or over Cabinets.	Include
2.8.6	Each a/c unit MUST be active and function at 45% load during normal operation.	Include
2.8.7	An automatic increase to cooling output MUST occur in the event of a failure of to either a/c unit.	Include
2.8.8	Cooled air supply into cabinets in communications rooms from the floor void is required.	Include
2.8.9	An alarm system is required which MUST be flexible enough to have a variety of alert levels. It is assumed that servers will have their own sensors which could be used to monitor air temperature.	Include
2.8.10	Communications rooms MUST have to be kept between a minimum temperature of 10°C (50°F) and a maximum 28°C (82°F). The ambient temperature SHOULD be between 20-21°C (68-71°F).	Noted
2.8.11	Communications rooms MUST be kept between 40% - 60% humidity.	Noted
2.9	Electrical Systems	
2.9.1	Server/Communications rooms MUST be fitted with 2 independent metered power supplies from alternate power distribution boards. Where mains essential power is provided one of the supplies to be taken from this source.	Include
2.9.2	All communications rooms MUST be connected to generated standby electrical	Include

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2.9.3	Solution MUST be capable of supporting emergency lights, stairwell lights, fire alarms, plus any other emergency systems to allow for safe evacuation of the building. The generator MUST be able to support the emergency planning room equipment for continued occupancy of business critical systems and staff for 5 days.	Included in CATB FF&E costs	
2.9.4	Lambeth WILL top up the generator on a daily basis with diesel if required. The developer MUST propose an appropriate solution based on the maximum 6 kW heat load per cabinet in each of the Communication Rooms in addition to the power consumption requirements for the rest of the building.	Included in CATB FF&E costs	
2.9.5	Additional to the generated power supply all communications rooms MUST be installed with uninterruptible power to provide 1 hour battery backup to all critical network and server hub room equipment. Resilience for all equipment MUST be N+1. One single phase rack mountable unit MUST be provided per cabinet. Hosting equipment will be Powerworks or similar.	Included in CATB FF&E costs	
2.9.6	Lighting levels in communications rooms MUST be 500 lumens at 1m. Minimum lux levels conforming to BS6206 MUST be installed at the Front and Rear of each Cabinet location. Lighting MUST NOT be installed directly over cabinets.	Included in CATB FF&E costs	
2.9.7	Minimal Communications room power and A/C cooling requirements are listed. Individual specifications for Communications rooms MUST be agreed with Lambeth's ICT reorsentative.	Noted	
2.9.8	2 x 32amp BS4343 'Commando' outlets on separate supplies MUST be provided for each cabinet, plus two 'spares' in all communications rooms. There MUST be one socket per source and all on separate MCBs.	Included in CATB FF&E costs	
2.9.9	Additional power requirements for the communications rooms MUST be standardised to provide a minimum supply capability which MUST be agreed with ICT.	Noted	
2.9.10	Each cabinet MUST have two power supplies fed from different sources or phases to enable power to be switched quickly in the event of a cable or breaker failure.	Included in CATB FF&E costs	
2.9.11	The type and capacity of circuit breakers, Cables. Plugs and Sockets MUST be standardised and agreed with ICT.	Noted	
2.9.12	All power circuits are to be identified by distribution board/phasebreaker e.g. DB/LP/2/Y12.	Noted	
2.10	Fire detection		
2.10.1	The communications rooms MUST be protected by Fire detection systems.	Included in CATB FF&E costs	
2.10.2	The Fire detection system MUST be connected to the BMS system which MUST automatically dial out alert in the event of a fire.	Included in CATB FF&E costs	
2.10.3	All communications rooms on all floors MUST be fire resistant for a minimum of one hour.	Included in CATB FF&E costs	

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2.11	Water	
2.11.1	All Hub rooms MUST be provided with a water proof seal to a minimum height of 100mm around the entire floor area.	Included in CATB FF&E costs
2.11.2	Water services MUST NOT be in or run through the room.	Noted
2.12	Warranty	
2.12.1	The supplier shall provide a 20-year system warranty covering the installed cabling system defined within this specification against defects in workmanship, components, and performance, and follow-on support after project completion. Warranty submittal shall comply with the manufacturer's requirements for warranty to eliminate possible problems and delays.	The CATB FF&E budget allows for standard market warranties. A 20-year system warranty is non-standard and therefore the differential in cost between obtaining a standard warranty and a 20-year warranty, if available in the marketplace, will be funded from the LBL £4.5m allowance.
2.12.2	No equipment provided to Lambeth SHOULD be subject for manufacturer's end of life notice at the time of contract acceptance.	Noted
2.12.3	The plugs, sockets, covers and switches used MUST be of good quality manufacture and be sufficiently robust to withstand use several times per working day for a working file of twenty years.	Noted
2.13	Technical Standards	
2.13.1	This section describes the technical standards and requirements for Cable fibre and sockets, including the installation standards required.	Noted
2.13.2	'Vertical' fibre networks connect the buildings to the public networks and connect the data centre to the communications rooms. 'Horizontal' (typically copper) networks connect the services terminated in communications rooms, the data outlets at desk and equipment locations.	Noted
2.13.3	Vertical networks MUST have duplicated and diversely routed connections.	Noted
2.13.4	The cabling infrastructure may be used to create non-internet protocol connections, only if those connections remain within the cabling distance restrictions imposed by IP networks.	Noted
2.13.5	Given the increasing reliance on ICT and the proliferation of multi-media and electronic document access, it is of critical importance to create a high performance network. To facilitate this, the network elements MUST use the up- to-date de-facto standard at the point of implementation. To illustrate this, such standards are:	Noted
	 Vertical networks – OM3 multi-mode fiber optic cables terminated to achieve minimum 10 Gigabit per second data rates on distances over 100m and 100 Gigabit per second data rates for distances under 100m. 	Noted

	 Horizontal networks – Category 6a twisted copper pair cables terminated to achieve 10 Gigabit per second data rates. U/FTP cabling MUST be installed where required (e.g. outdoors/CCTV). Requirements for U/UTP cabling MUST be clarified by Lambeth's ICT representative. If the distance is over 80m the horizontal network MUST be OM3 multi-mode fiber optic cable (as specified for vertical networks). 	Noted
2.13.6	It is Lambeth's policy to integrate voice and data cabling. There will therefore be no distinction made between the specification of voice and data cables, for non analogue lines, from the data cabinet, to the end user location.	Noted
2.13.7	Category 6a MUST be minimum standard installed by the supplier which meets or exceeds ISO/IEC 11801:2002 Amendment 2 standard for Cat 6a. The Cat6a solution shall be specified and characterised up to 500MHz.	Noted
2.13.8	The supplier MUST adhere to EIA/TIA Building Telecommunications Wiring Standards as follows:	
	I). The University Series IOI. Commercial Unshielded Twisted Pair (U/UTP) Wiring Standard and U/FTP Wiring Standard as well as Commercial Unshielded Twisted Pair (U/UTP) and U/FTP Wiring Standard for cross-connect hardware. Transmission Performance Specifications for Testing of U/UTP and U/FTP systems Centralised Optical Fibre Cabling Guidelines. Commercial Building Teconomy increationes Wiring Standard.	Noted
	ii). EIA/TIA-569-A for:	
	Commercial Building Standard for Telecommunications Pathways and Spaces.	Noted
	III). EIA/TIA-60b tor: The Administration Standard for the Telecommunications Infrastructure of Commercial Buildings M. J-SID-607-A for	Noted
	Commercial Building Grounding and Bonding Requirements for Telecommunications.	
2.13.9	The criteria contained within the EIA/TIA standards are subject to revision and updating as waranted by advances in network terminal equipment or wiring technology and the supplier MUST ensure that the latest standard is applied prior to cable installation.	Noted; subseq
	If there are discrepancies between this exercification including its supporting	Noted
2.13.10	documents and EIA/TIA standards detailed above, the supplier MUST apply the latest FIA/TIA standard.	notou

Ref.		
2.13.12	All OM3 multi-mode fibre cable installed MUST at minimum enable 10GBASE-SR and Fast Ethernet.	Noted
2.13.13	The longest Category 6a run from hub to user equipment MUST be no more than 80 metres, excluding fly leads.	Noted
2.13.14	The maximum total length of patch cables and fly leads at both ends of the link to be 10m or less.	Noted
2.13.15	A minimum of 60% of expansion MUST be provided. Expansion may be provided by installation of un-terminated cable, which MUST be able to reach the furthest point in each room.	Noted; although this seems excessive
2.13.16	Vertical network containment MUST have a 25% maximum fill ratio and horizontal network containment, a 40% maximum fill ratio.	Noted
2.13.17	There MUST be 2 terminated Fibre cable runs between all the ICT communications rooms and the main communications room. All fibres panels MUST be mounted into a cabinet in the same location as the cable.	Noted
2.13.18	The installed fibre Optic Cables MUST be designed to meet the requirements of structured cable networks in accordance with EN50173 or equivalent latest standard.	Noted
2.13.19	All installed cabling MUST be designed to meet the requirements of IEC 61156, amendment 2:2001, Parts 1 to 6.	Noted
2.13.20	All installed fibre cable MUST be suitable for use in the transmission of Gigabit Ethernet. Whether to install tight buffered or loose tube design will be left to the discretion of the supplier.	Noted
2.13.21	All copper and fibre cable MUST adhere to the latest requirements to install LSNH (Low Smoke No Halogen) fire retardant standard cable in New Builds.	Noted
2.13.22	Orange sheath fibre cable MUST be used for internal runs and Black sheath fibre cable MUST be used for external runs.	Noted
2.13.23	Labeling MUST be capable of being altered in the event of the use of the data- point changing at a future date. Machine printed clear and robust circuit labeling MUST be applied to uniquely identify the outlets concerned.	Noted
2.13.24	For floors which have a raised floor, 3 compartment floor boxes MUST be provided for every 3sqm of usable floor space which could be adjusted on the end of a 2m umbilical to allow the floor box to be repositioned within a 2m radius. In the ceiling, a double power outlet and a provision for adjoining double data outlet terminals MUST be provided for every 35sqm of ceiling space.	This seems excessive based on the density of seating. CATB FF&E allows for one three compartment floor box per desk
2.13.25	For floors which do not provision for floor boxes, provision MUST come from the ceiling and wall space to provide effective and very flexible coverage on the floor for the same density coverage as stated for floors with raised floors.	Noted

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; but must be subject to a Base Date in order to ensure that liability for	
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2.13.26	A variety of da to cater for	ata outlet 8P8C situations such	terminations and por as: dado trunking	wer solutions MUST be offered ; floor boxes; ceiling outlets; ations integrated into furniture	Noted	
2.13.27	Containment a the roof area f	and cabling ne or each buildin	eds to run from the i g which MUST be a n	main communications room to nixed cable run. An IP67 rated	Noted	
2.14	Continuity/Wir	e Map				
2.14.1	The pin out M	UST conform to	5 EIA/TIA 56B wiring s	standard:		
	PIN	TIP/RING	COLOUR		Noted	
	1	T2	WHT/ORG			
	2	R2	ORG/WHT			
	3	Т3	WHT/GRN			
	4	R1	BLU/WHT			
	5	T1	WHT/BLU			
	6	R3	GRN/WHT			
	7	Τ4	WHT/BRN			
	8	R4	BRN/WHT			
2.14.2	The installatio 6701 Parts 1 a	n MUST be co and 2, BS EN 5	ompleted in accordar i0174 and IEEE Regul	nce with British Standards BS ations (latest edition).	Noted	
2.15	Distribution					
2.15.1	It is expected that all data and voice outlets will be distributed in accordance with the phased development.				Noted	
2.15.2	The number of communications rooms MUST be determined by the size of the buildings, the 80m cable limit and the density of staff.				Noted	
2.16	Voice and Dat	a				
2.16.1	Incoming voic suppliers. The two diverse so building for bo	e and data se refore to provid ervices routes th voice and da	rvices may be provid de maximum flexibility MUST be provided fr ata.	ded by any number of service and minimise future disruption om the site boundary into the	Noted	
2.16.2	A total of 8 ducts of 100mm dedicated to the building MUST be installed, spli between two locations. Two diverse routes MUST be provided from the site boundary into the building.			ilding MUST be installed, split ST be provided from the site	Noted	
2.16.3	These routes work whether	MUST not cro in the control c	iss areas of the site of the principle contract	scheduled for future buildings tor or not.	Noted	
2.16.4	Duct/cables re	outes MUST b	e linked to the buildi	ngs telecommunications cable	Noted	

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2.16.5	Duct/cable routes MUST be as diverse as possible so as to provide a resilient pathway for services.	Noted
2.16.6	All routes MUST approved by Lambeth's ICT representative beforehand.	Noted
2.16.7	All incoming voice and data services will be presented to a location agreed with Lambeth's ICT representative.	Noted
2.17	Wireless 802.11x	
2.17.1	Wireless outlets are to be positioned above the ceiling grid. One outlet per room or per 50 desks MUST be provided, whichever provides the greater capacity. A label MUST be fixed to wall below the outlet. The label to be 40mm * 20mm with the wording:	Included in CATB FF&E costs
	DATA OUTLET ABOVE	
2.17.2	Fixed labels MUST be bicolour, engraved with reusable fixings (e.g. screws, push rivets etc.). Power and data socket IDs can be printed plastic labels that are changed when necessary.	Noted
2.17.3	Cable IDs MUST be Building code/floor/unique number (e.g. IV/2/A073 which translates to lvor House, Second floor, Town Hall side communications room socket 073). If there are in excess of 1,000 lines from any of the communications rooms, the numbering MUST reflect this.	Noted
2.18	Mobile Phone Wireless Connectivity	
2.18.1	Full mobile and 4G connectivity for all mobile networks is required in all areas of the new build.	Included in CATB FF&E costs
2.19	Testing – Minimum Requirements	
2.19.1	All cables MUST be tested to demonstrate compliance with the standards and specification to which they were bought. The manufacturer of the cabling system shall provide copper and optical fibre testing procedures that clearly describe the tools and settings to be used to ensure correct measurements of the system.	Noted
2.20	Testing of Class E	
2.20.1	100 % of the installed horizontal links have to be tested. The testing procedure has to comply with the standard ISO/IEC 11801: 2002 (Amendment 2) for Class EA, according to the procedure for "Channel or Permanent Link" or latest technical standard. The measurements shall be done using Level III or IV testing equipment. Channel testing shall be preferred.	Noted
2.20.2	The testing equipment MUST be yearly calibrated by the manufacturer and the copy of the calibration certificate MUST be included in the documentation.	Noted
2.20.3	The following parameters have to be tested:	
	i. Pair continuity (wiremap)	Noted
	ii. Pair length	Noted

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	iii. DC Loop resistance per pair	Note
	iv. Insertion loss (Attenuation) per pair	Note
	v. Next and Powersum Next for every pair combination	Note
	vi. Fext and Powersum Fext for every pair combination	Note
	vii. The ACR (ratio NEXT/ insertion loss) for every pair combination	Note
	viii. Return Loss (impedance match, retransmitted signal)	Note
	 Any standard tests that emerge over the lifetime of the structured cable infrastructure may be required after discussion with the tenants' LSLSIS representative. 	Note
2.20.4	The complete test results of all the installed links or channels have to be collected in a certification file. It is preferred to have the test result in electronic format to facilitate the certification procedure.	Note
2.21	Vertical Fibre testing	
2.21.1	The procedure shall comply with the ISO/IEC 14763-3 standard or its successor.	Note
2.21.2	The ISO/IEC 14763 standard specifies the implementation and operation of customer premises cabling.	Note
2.21.3	The part 3 of ISO document (14763-3) details test procedures for optical fibre cabling designed in accordance with ISO/IEC 11801:2002 Amendment 2 and installed according to the recommendations of ISO/IEC 14763-2 (Planning and installation of customer premises cabling).	Note
2.21.4	For Multimode fibres, the test procedure is based on the use of the "one-jumper method" specified by Method 2 of IEC 61280-4-1. This procedure is used for testing links for which the connector loss is a significant portion of the total link attenuation. This is the case for LAN premises links.	Note
2.21.5	Fibre-optic Tests applied to links and exclude equipment and work area cord.	Note
2.21.6	OF Attenuation testing is used to verify the initial performance of the installed link.	Note
2.21.7	All 100 % of the installed OF links have to be tested and MUST pass the acceptance criteria.	Note
2.21.8	The attenuation of the link is measured using the insertion loss method. This method uses an optical source and an optical power meter to compare the difference between two optical power levels.	Note
2.21.9	When testing multimode optical fibre links with a Light Source and a Power Meter, this measurement kit has to be capable of operating at	Note
	i. 850nm and 1300nm for multimode fibres (OM1, OM2, OM3 and OM4)	Note
	ii. 1310nm and 1550nm for single mode fibres (OS1)	Note
2.21.10	The test scenario with a Light Source and a Power Meter shall be one of the following for each link:	
-	i Single direction @ 850nm and @ 1300nm for multimode fibres	Note

	ii. Single direction @ 1310nm and @ 1550nm for single mode fibres if single mode fibres are required.	Not
2.21.11	The use of certification tool is recommended. Those tools are capable of producing a report logging the time of the test the link identification under test, the link length, the attenuation at the window tested and the acceptable link attenuation. The report shall also identify in which direction the testing was implemented.	Not
2.21.12	When testing with basic optical source and power meter, the operator MUST fill in a report logging	
	i. the time of the test,	Not
	ii. the link identification under test,	Not
	 the link length and attenuation at the window tested. 	Not
	iv. The report shall also identify in which direction the testing was implemented.	Not
	v. Acceptable link attenuation (To be calculated)	Not
2.21.13	The measured attenuation of the links shall have a lower value than the acceptable link attenuation calculated.	Not
2.22	Documentation	
	The following documentation is to be provided to Lambeth in electronic and hardcopy formats:	
	i. Certification files (in Excel format)	Not
	Plans "as built (in AutoCad and PDF format) showing all outlet positions with outlet number and cable routes.	Not
	iii. Class EA "Link and Channel Warranty" delivered by the LIFTCo	Not
	iv. List of components used, (Manufacturer and Part number)	Not
2.23	Security	
	Within the buildings, it is anticipated that the Council will use standard business network technologies and design approaches to create a PSN CoCo compliant network with data up to and including IL3 category. Swipe or proximity controlled door locks MUST be required with PIN pads for non general areas.	Not
	User communities, including Lambeth staff, will need to be able to interoperate and work alongside each other so the technical solution MUST be secure.	Note
2.24	Professional services	
	Project Management	
2.24.1	The contractor will be expected to manage the delivery of the required equipment and services providing a suitably qualified Project Manager with appropriate certification.	Not
2.24.2	The nominated Project Manager MUST be suitable technically qualified to paragent the contractor to the various stakeholders within the council	Not

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2.24.3	The Project Manager MUST provide regular (at least monthly) progress and status reports to the main Programme Manager and the ICT OAS lead. These will include, but not be limited to: progress for each key element; issues encountered; risk mitigation steps undertaken; dependencies and their anticipated impact and cost implications.	Noted
	Design	Noted
2.24.4	The contractor will take responsibility for all design input with regard to the passive infrastructure.	Noted
	Co-ordination	Noted
2.24.5	The contractor will undertake project co-ordination with:	Noted
	iii. The overall Programme Management team	Noted
	iv. The ICT department	Noted
	v. The client's representative	Noted
	vi. The supply chain	Noted

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Appendix 1

Brixton Campus Private Ducts - for information

Please refer to the diagram 'Brixton Campus Private Ducts.pdf' for the diagrammatical representation of Lambeth's private ducts.

The system uses a pair of purple 100mm ducts throughout.

The links between lvor House and the Assembly Rooms are separate; one goes direct and the other goes via the Buckner Road channel pit. The pit has the dual ducts to Town hall Parade, Hambrook House and Olive Morris House.

The following fibres are in place:

- Two 12 pair fibres running between Ivor House (second) and Olive Morris House (1 off each basement, second). ٠
- .
- One 4 pair between lvor House (second) and the Town Hall (room 17) One 12 pair fibre running directly between the Town Hall (room 117) and Olive Morris House. •
- Two 8 Pair fibres running between the Town Hall (room 117) and Town Hall Parade (mezzanine) Two 8 pair fibres running between Town Hall Parade (mezzanine) and Hambrook House (5th) on an aerial catenary because it predates the ducting system; if this is replaced, it will be replaced with new fibre using the private ducts. Two 8 pair fibres running between the Town Hall (room 117) and Acre House (first floor) •
- .
- •
- One 8 pair fibre running between Acre House (first floor) and Unison 6 Acre Lane. The link to the Unison Offices at 6 Acre Lane goes via Acre House at 10 Acre Lane. One pair of 100mm ducts from the Town Hall to Acre House and then a single • 100mm duct from Acre House to 6 Acre Lane.

Appendix 2

International House Equipment on roof Listed from Right

Lower roof, just to the right of door to roof

Equipment and number	Assumed owner
Motorola antenna, TSU 5462	Metropolitan Police TSU (Technical Support Un
Antenna, TSU 8372	Metropolitan Police TSU (Technical Support Un

Upper roof, RHS of railing where steps meet roof

	Equipment and number	Assumed owner
ĺ	Spectra antenna, link to Larkhall	Metropolitan Police TSU
ĺ	Wavesight antenna, connects to 2.4GHz antenna and encoder in locked cabinet	Metropolitan Police
	Stryker antenna	Lambeth Council, Public
	Motorola antenna, TSU 8672	Metropolitan Police TSU
ĺ	Motorola antenna, TSU 5452	Metropolitan Police TSU
ĺ	Antenna 2.3MHz to 2.7MHz	Metropolitan Police
ĺ	Antenna 2.3MHz to 2.7MHz	Metropolitan Police
ĺ	Motorola antenna, TSU 5453	Metropolitan Police TSU
ĺ	Infinet antenna Stryker	Lambeth Council, Public
ĺ	Mesh antenna Stryker	Lambeth Council, Public
ĺ	Flat plate antenna Stryker	Lambeth Council, Public
ĺ	Infinet antenna Stryker	Lambeth Council, Public
ĺ	Infinet IP receiver (2x long plates and a co-joiner)	Lambeth Council, Public
ĺ	Data antenna (x 2)	Lambeth Council, Public
ĺ	Yellow boxes attached to low wall (x3)	Lambeth Council, Public
ĺ	Parabolic antenna (x 2), one freestanding	Lambeth Council ITC?
ĺ	Ogier microwave receiver (looks like a shoe box camera)	Lambeth Council, Public

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)	
)	
(Technical Support Unit)	_
Realm CCTV	_
(Technical Support Unit)	
(Technical Support Unit)	
(Technical Support Init)	_
Realm CCTV	_
Realm CCTV	
Realm CCTV	
Realm CCTV	_
Realm CCTV (redundant item)	_
Realm CCTV Realm CCTV (redundant item)	
	_
Realm CCTV (redundant item but should be recovered)	
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SECTION 2: QUALITY AND DELIVERABILITY 2.1.15 TELECOMMUNICATIONS

TELECOMMUNICATIONS

The telecommunications provision will follow the requirements in the "draft IMT requirements document for the SW2 Enterprise Zone". We note that this document is still subject to consultation and finalisation by the Council as it states that, "full requirements will be provided after further analysis has taken place". However, possible future requirements include security and access control for buildings, documents and equipment as well as AV provision and streaming to interactive technology.

The allowance for the infrastructure and wireways for these systems will be provided within the design, to provide a modern flexible and resilient ICT infrastructure that will provide for current and future needs.

Standard components will be used and the hardware and installation will comply with good practice industry standards for ease of installation and longevity / durability.

Components that are critical will be backed up on an N+1 basis as required in the IMT draft document.

Please refer to Section 2.1.14 whare we have provided the IMT specification set out as a schedule that identifies those elements that are included in the CATB costs and those that will be funded through the £4.5m LBL allowance for IMT.

SECTION 2: QUALITY AND DELIVERABILITY 2.1.16 SECURITY

THE SITE

The detailed design of the site and buildings will be developed to comply with the requirements of Secured by Design. The following features will ensure the appropriate secure boundaries and levels of security for the overall Town Hall triangle site:

- The proposed building layout naturally defines the public space / route providing secure frontages.
- The new entrances to the civic offices, Town Hall, The Triangle, residential units and the active frontages will also provide passive surveillance to the new public space on Buckner Road, Brixton Hill and Porden Road.
- In terms of secure boundaries, a wall / fence is provided to the back of the new residential units on Porden Road. The Triangle external space can be secured out of hours to prevent loitering and antisocial behaviour. Other secure boundaries are formed by the buildings themselves.
- The design will target existing site security issues such as undesirable loitering and anti-social behaviour, break-ins / thefts that are not monitored and vandalism.
- The transformation of Buckner Road from a service road and back door to The Electric into a new civic and residential quarter will completely change the nature and use of the space and this new environment will encourage more responsible behaviour.
- Removing the ability for patrons of The Electric and other night time venues to park their cars in this area and gather to the back of Town Hall Parade, will significantly reduce the levels of anti social behaviour currently experienced in and around the site.
- External lighting the lighting strategy at night will be designed to meet the needs of security and specifically the recommendations of Secured by Design, while also meeting BREEAM requirements for light pollution. It is important to create a sense of safety and encourage routes to be used in evening, therefore suitable ambient and decorative lighting will be introduced.

TOWN HALL AND NEW CIVIC OFFICES

The detailed security brief for the buildings will be developed further during detailed design. Our first principles approach at this stage for both the Town Hall and the new civic offices has been to ensure that effective security control can be provided in the most efficient manner possible. Each building has a single point of reception and security control, centrally located, highly visible and with optimised sight lines allowing both active and passive surveillance of public areas.

The security systems for the new civic offices and the Town Hall create zoning to allow for different levels of access to control movement through the buildings according to the permissions set on the pass. This will, for example, allow users of enterprise and community space to access only the room or space they have hired and prevent access to private Council office space.

Within these buildings, primary access control beyond the public areas on the ground floor will be via automatic access gates, with door passes controlling movement within the buildings from that point. CCTV will provide further security to circulation routes and public areas.

RESIDENTIAL DEVELOPMENTS

The design of the residential uses has ensured that wherever possible, the living space of each dwelling overlooks public areas to encourage passive surveillance. Access control to main entrances and to cycle / refuse stores will be designed in accordance with the London Housing Design Guide on residential buildings.

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SECTION 2: QUALITY AND DELIVERABILITY 2.1.17 STRUCTURAL INTEGRITY

NEW CIVIC OFFICES

Superstructure

It is proposed to construct the new build

office block using a reinforced concrete frame with flat slabs. This form of construction will minimise floor depths, maximise thermal mass, and aid the sustainability aspects of the design. The provision of flat reinforced concrete slabs without down stand beams will also simplify services distribution.

Columns will be positioned on a 7.5m by 7.5m grid to maximise flexibility for future use, and in line with BCO recommendations. Generally 300mm thick flat slabs have been allowed for, although a transfer structure will be required at third floor to accommodate the step back in the Brixton Hill elevation at this level. Generally the atrium 'bridges' and other building steps have been rationalised to occur on grid and minimise the requirement for transfers. Where external green roofs / allotment spaces are required, the structure will be designed to suit the increased loads.

Stability will be achieved using the two proposed cores as reinforced concrete cores designed as vertical cantilevers to resist lateral wind loads. The building will also be designed to comply with the requirements of Approved Document A with respect to achieving Class 2B for disproportionate collapse.

Substructure

Based on historical borehole logs and geological maps, the ground conditions are expected to comprise pebbly clay and sands overlying London Clay. Due to the high concentrated point loads in the columns, it is assumed the new building will be formed on piled foundations, probably Continuous Flight Auger (CFA) concrete piles. Four piles and a pile cap have been allowed for under each column.

One of the proposed options for the building is to create a basement over part of the building footprint to tie in with the existing plan dimensions of the lower ground floors to the Town Hall Parade buildings to be demolished. At this stage it is assumed the retaining walls which form the existing basement will be masonry walls due to the age of the Town Hall Parade buildings. In addition, it is probable the existing lower ground floor slab will be relatively thin by modern standards. Therefore, in order to create a new basement, the existing slab level is likely to require lowering relative to the existing, which will potentially undermine the existing masonry retaining walls.

As a result it is assumed a full new basement construction will be required. This will be formed as a reinforced concrete 'box' with the basement slab designed to span between piles. The existing Victorian basement walls could be used as temporary retaining walls during construction of the new basement, with appropriate propping where required, but new reinforced concrete basement walls would be cast either on the face of these masonry walls or in place of them.

Waterproofing of the basement could take various forms but at this stage it is suggested concrete with a waterproof additive such as Caltite or Xypex, and a cavity drain system is allowed for. It should be noted that the historical borehole logs available for the Town Hall and Olive Morris sites noted that water was not struck; this will need to be checked on site as part of a detailed site investigation.



SECTION 2: QUALITY AND DELIVERABILITY 2.1.17 STRUCTURAL INTEGRITY

LAMBETH TOWN HALL

Existing Structure Based on a visual inspection of the existing building, the structure of the Grade II Listed Town Hall building is assumed to be load bearing masonry walls supporting concrete filler joists. The direction of span of the existing floors is unknown. The roof structure is unknown at present but assumed to also be concrete filler joists. It is assumed that stability is provided by the cellular nature of the masonry walls.

On the assumption the existing walls are load bearing masonry, it is expected the foundations are generally traditional corbelled footings. The perimeter walls of the existing lower ground floor are assumed to be brickwork, designed as gravity retaining walls, although it is possible concrete walls were used.

Proposed Structure – Existing Building The architectural proposals include opening up many of the existing meeting rooms along each of the long corridor wings. It is also proposed to remove many of the existing partition walls at second floor level to provide open plan spaces. To the rear of the building the current proposal is to demolish elements of the existing buildings and build a new open plan space with full

height atrium to form a new public entrance.

The removal of the existing partition walls between the existing meeting rooms will require new steel frames to re-support the existing floors and roof. As the direction of floor span is currently unknown, it is assumed the existing floors span from perimeter wall to corridor wall to perimeter wall. This is consistent with the typical allowable span of concrete filler joist slabs.

Based on this assumption, the removal of sections of these corridor walls will require new steel beams to re-support the floors. Where the cross walls are also to be removed, these will need to be replaced with new steel box

frames (top beam, bottom beam and two columns) to support the new corridor wall steels and transfer the loads back to the existing footings. In addition, it is currently assumed the existing cross walls are helping to stabilise the existing perimeter walls. Therefore, the steel box frames will be designed as stability frames to transfer lateral loads from the wind (and any retained soil at lower ground floor).

At this stage it has been assumed that anywhere a cross wall is to be removed, a new box frame will be provided. The intention is to maintain the existing load paths wherever possible to transfer the vertical loads back down to the existing foundations. This reduces the risk of any unwanted settlements.

Proposed Structure - New Build

The new build elements of the scheme will be constructed using a reinforced concrete frame to help optimise floor to ceiling heights and maximise thermal mass. The new columns will be positioned away from the existing Listed building wherever possible to avoid surcharging the existing foundations to the Town Hall. At this stage the new foundations are assumed to be piled. The new build floor slabs will also be cantilevered to the edge of the existing Town Hall slabs to help create a seamless transition between the two.

The new atrium roof will be formed using ETFE pillows, supported on a diagrid structure to create a clear span roof over the main entrance. The diagrid structure is still to be designed, but could be timber or steel.

The new build elements will be designed to comply with the requirements of Approved Document A with respect to achieving Class 2B for disproportionate collapse. It is assumed the existing building will not require upgrading to Class 2B but any new structural interventions will be designed to ensure effective horizontal and vertical ties are provided.



. THE WALLS REFERENCIALITY TO THE FACADE AND ASSIMED TO CUERENTLY BE CONTRIBUTING TO LATERAL STABLITY OF THE BUILDING ALONG THEM LENGTH. STEEL BOX. FRAMES [1] SHOULD BE PLIDUED FOR IN GACH LOCADON WHERE AT WALL IS TO BE PONIOVED. IT MAY BE POSSIBLE TO REDUCE THE ANMBER OF THESE WHOM FURTHER INFO IS FUMLARE

SECTION 2: QUALITY AND DELIVERABILITY 2.1.17 STRUCTURAL INTEGRITY

IVOR HOUSE

Existing Structure The existing structure of Ivor House is framed, probably consisting of steel beams and columns. Based on a visual inspection, there are down stand beams at approximately 2.5 metre centres, which would suggest the floors might be hollow clay pot floors, one way spanning between these beams. The existing basement construction is unknown but is assumed to consist of reinforced concrete walls and basement slab. The foundations are also unknown but are likely to consist of either discrete concrete pad foundations under each column or the basement concrete slab might be designed as a raft to distribute the column loads evenly over the soil.

Existing stability of the building is at present unknown, but it is assumed the existing stair core is helping to stabilise the building.

Proposed Structure

The current proposal involves retaining the existing structure, adding a new storey to the top of the existing building and the addition of a new gallery to the rear to create access to the new apartments.

The existing structure is likely to be fairly lightweight, which means adding an additional

floor will represent a significant proportion of the existing building load, in excess of the nominal 10% increase usually allowed in these situations. Sometimes it is possible to trade loads by replacing the existing 'heavy' floors with new lighter weight floors but if the assumption of lightweight floors is correct, it is unlikely replacing all the floors will provide a large enough trade off. This means the existing columns and foundations will probably require strengthening.

Based on our analysis of the existing structure, unless it is accepted the existing footings will be largely abandoned there is no significant structural gain to be had from demolishing the existing building, temporarily supporting the facade and attempting to re-use the existing foundations. It is therefore proposed to work with the existing structure and strengthen where necessary, including foundations.

Adding a new gallery structure to the rear of the existing building to facilitate access will have minimal impact on the existing structure. The gallery will be designed to respect the existing column locations and retain the majority of the existing stair core. The new build elements are likely to be formed using a lightweight steel frame and concrete floors slabs. Depending on the existing ground conditions, foundations could be concrete pad footings or piles.



Existing structure



Proposed structure

Confidential

SECTION 2: QUALITY AND DELIVERABILITY 2.1.17 STRUCTURAL INTEGRITY

PORDEN ROAD

This building consists of a new build apartment building which varies in height across its floor plan. On the Brixton Hill elevation the building will be nine storeys high whilst at the rear towards the existing properties on Porden Road it will be four storeys high.

As the new structure must comply to Class 2B for Disproportionate Collapse in accordance with Approved Document A, the structure will need to be framed. To minimise structural floor

zones and maximise floor to ceiling heights within the building, it is currently assumed the structure will be formed as a reinforced concrete frame, probably on piled foundations.

OLIVE MORRIS HOUSE

It is proposed to demolish the existing building and build a new apartment building. It is assumed this building will be constructed using either a steel or concrete frame founded on either pad footings or piled foundations depending on the ground conditions.

ASSUMED LOADINGS

Now only officer

ltem	Assumed area loads in kN/m2	
DEAD LOADS:		
Typical floor		
300thk RC Slab	7.2	
75 Screed (tbc)	1.8	
Finishes	0.25	
Ceiling & Services	0.25	
Green Roof (Not Allotments)	Green Roof (Not Allotments)	
Steel Decking	0.3	
Steel Frame	0.8	
Sedum Roof	1.2	
Ceiling & Services	0.25	
Allotment Terrace		
300thk RC Slab	7.2	
75 Screed (tbc)	1.8	
Ceiling & Services	0.25	
Waterproofing etc	0.50	
600mm Soil (tbc by landscaping specialist)	12	
Basement Slab (Suspended)		
300thk RC Slab	7.2	
75 Screed (tbc)	1.8	
Finishes	0.25	
Façade		
Glass	1.0	
IMPOSED LOADS:		
Office loading (plus partitions)	2.5 + 1.0	
Public Areas (plus partitions)	4.0 + 1.0	
Plant Rooms	7.5	
Roof Load (Snow)	0.75	
Allotments (Roof terraces)	4.0	

Lambeth Town Hall

Item	Assumed area loads in kN/m2		
DEAD LOADS:	DEAD LOADS:		
Existing Floor	TBC on site		
Existing Roof	TBC on site		
Existing Walls			
9" Brickwork	4.6		
13.5" Brickwork	6.9		
Proposed Floor			
300thk RC Slab	7.2		
75 Screed (tbc)	1.8		
Finishes	0.25		
Ceiling & Services	0.25		
Façade			
Glass	1.0		
IMPOSED LOADS:			
Office loading (plus partitions)	2.5 + 1.0		
Public Areas (plus partitions)	4.0 + 1.0		
Plant Rooms	7.5		
Roof Load (Snow)	0.75		
Allotments (Roof terraces)	4.9		

Residential Buildings (Ivor House, Porden Road, Olive Morris House)

Item	Assum area loa in kN/n
DEAD LOADS:	
Existing Construction	TBC or
Proposed Construction	TBC in detailed design
IMPOSED LOADS:	
Domestic	1.5
Partitions (where applicable)	1.0
Communal Areas e.g. stairs, landings etc	3.0
Balconies	1.5

DESIGN CRITERIA

Design Codes

- Where appropriate, the following codes and regulations will be applied in the structural design;
- BS EN 1990:2002 Eurocode 0:
- Basis of structural design
 BS EN 1991-1-1:2002 Eurocode 1: Actions on structures
- BS EN 1992-1-1:2004 Eurocode 2: Design of concrete structures – Part 1-1:
- General rules and rules for buildings BS EN 1993-1-1:2005 Eurocode 3: Design of steel structures - Part 1-1:
- General rules and rules for buildings BS EN 1994-1-1:2004 Eurocode 4: Design of composite steel and concrete structures - Part
- 1-1: General rules and rules for buildings
 BS EN 1995-1-1:2004 Eurocode 5: Design of timber structures – Part 1: General/ Common Rules and rules for buildings
- BS EN 1996-1-1:2005 Eurocode 6: Design of masonry structures – Part 1-1: General rules for reinforced and unreinforced masonry structures
- BS EN 1997-1:2004 Eurocode 7: Geotechnical design – Part 1: General Rules • BS EN 1998-1:2004 Eurocode 8:
- Design of structures for earthquake resistance
 BS EN 1999-1-1:2007 Eurocode 9: Design of aluminium structures: General Structural Rules

Building Regulations:

- Approved Document A Structure
- Approved Document B Fire Safety
 Approved Document E Resistance
- to the Passage of Sound All to include revisions and amendments to date with appropriate National
- Annexes and approved NCCIs.

8.2 Design Life The structure will be designed for a design life of 60 years.



SECTION 2: QUALITY AND DELIVERABILITY 2.1.18 M&E STRATEGY - VENTILATION AND ENERGY STRATEGY

VENTILATION AND ENERGY STRATEGY

Town Hall rooms and corridors are conditioned and ventilated from a series of vertical fan coil units mounted in the walls between the rooms as discussed elsewhere.

The new connection to the atrium space include open galleries that effectively link the old building and new once the windows are removed from the openings. The old Town Hall spaces will be positively pressurised and the intent is that the air from these areas will migrate into the central atrium space where it will mix with the air in this zone. The corridors will effectively be an interstitial space between these two comfort conditioned zones and with their limited heat gains/losses and high thermal mass from walls, floors and ceiling, they will remain comfortable and stable in temperature as a result.

The equipment used for the ventilation systems will be drawn from a limited range of equipment for efficient maintenance. Key components, such as the Menerga Adiabatic cooling and heat recovery units and the bio diesel CHP unit, have been selected early in the process to ensure that they are fully embedded in the project.

A principal goal for the design has been to embed One Planet Living (OPL) principles into the proposal. OPL involves achieving very high levels of energy efficiency, water use reduction, resource use optimisation and waste minimisation as an intrinsic part of the design. The ultimate goal of OPL is zero net carbon and zero net water use; this has not proved to be fully achievable with the constraints of the site, in particular the Grade II listed Town Hall, but there have been significant decisions made about building systems and operation that will ensure that the buildings will function to an exemplary standard and have the future flexibility and potential to achieve the ultimate OPL goal. The design is also targeting to exceed the minimum requirements of BREEAM "Excellent" for the new buildings that form the development and Code for Sustainable Homes Level 4 for the new residential units.

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SECTION 2: QUALITY AND DELIVERABILITY 2.1.18 M&E STRATEGY - VENTILATION AND ENERGY STRATEGY

NEW CIVIC OFFICES

The buildings generally will be designed for mixed mode operation. With this arrangement, natural ventilation will be available via opening windows and vents throughout the existing and new buildings. Parts of the site are subjected to significant traffic noise due to the close proximity of the road, and the use of extensive natural ventilation in these areas will not be a comfortable option most of the time. This may change in the future with the increasing use of quieter and more efficient buses in particular and the building can adapt and respond over time to these changes in the external environment. The natural ventilation capability is supplemented with a background mechanical ventilation system for winter and summer months in the mixed mode areas, with mechanical ventilation maintained at all times for meeting rooms and areas affected by significant traffic noise and pollution.

The mixed mode ventilation strategy typically uses natural ventilation in moderate weather and a mechanical system is used in more extreme temperatures to allow heat recovery and cooling where and when required.

An under floor displacement mechanical ventilation system with heat recovery is proposed for the new build office and meeting room areas to provide fresh air, air movement and comfort control in an energy efficient way. The ventilation system will be operated at night during the summer months to cool the structural concrete. This will eliminate the need for auxiliary cooling for most of the summer period. The supply of air can however be cooled by chilled water from the central energy plant in the warmest weather and will be heated by energy recovery from outgoing airstreams using thermal wheels, and by waste heat from a Combined Heat and Power unit in the winter. One of the main benefits of the under floor system is that it can be combined with the natural ventilation in the same general office area without risk of condensation or damage to finishes if windows are left open.

A control system with indicator lights located around the new civic office building will advise the occupants when the weather is suitable for natural ventilation. The image adjacent is taken from a building designed by Atelier Ten at Yale University which uses this method and has been very successful. Security issues with respect to window openings and opening façade vents, both on new and existing buildings will be considered in detail in the next stage of the design process.

The air handling plant will be provided with adiabatic evaporative cooling which uses heat exchangers between water and the exhaust air to cool the incoming supply air, significantly reducing the supply air temperature to minimise the remaining mechanical cooling required. The process is shown in the adjacent diagram.



Natural ventilation control indicators at Kroon Hall, Yale

University



An adiabatic cooling unit for heat recovery in winter and free cooling in summer.



Site plan & Energy Strategy

SECTION 2: QUALITY AND DELIVERABILITY 2.1.18 M&E STRATEGY - VENTILATION AND ENERGY STRATEGY

TOWN HALL

Providing ventilation and improved comfort conditioning to the cellular basement, ground and first floor rooms in the historic Town Hall building is particularly challenging and the team have explored a number of options to deliver this requirement. The building currently suffers from poor environmental conditions all year round, with limited cross floor ventilation due to the cellularised nature of the perimeter rooms and the constraints of secondary glazing and the noisy and polluted environment immediately outside on Brixton Hill and Acre Lane. Significant heritage elements of the building are to be retained and protected, therefore it is not possible to distribute services within ceiling or floor voids, and it is highly undesirable to distribute services at ceiling level.

The proposal is that primary services will be routed around the perimeter of the basement and routed through new vertical ducts running up through the floors that will also act as thick wall dividers. These have been christened as 'fat walls' and also conceal the fan coil units that will provide heating and cooling to the rooms on either side and any electrical equipment and AV facilities, without damaging the existing wall and ceiling treatments.

Corridors will be connected to the same distribution network. The Council Chamber will be mechanically ventilated when in use to ensure appropriate environmental conditions are achieved. The assembly hall will be connected to the distribution network via the basement, with natural ventilation introduced at roof level to allow warm air to be purged.

The Town Hall will be connected to the CHP system located in the new civic offices and will therefore benefit from low energy, low carbon air and water heating and cooling.

All mechanical and electrical services in the Town Hall will be removed and replaced, and the building will therefore benefit from the same lighting, electrical distribution and controls as the new civic offices.

RESIDENTIAL

Residential ventilation includes the provision of opening windows / vents for summer purge ventilation wherever possible. To meet the sustainability targets whole-house background and boost ventilation using heat recovery systems will be included. These will be local systems within each new build unit and for the existing buildings central systems are proposed due to the opportunities with regards to existing space for ventilation risers and plant.

The residential developments on the SW2 Enterprise Centre site will be connected to the district heating system and will therefore benefit from low energy, low carbon water heating.



Detail of a "Fat Wall" at the Ashmolean Museum in Oxford.
SECTION 2: QUALITY AND DELIVERABILITY 2.1.19 M&E STRATEGY - LIGHTING

LIGHTING & ENERGY

Excellent levels of insulation, combined with heat recovery on the ventilation systems, and potentially, pre-conditioning through ground coupled heat exchangers (e.g. earth tubes) and evaporative (free) cooling in air plant, will result in very low heating and cooling energy demands. The next challenge becomes the reduction of electrical demand for lighting and small power use, and minimising heat output from light fittings.

LIGHTING

Minimising lighting energy demand requires a combination of effective daylighting, simple and usable lighting controls and high performance light sources.

Our design proposals for both the Town Hall and the new civic offices seek to maximise natural daylighting as a priority.

Appropriate luminaires will be selected in detailed design in order to provide required illumination levels and uniformity throughout and automatic lighting controls for daylight dimming and occupancy detection will maximise energy savings.

Lighting will be designed to meet security needs and minimise light spill pollution to adjacent properties.

Atelier Ten will provide comprehensive design for energy-efficient interior and exterior lighting systems including layouts, luminaire and control specifications, illuminance modelling, and lighting energy calculations. Sustainable lighting integrates natural and electric lighting with architectural design, finishes, and materials to create visually appealing spaces. Careful attention will be given to the intensity, direction, distribution, and colour of light balances visual and energy performance. Atelier Ten will develop resourceful, responsive, and sustainable lighting systems.



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SECTION 2: QUALITY AND DELIVERABILITY 2.1.20 REVIEWABLE DESIGN STRATEGY

PROCESS

To ensure that end user requirements are met, the Reviewable Design Data (RDD) process will facilitate the review of the design after the conditional Development Agreement is signed. Through the RDD process, the Council will continue to have the opportunity to review, comment and approve the proposals being made.

The schedule sets out the packages of work that we are proposing to be reviewed as part of the RDD process. These items will be reviewed with the Council through a series of RDD meetings to allow any initial queries to be resolved before being submitted to the Council team for formal sign off. Once formally issued for approval, the Council will be required to respond confirming their acceptance or comments on proposals within time scales to be agreed.

The Kajima project team will manage the RDD process, including scheduling of meetings and formal issue of packages in relation to the programme on site.

Reviewable Design Data (RDD) Schedule

Number	RDD Item	Notes
1.00	Detailed Layouts	
1.01	One stop Shop	The detailed layout and departmental requirements will be reviewed as part of t
1.02	Youth Offender Area	The detailed layout and departmental requirements will be reviewed as part of t
1.03	Entrance Area/ Reception to Town Hall & Civic Offices	The detailed layout and departmental requirements will be reviewed as part of t
1.04	Typical floor plans to Town Hall and Civic Offices	The detailed layout and departmental requirements will be reviewed as part of t
2.00	Finishes	
2.01	Floor Finishes	Floor finishes specification and samples to be reviewed as part of the RDD pro-
2.02	Wall finishes	Samples required for Dado Rail/Bumper rail, Corner protection, and paint types
2.03	Finishes to Stairs	Stair finishes to be reviewed as part of RDD process
2.04	Finishes Board/ Samples	Samples of systems and finishes will reviewed as part of RDD process
3.00	Public Art to Public Realm	This will be developed with LBL as part of the RDD Process
4.00	Public Art to Town Hall & Civic Offices	This will be developed with LBL as part of the RDD Process
5.00	Wayfinding	Wayfinding Design will be developed with LBL during RDD process
6.00	External Landscape	
6.01	Servicing arrangements	Servicing strategy to be reviewed as part of RDD process
6.02	External Landscape Strategy	Detailed design & specification to be reviewed with LBL as part of RDD proces
7.00	External Envelope	
7.01	External Colours Strategy	Colours to external envelope to be reviewed with LBL as part of RDD process
7.02	External Finishes/ samples	Samples of external finishes to be reviewed as part of RDD process
8.00	Ironmongery	
8.01	Ironmongery to External doors	Ironmongery to external doors to be reviewed as part of RDD process
8.02	Internal Ironmongery	Ironmongery selection to be reviewed with LBL as part of RDD process
9.00	Fittings	
9.01	Blinds	Scope of blinds and detailed specification to be reviewed with LBL as part of the
9.02	Fire Safety Equipment	Specification and layout of fire exit and safety equipment to be reviewed with L process
9.03	Alarm Panels to Main Reception	Details of location of alarm panels to Civic Offices and Town Hall to be review RDD process



SECTION 2: QUALITY AND DELIVERABILITY 2.1.20 REVIEWABLE DESIGN STRATEGY

Number	RDD Item	Notes
10.00	CCTV	
10.01	External & internal CCTV cameras	Location of CCTV camera's to be reviewed with LBL as part of reviewable design
11.00	Security/ Locks	
11.01	Locks & Suiting to internal & external	Security & locking strategy to be reviewed with LBL as part of reviewable design
11.02	Electronic locking systems	Security & locking strategy to be reviewed with LBL as part of reviewable desig
12.00	Security Systems	
12.01	Security Systems	Details of security system to be reviewed with LBL as part of reviewable design
12.02	Location and quantity of Panic Alarms	Number and scope to be reviewed with LBL as part of reviewable design data.
12.03	Access Control Strategy	Access control location, specification and number to be reviewed with LBL duri
12.04	Controls to external gates	To be reviewed with LBL as part of RDD process
13.00	Lifts	
13.01	Lift Car Finishes	Lift finishes to be reviewed with LBL as part of RDD process.
13.02	Lift entrapment arrangements.	To be reviewed with LBL as part of RDD process
14.00	Services	
14.01	Reflected Ceiling plans	Typical RCP for Civic Offices and Town Hall, including exposed services to b RDD process
15.00	Doors	
15.01	Automatic Doors	Final configuration and controls to be confirmed with LBL during RDD process
15.02	Internal automatic doors	Scope to be reviewed as part of RDD process with LBL
15.03	Internal Door schedule	Specification, details & colours to be agreed with LBL during RDD process
15.04	External Door Schedule	Specification, details & colours to be agreed with LBL during RDD process
16.00	Furniture Layouts	
16.01	Detailed Furniture layouts & specifications	Specification, details & colours to be agreed with LBL during RDD process

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INTRODUCTION

Our design team has the experience and ambition to maximise the sustainable aspirations for the project and the ability to monitor progress on all fronts of the sustainability targets.

At this initial stage of the project we have produced a high level One Planet Living outline action plan, to be further developed in partnership with the Council at detailed design stage. The Action plan addresses each of the OPL ten principles.

A principal goal for the design has been to embed One Planet Living (OPL) principles into the proposal. OPL involves achieving very high levels of energy efficiency, water use reduction, resource use optimisation and waste minimisation as an intrinsic part of the design. The ultimate goal of OPL is zero net carbon and zero net water use; this has not proved to be fully achievable with the constraints of the site, in particular the Grade 2 listed Town Hall, but there have been significant decisions made about building systems and operation that will ensure that the buildings will function to an exemplary standard and have the future flexibility and potential to achieve the ultimate OPL goal. The design is also targeting to exceed the minimum requirements of BREEAM "Excellent" for the new buildings that form the development and Code for Sustainable Homes Level 4 for the new residential units.

NEW CIVIC OFFICES

The building has been designed for mixed mode operation. With this arrangement, natural ventilation will be available via opening windows and vents throughout the building. Parts of the site are subjected to significant traffic noise due to the close proximity of the road, and the use of extensive natural ventilation in these areas will not be a comfortable option most of the time. This will change in the future with the increasing use of quieter, more efficient and less polluting vehicular traffic (buses in particular) and the building can positively adapt and respond over time to these changes in the external environment. The natural ventilation capability is supplemented with a background mechanical ventilation system for peak winter and summer months in the mixed mode areas, with mechanical ventilation maintained at all times for meeting rooms and areas currently affected by significant traffic noise and pollution.

The mixed mode ventilation strategy uses natural ventilation in moderate weather and a mechanical system is used in more extreme temperatures to allow heat recovery and cooling where and when required. An underfloor displacement mechanical ventilation system with heat recovery is proposed for the new build office and meeting room areas to provide fresh air, air movement and comfort control in an energy efficient way. The ventilation system will be operated at night during the summer months to cool the structural concrete. This will eliminate the need for auxiliary cooling for most of the summer period. The supply of air can however be cooled by chilled water from the central energy plant in the warmest weather and will be heated by energy recovery from outgoing airstreams using thermal wheels, and by waste heat from the Combined Heat and Power unit in the winter. One of the main benefits of the under floor system is that it can be combined with the natural ventilation in the same general office area without risk of condensation or damage to finishes if windows are left open.

A control system with indicator lights located around the new civic office building will advise the occupants when the weather is suitable for natural ventilation. The image adjacent is taken from a building designed by Atelier Ten at Yale University, which used this method and has been very successful. Security issues with respect to window openings and opening façade vents, both on new and existing buildings will be considered in detail in the next stage of the design process.

The air handling plant will be provided with adiabatic evaporative cooling which uses heat exchangers between water and the exhaust air to cool the incoming supply air, significantly reducing the supply air temperature to minimise the remaining mechanical cooling required. The process is shown in the adjacent schematic.

TOWN HALL

Providing ventilation and improved comfort conditioning to the ground and first floor rooms in the historic Town Hall building is particularly challenging and the team have explored a number of options to deliver this requirement. Effective use of thermal mass with night time cooling is not practical in most parts of the Town Hall due to its cellularised space. Furthermore, the significant heritage elements, both on the facades and internally severely restrict our ability to significantly

improve the insulation standards of external walls. Our proposal is that primary services will be routed at the perimeter of the basement and routed up through the building through new vertical ducts running across the floor plan that will also act as thick wall dividers. These have been christened as "Fat Walls" and also conceal the fan coil units that will provide heating and cooling to the rooms on each side and any electrical equipment and AV facilities, without damaging the existing wall and ceiling treatments and other heritage assets. The building is connected to the CHP unit located in the new Civic Offices, allowing the systems in the Town Hall to operate at the highest possible efficiency.

RESIDENTIAL

Residential ventilation includes the provision of opening windows/vents for summer purge ventilation wherever possible, while to meet the sustainable targets will include whole-house background and boost ventilation using heat recovery systems. These will be local systems within each new build unit and for the existing buildings central systems are proposed due to the opportunities with regards to existing space for ventilation risers and plant. All new build residential accommodation will achieve Code for Sustainable Homes level 4.

To achieve CSH Level 4 many features will be incorporated. Many of these will be aimed at minimising the carbon emissions and water usage. The design will include whole house ventilation using local MVHR systems, façade thermal optimisation (U values 20% better than current Part L, air permeability of 3.0 m3/hm2, and glazing orientation optimisation), insulation products with low GWP and providing renewable energy PV panels where required. The new build homes on the Town Hall triangle site site will benefit from connectivity to the district heating CHP scheme. The CHP system will provide the base hot water demands for the residential buildings and help to reduce carbon emissions.

Water use will be minimised by incorporating low water usage items such as low flush WCs, low flow taps and fittings. SUDs drainage principles will be used, utilising drainage attenuation and green roofs.

Waste facilities including external waste facilities and internal and external storage space for recyclable waste will be provided.



Yale University control system and indicator lights



Adiabatic schematic

1	Zero carbon
2	Zero waste
3	Sustainable transport
4	Sustainable materials
5	Local and sustainable food
6	Sustainable water
7	Land use and wildlife
8	Culture and heritage
9	Equity and local economy
10	Health and happiness
Dne Plan	et Living principles

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KEY FEATURES OF HOW OPL PRINCIPLES WILL BE ADDRESSED



ZERO CARBON

Key feature of how the OPL principle has been / will be addressed	Cross Reference for more information	Council responsit
Our "first principles" approach of maximising the operational use of the existing Town Hall through reconfiguration, restoration and extension minimises the requirement for new build office space and maximises the benefit of the embodied carbon within the existing building.	2.1.23	Continue to explo and develop new ways of working collaborating with Kajima.
The BREEAM Excellent target we will achieve sets a mandatory minimum level of energy performance that will go some way towards the Zero Carbon goal. Our proposals have prioritised high levels of thermal efficiency in the built fabric, energy efficient fixtures and fittings, locally generated energy and on site renewable energy and a communal heating system with connection for possible offsite renewable energy generation in the future to achieve aspirations for net zero carbon by 2020. During the detailed design stage we will further explore connections to existing heat sources and engage with other local heat users.	2.1.22 2.1.23	Assist with identification and engagement with other potential local heat uses.
Our approach to developing low and zero carbon solutions for this project is illustrated in the diagram adjacent and follows the basic tenet of intrinsically designing to minimise energy/ heating/ cooling demand first, followed by developing energy efficient and passive/active crossover systems (e.g. earth ducts for ventilation) before considering additional options for renewable energy from solar and other sources.	2.1.23	
Zero and low carbon solutions are proposed to meet the energy demands. The central component of the energy centre will be a Combined Heat and Power (CHP) unit running on biofuel in the form of waste cooking oil sourced from a specialist supplier who recovers oil from restaurants in South London and processes it for use as a fuel stock. The CHP unit will deliver power to the Council office buildings and heating and hot water to all of the buildings around the development through a district heating network. The heat will also be supplied to an Absorption Chiller located in the energy centre to provide very low-carbon chilled water for cooling to the Town Hall and the new civic office building.	2.1.18	
The biofuel Combined Heat and Power system will provide the base hot water loads, minimising carbon emissions from the central plant while providing the higher water temperatures required for domestic hot water. The CHP system will feed buffer vessels before secondary pumped systems feed the district heating system and the absorption chiller.		
Residential developments have significant water demands, in particular hot water, which impact significantly on the energy requirements which further optimises the use of the combined heat and power system.		
Photovoltaic panels (roof mounted) are proposed to offset further carbon emissions from the site.	2.1.23	
Excellent levels of insulation combined with heat recovery on the ventilation systems and, potentially, pre-conditioning through ground coupled heat exchangers (e.g. earth tubes) and evaporative (free) cooling in air plant, will result in very low heating and cooling energy demands and so the next challenge becomes the reduction of electrical demand for lighting and small power use. Our proposals minimise lighting energy demand through a combination of effective daylighting, simple and usable lighting control and high performance light sources and the planning concept seeks to maximise daylighting as a priority. Furthermore automatic lighting will be designed to meet security needs and minimise light spill pollution to adjacent properties	2.1.18 2.1.19	
The buildings on the site are typically orientated east-west facing, so shading due to low angled sun throughout the year is being considered as part of the design, typically through the use of internal blinds, which also complement BREEAM/CSH4 requirements for glare control measures. The facades will also be designed to control solar gain to all facades, so as to minimise the cooling loads to ensure the low energy cooling strategies perform. Solar control will take the form of optimisation of glazing percentage for daylight and solar gains. External shading will be considered where appropriate, although the envelope will be designed to be efficient wherever possible before the use of external shading is used.	2.1.22	
With regard to our housing proposals, each scheme is assessed on the merits of value generation versus sustainability with a strong desire to achieve as low a possible carbon footprint as possible. Although not measured through any BRE assessment, the decisions to retain Ivor House and International House provide significant carbon savings beyond those required by the Code for Sustainable Homes.	2.1.22	



KEY FEATURES OF HOW OPL PRINCIPLES WILL BE ADDRESSED



ZERO WASTE

Key feature of how the OPL principle has been / will be addressed	Cross Reference for more information	Council responsit
In accordance with WRAP guidelines, our selected contractor will be required to implement a Site Waste Management Plan throughout the construction period that complies with regulatory requirements and that will include project-specific targets for waste recovery and reused and recycled content and for waste reduction.	2.2.3	
Our selected contractor will be contractually bound to:	2.2.3	
 measure and report progress for the quantity of waste produced and the quantity of waste sent to landfill (measured in tonnes per £100k construction value) recover at least 80% of construction material waste, and aim to achieve 95% recover at least 80% of demolition and excavation materials, and aim to achieve 95% ensure that at least 20% of total material value derives from reused and recycled content in new construction 		
Our design proposal provides sufficient capability to enable 80% of Council commercial waste to be recycled, with dedicated facilities for segregated waste at ground floor service zones to both the Town Hall and to the new Civic Offices	Ground Floor Plans – Appendix A2.1	This will require the ongoing commitme and management the Council to act the 80% target
Residential proposals will meet waste standards of CSH level 4	2.1.22	





KEY FEATURES OF HOW OPL PRINCIPLES WILL BE ADDRESSED



SUSTAINABLE TRANSPORT

Key feature of how the OPL principle has been / will be addressed	Cross Reference for more information	Council responsib
Brixton is well served by public transport (bus, tube and rail) allowing for a transport reduction policy for direct and indirect uses and the buildings should address both by providing flexibility for future needs. The direct uses include connection to the existing cycle network; car-pool facilities for work travel (potentially electrically charged on–site) and spaces that can enable flexible working arrangements (including work from home). The indirect uses include how people get to work, or how visitors come to the site. There is the potential to provide a 'tele-conference' suite, for use by staff and the local community, to replace the need for business travel.	2.1.4	Developing a Trave Plan is something will be coproduced with the Council, who will have an ongoing obligation enable and suppor users of its facilitie to make sustainab transport choices
No additional car parking is being provided as a result of the development.	2.1.4	
Exisiting Porden Road residents would benefit from more control over parking, particularly during the night, in relation to patrons of the Electric currently using spaces in the street and engaging in antisocial behaviour. Introducing car club spaces on this street would provide added amenity to these residents, reduce the availability of spaces for Electric patrons and encourage the further reduction in dependence on vehicle ownership in Brixton.		
With regard to housing, all homes are provided with cycle storage with a range of types available from double stacked wall mounted storage to more traditional Sheffield hoops. Cycle storage is a prominent part of each building and easily accessible from the entrances.	Residential Ground Floor Plans Appendix A2.2	



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KEY FEATURES OF HOW OPL PRINCIPLES WILL BE ADDRESSED



LOCAL AND SUSTAINABLE MATERIALS

Key feature of how the OPL principle has been / will be addressed	Cross Reference for more information	Council responsib
Targeting BREEAM standards and the BRE Green Guide will help to ensure the sustainable procurement of materials for the construction of the SW2 Enterprise Centre. These materials will be specified on the basis of their environmental performance. This will prevent inadequate substitutions, which may occur due to cost or availability restrictions, from falling short of the required environmental standards. We will carry out a pre-demolition audit of whole site to identify opportunities for re-use of materials for construction.	2.1.22	It is recommender that Lambeth Cou enhance its office supplies and cant purchasing policy to assist with its OPL ambitions
We will work with our selected contractor to develop a strategy to achieve and monitor 50% of construction materials being sourced from within 50 miles and 20% being from recycled material	2.2.3	
The residential developments are targeted to achieve A+ to B from the BRE Green Guide to Material Specification.	2.1.22	





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KEY FEATURES OF HOW OPL PRINCIPLES WILL BE ADDRESSED



LOCAL AND SUSTAINABLE FOOD

Key feature of how the OPL principle has been / will be addressed	Cross Reference for more information	Council responsib
We have incorporated a rooftop garden as an integral part of our proposals for the new Civic Offices. This will provide opportunities for allotments and local food production	Appendix A2.1, Civic Office Plan	On-going management
We envisage cafe space opportunities at ground floor locations within the site will continue Brixtons independent, sustainable food culture, benefitting from the many new resident and staff living and working on and near to the site	Appendix A2.1	Rents to be maintained at manageable level
With regard to our housing proposals, Olive Morris House and Porden Road proposals include communal gardens that include amenity space beyond that required in the GLA housing design guide. This is intended to promote on site allotments for the buildings to encourage local food production.	Appendix A2.1	



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KEY FEATURES OF HOW OPL PRINCIPLES WILL BE ADDRESSED



SUSTAINABLE WATER

Key feature of how the OPL principle has been / will be addressed	Cross Reference for more information	Council responsib
Water demand can be controlled by reducing supply, but only up to a point, beyond this point opportunities for rainwater and greywater capture and re-use will need to be assessed on a lifecycle basis.	Employers Requirements Appendix A2.3	
The adoption of BREEAM standards will assist in targeting sustainable water practices such as water metering, rainwater harvesting, low water fittings, leak detection, SUDs, green roofs etc.	2.1.22	
Drought resistant plants will be specified to minimise the need for irrigation	2.1.8	
We have proposed the use of porous paving, rainwater attenuation and storage for irrigation etc.	2.1.8	
Surface Drainage Systems (SUDS) will be assessed to limit run-off to minimise flood risk and to control the water being released back into the public drainage system, following SUDS principles.	2.1.8	





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KEY FEATURES OF HOW OPL PRINCIPLES WILL BE ADDRESSED



LAND USE AND WILDLIFE

Key feature of how the OPL principle has been / will be addressed	Cross Reference for more information	Council responsi
 Our landscaping proposals for the site maximise green infrastructure benefits through: Filtering air particles and absorb air borne pollutants Reducing summer temperatures through shading from planting Improving the summer micro-climate through plant evapo-transpiration Enhance habitat provision through the use of native species Use of porous paving, rainwater attenuation and storage for irrigation etc. Improved sense of well-being Provide productive urban garden spaces for growing food, keeping bees, etc 	2.1.8	
Biodiversity and ecology measures will be targeted under BREEAM and a biodiversity management plan. These will include ensuring responsible sourcing of materials through stewardship and certification; managing land /roof space for maximum benefit to habitats and wildlife; appointing a biodiversity champion and on-going monitoring of improvement to flora and fauna on site. Our use of green/brown roofs will aid this in this urban environment.	2.1.8 2.1.22	
Espalier trees, mixed perennial groundcover planting and green walls provide productive and sensory enclosure to the public spaces. These areas, combined with biodiverse roofs and rooftop community market garden, offers a huge increase in green infrastructure to the site	2.1.8	
With regard to our housing proposals at Porden Road, the Code for Sustainable Homes requires a small amount of habitat creation for local species, however the over provision of amenity space within our design will provide additional habitat areas. Green facades and vertical planters will also help encourage insects to a level beyond that required by the BBE	2.1.8	















KEY FEATURES OF HOW OPL PRINCIPLES WILL BE ADDRESSED



CULTURE AND HERITAGE

Key feature of how the OPL principle has been / will be addressed	Cross Reference for more information	Council responsibi
Our design proposes the full restoration of the Town Hall, reimagined to meet the needs of both staff and visitors. The new Civic Offices create a new visual and physical connection to St Matthews Church, and our residential proposals for Ivor House involve the retention and restoration of the existing facades. Each of these elements is connected by a high quality public realm, with The Triangle, a community and cultural venue, at its heart.	Appendix A2.1	
Significant enterprise and employment opportunities will be generated by this development, both during construction and long term through the creation of opportunity space for enterprise.	1.3	On-going commitr to cooperative Coucil principles.
There is enormous potential within the development to incorporate the work of ocal artists and crafts people, both within the public areas of the Town Hall and Civic Offices, but also externally within the public realm and at The Triangle.	2.1.6	

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KEY FEATURES OF HOW OPL PRINCIPLES WILL BE ADDRESSED



EQUITY AND LOCAL ECONOMY

Key feature of how the OPL principle has been / will be addressed	Cross Reference for more information	Council responsib
The Enterprise Centre will welcome visitors and stakeholders keen to learn about low carbon and sustainable living. Employees will engage with the local community through training and events with the Enterprise Centre being a focal point for local people.	1.3	Commitment to training and engagement with visitors and stakeholders.
Local enterprise space for embryonic businesses, providing accessible and affordable facilities, is incorporated as a core part of our proposals within the Town hall	1.4	On-going commit to cooperative Council principles
There are opportunities for fair trade businesses to establish themselves in the commercial space provided within the development. The Council can set the rent for these spaces as appropriate to support and encourage such businesses.	1.3 1.4	Lambeth will also ensure it is aware where products us or bought come fr in terms of buying trade goods and t that have exempla ethical standards.
Our proposals bring the customer services function of the Council, that regularly deals with the most vulnerable members of the population of the Borough, into the heart of the Council within the Town Hall. This will be a very public demonstration of the Cooperative Council and of the OPL principle of equity.	Appendix A2.1	



KEY FEATURES OF HOW OPL PRINCIPLES WILL BE ADDRESSED



HEALTH AND HAPPINESS

Key feature of how the OPL principle has been / will be addressed	Cross Reference for more information	Council responsib
Espalier trees, mixed perennial groundcover planting and green walls provide productive and sensory enclosure to the public spaces. These areas, combined with biodiverse roofs and rooftop community market garden, offers a huge increase in green infrastructure and the many benefits they bring to the quality of urban living.	2.1.8	Ongoing Council commitment to supporting and enabling the
We want this 'civic garden' to become loved and cherished by the whole community. The success of the maintenance and management of the garden will crucial. We see the potential to involve council staff and wider community under the guidance of a 'head gardener' based on the site.		community to self manage and main the civic garden
The approach to health and well-being will be achieved by maximising daylight and views out of the buildings and the buildings will achieve a high level of user satisfaction by ensuring consistently excellent comfort conditions.	2.1.18	Buy-in to post occupancy survey process.
An in-use assessment will be developed with the Council that will review building performance and occupier satisfaction, and also publish the results as a case study.		
A full building monitoring strategy will enable Lambeth Council to obtain regular building performance data.		
With regard to our housing proposals, each of the new build proposals at Ivor House and Olive Morris House include a mix of tenure and dwelling types that will move the development away from the single tenure council housing of old. Instead houses, apartments and duplexes all form part of a residential offer that includes social rented, shared ownership and private market housing. This will enable and support a diverse community in these key sites in Brixton.		



MANAGING THE INCORPORATION OF OPL PRINCIPLES

Kajima will continue to manage the detailed design development of the SW2 Enterprise Centre up to and through Planning and on to RIBA Stage E, prior to selecting a building contractor. During this time we will work collaboratively with the Council to ensure that our design continues to develop the OPL Principles as an integral part of the process. Our control over this process to such a detailed stage of the design process, prior to a Building Contractor being selected, ensures that these OPL principles and associated solutions will be fully incorporated and ultimately integrated into the Contractors Proposals.

One technique that we recommend for managing sustainability impacts in large and complex projects, and that we intend to use for this project, is the development and application of a Sustainability Implementation Plan (SIP) which sets out key sustainability issues and tracks how they are dealt with through the life of the project. The method covers One Planet Living strategies and goes beyond BREEAM and other benchmarking techniques. An extract from a SIP is shown to the right. All items are identified and tracked from an early stage of a project to ensure their implementation through liaison with the relevant parties.

In looking at whole life environmental impact we seek to integrate "virtuous cycles" to maximise the use of site resources and local and regional resources to minimise impacts this can apply to fuel, waste and water as well as material flows.

The development will meet all necessary sustainability measures and use the One Planet Living framework to aid this. An outline OPL action plan for this project is included above.

Post Occupancy Evaluation surveys can provide valuable feedback on the use of the building and how the occupants interact with it. This can be developed with the Council if desired.



Sustainability Implementation Plan extract

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CASE STUDIES

Kajima: The Grove

The Grove was a comprehensive back to shell refurbishment of a dilapidated 1980's post modern office building on a prominent gateway corner in Westminster. The development was a speculative development i.e. undertaken with full market risk without an identified occupier. Formerly known as Grove House, the building comprised 33,777 sq ft of Gross Internal Area.

Sustainability was a fundamental project driver for the redevelopment of The Grove. Kajima aspires to be known for our environmental credentials and maximising the sustainability potential of our projects. This was enshrined in the project from the outset, and the design team were charged with achieving BREEAM 'Excellent' and an EPC rating of "B". To achieve such high standards in a refurbishment project required commitment to sustainability at all stages of the process. A number of active and passive systems were incorporated in order to achieve this:

- An energy management system designed to maximise energy savings throughout the building;
- A highly efficient locally controllable air conditioning system and associated plant designed to minimise energy take; Recycling facilities;
- Water saving measures including
- low flow sanitary ware; The introduction of increased biodiversity including bird boxes and native planting;
- A reduction in parking provision in lieu of electric vehicle charging capacity;
- The introduction of significant bike parking
- spaces with showering and drying facilities; Solar water heating; and
- Replacing all windows with ultra high performance solar thermal reducing glazing.

BREEAM and EPC performance were monitored throughout the design and delivery stages and as a result the targets of BREEAM 'Excellent' and EPC 'B' were secure: a significant achievement for a refurbishment project in a Grade II listed building in London. The Grove is one of the first office refurbishment projects to achieve such a high standard.

Atelier 10: WWF - UK Living Planet Centre The UK Living Planet Centre for the World Wildlife Fund in Woking, Surrey, is a new and highly sustainable building that will become a showcase headquarters for the World Wildlife Fund, and is a good example of what can be achieved on a project where the client and design team have a commitment to sustainability at all stages of the process.

Atelier Ten are the M&E and Sustainability consultants on the development. In addition to targeting the highest BREEAM accreditation Outstanding, Atelier Ten produced, in liaison with the WWF, a challenging brief that is formed around the Bioregional One Planet Living targets. This reflects the core sustainability and energy values that were incorporated into the design and construction and ultimately the operation of the building.

A mixed mode ventilation strategy will be adopted for the whole building. This includes mechanical ventilation with heat recovery in winter, natural ventilation assisted by earth ducts for passive cooling in the summer. The mechanical ventilation strategy allows the thermal energy extracted from the exhaust air to be used to heat the supply air, thus dramatically minimising the need for additional heating in winter.

The earth ducts will supply naturally cooled fresh air to the AHUs. The exhaust air extracted at high level through wind cowls located above the roof. A displacement ventilation system will supply low velocity fresh air from low level and extract exhaust from high level within the building.

To further minimise energy consumption, energy efficient lighting, i.e. fluorescent and LED lamps will be installed inside and outside the building. Daylight dimming sensors will be provided around the perimeter areas and occupancy sensors will be installed in storage, toilets and changing facilities. PVs will be incorporated into the scheme to offset approximately 46% CO2 emissions arising from fans, pumps and lighting. The estimated peak output is around 55kW.





Earth ducts (100m length minimum)

Openable door jopen in mill season

Cost for exhaust air (closed in winter)

Louvred openings for natural ventilation (open in mid season)

86

- Photovoitaic cells integrated into rooflights Borehole for ground source heat pump
- 9. Displacement ventilation
- 10. High thermal mass 11. Deciduous trees for solar shading

Sustainability forms an integral part of this project as it does on all of our projects. Our team includes leading environmental design consultancy Atelier Ten to design, guide, manage and deliver on this key area of the project brief.

The design of the SW2 Enterprise Centre supports and promotes the One Planet Living (OPL) principles. Furthermore the development will aim to exceed the minimum BREEAM targets for the development as set out by the Employer's Requirements and incorporate the guidance provided.

- BREEAM 2011 Excellent new build we will identify during the detailed design how BREEAM Outstanding can be achieved
- BREEAM Refurbishment -Very
- Good refurbishment buildings • Code for Sustainable Homes – Level 4 for new build residential
- Carbon Trust Heating Control Technology Guide

Whole life environmental impacts in buildings cover an enormous range of systems and components from macro to micro scale and every decision from door handles to site plans can be viewed in terms of its sustainability impacts and the evolution of a 'green' solution to the project will be built on the building blocks of these numerous small decisions.

Our Sustainability Management Plan for the project cross references OPL and BREEAM objectives so that the relevant sustainability elements will be tracked through the Design and Construction stages of the project. An example of the tracking sheet is included in the previous section (Section 2.1.21 One Planet Living)

We highlight two key benefits of our approach.

i. All companies involved in the Core Management, Design or Construction activities will be required to nominate a "sustainability champion'" to ensure that the agreed sustainability and BREEAM objectives are followed through and new opportunities identified related to their area of expertise, or otherwise.

ii. Regular BREEAM/sustainability workshops, managed by Atelier Ten, will continue throughout the project into the construction phase to ensure that the design intent is followed through.

Atelier Ten have managed the sustainability benchmarking of numerous BREEAM 'Excellent' buildings and three office buildings that are tracking 'Outstanding'. They have also managed LEED 'Platinum' and 'Gold' accreditation in the UK and Internationally for more than 100 buildings.

The assessment checklist on this and following pages illustrates how BREEAM and CSH credits will be achieved and managed for the new civic offices and the Town Hall building. At present, the status is that pre-assessments have been carried out and the points allocated to the target areas for both BREEAM and CSH. Prerequisite points have already been confirmed. In the next stage of the detailed design process, these will be converted to confirmed points through the workshop process. We are targeting 71% for CSH and 75% for BREEAM.

C Info	Credit rmati	on	Current Target	EXCELLENT				
lable	geted	ieved	Percentage	75.07%				
edits Availa redits Targe	edits Ach	Credit Issue	Title	Mandatory Credits	Aim	Summary of criteria		
õ	õ	ŏ				For full details of credit compliance requirements	refer to the BREFAM 2011 Scheme Document (manual) which takes prece	dence to this docume

New Cor	nstruction 201	1						
mbeth	SW2							
credits	Good 45 cm	edits Very Good 55 credits Excell	ent 70 credits Ou	Itstanding 85 credits				
00	Current	EXCELLENT		_				
a a	Percentage	75.07%						
Achieve	1 oroontago	10.01%	Mandatory					
redits	Credit Issue	Title	Credits	Aim	Summary of criteria	Comments	Responsible	Date Updated
C				For full details of credit compliance requirements,	refer to the BREEAM 2011 Scheme Document (manual), which takes precede	ence to this document		
0					Management			
		Sustainable procurement - Project brief and design		To ensure delivery of a functional and sustainable asset desided in accordance with performance expectations	1 credit: Establish from <u>RIBA Stage B</u> : Roles & responsibilities for Design,			
		Sustainable procurement - rioject biler and design	-	(Project brief and design)	users and managers, etc.			yymmdd
				Involvement of BREFAM AP to provide advice regularly	1 credit: BREEAM AP appointment no later than early RIBA Stage C			
		Sustainable procurement - BREEAM AP	1 credit = All levels	from early design stages	2 credits: 1 (above) + BREEAM AP involvement from <u>RIBA Stages B-E</u> 3 credits: BREEAM AP involvement from <u>RIBA Stages E/F to handover</u>			
	Man 01 (8 credits +		2 credits = Outstanding	To ensure delivery of a functional and sustainable asset is	1 credit: Thermographic survey to be carried out, and if any defects arise these	comments comments comments	Team Member	
	Exemplary)	Sustainable procurement - Construction and handover		built in accordance with performance expectations	are rectified			
		Sustainable procurement - <u>Aftercare</u>	1	Seasonal Commissioning	1 credit: Commissioning programme, roles and responsibilities 1 credit: Seasonal commissioning for simple and complex systems over 12			
		Sustainable procurement - Aftercare	N/A	Data collection and further involvement	1 credit: Above + Data collection, targets & analysis post seasonal	-		
		Sustainable procurement - Exemplary		Data collection and involvement for a longer period	commissioning for 12 months minimum 1 credit: Data collection, targets, analysis & feedback post seasonal			
_	Man 02		1 credit = Evcellent	To recognise and encourage construction sites which are	commissioning for 3 years minimum 1 credit: a CCS score between 24 and 31.5			
	(2 credits + Exemplary)	Responsible construction practices - Exemplary	2 credits = Outstanding	managed in an environmentally and socially considerate, responsible and accountable manner.	2 credits: a CCS score between 32 and 35.5 CCS score of 36 or more	comments comments	Team Member	yymmdd
					Monitor, record, report & target:			
	Man 03	Construction site imposts	NZA	To recognise and encourage construction sites managed	1 credit: Water consumption	commonto commonto commonto	Toom Momhor	ummdd
	(5 credits)	construction site impacts	N/A	use, energy consumption and pollution	1 credit: Timber (temporary for site activities)	comments comments comments	ream wember	yynniad
					1 credit: EMS (Main Contractor)+ Compliance with Checklist section 2.2.5, EA's 'Building a Better Environment guide.			
					1 credit: <u>During preparation of project brief</u> - prepare and undertake consultation - brief, plan. content. feedback, roles, identify stakeholders.			
				To deside plan and deliver assessible functional and	organisations			
	Man 04 (4 credits)	Stakeholder participation	1 credit (for BUG) = Excellent & Outstanding	inclusive buildings in consultation with current and future	1 credit: Inclusive and accessible design (D&A Statement has been prepared as	comments comments	Team Member	yymmdd
			_	building users and other stakeholders	per CABE guidelines) 1 credit: Provide a Building User Guide (BUG)			
					1 credit: Undertake Post Occupancy Evaluation (POE) (1 year after occupation via a third party) and information dissemination to share data.			
					1 credit: A Life Cycle Cost (LCC - 60 years period) analysis based on the			
	Man 05			To recognise and encourage life cycle costing and service	2 credits: 1 (above) + Analysis undertaken on the building elements at a			
	(3 credits)	Life cycle cost and service life planning	N/A	life planning in order to improve design, specification and through-life maintenance and operation	strategic and system level. The results of the feasibility study and consideration of LCC have been implemented.	comments comments	Team Member	yymmdd
					3 credits: 1 AND 2 (above) + Update model at <u>RIBA Stages D/E.</u> Implement results and prepare a maintenance strategy.			
	Man section sub	12%			· •			

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14 1	2 0						Health & Well Being			
3	2		Hea 01 (PRE-req + 3 credits + Exemplary)	Visual comfort	Pre-req = All levels	To ensure daylighting, artificial lighting and occupant controls are considered at the design stage to ensure best practice visual performance and comfort for building occupants.	Pre-req: All fluorescent and compact fluorescent lamps are fitted with high frequency ballasts. 1 credit: Daylighting - building type dependent 1 credit: Glare control and view out - building type dependent 1 credit: Internal and external lighting design & zoning (LG2009, LG7, BS5489- 1:2003+A2:2008)	comments comments	Team Member	yymmdd
		\neg		Visual comfort - Exemplary	N/A	Note: No. of credits will differ as per building types.	Daylight factor: DF thresholds dependent on building types			
4 3	3		Hea 02 (4 credits)	Indoor air quality	N/A	To recognise and encourage a healthy internal environment through the specification and installation of appropriate ventilation, equipment and finishes Minimising sources of air pollution (3 credits) Potential for natural ventilation (1 credit) Laboratory fume cupboard and containment areas (2 credits) - if applicable	1 credit: Minimising sources of air pollution (indoor air quality plan, minimum distances from inlets & windows, CO2 sensors. 1 credit: VOCs. 1 credit: Formaldehyde concentration level is measured post construction as per relevant standards. 1 credit: Potential for natural ventilation	comments comments	Team Member	yymmdd
2	2		Hea 03 (2 credits)	Thermal comfort	N/A	To ensure that appropriate thermal comfort levels are achieved through design, and controls are selected to maintain a thermally comfortable environment for occupants within the building	1 credit: Thermal modelling as per CIBSE AM11, compliance with "time out of range" (TOR) metric requirements 2 credits: 1 + zoning & temperature control strategy	comments comments	Team Member	yymmdd
1 :	L		Hea 04 (PRE-req + 1 credit)	Water quality	Pre-req = All levels	To minimise the risk of water contamination in building services and ensure the provision of clean, fresh sources of water for building users	Pre-req: Water systems minimising risk of contamination 1 credit: Failsafe humidification (if applicable), chilled, mains-fed point-of-use water coolers (as per building type)	comments comments	Team Member	yymmdd
2	2	(Pf	Hea 05 RE-req + credits building type dependent)	Acoustic performance	N/A	To ensure the buildings' acoustic performance including sound insulation meet the appropriate standards for its purpose.	Pre-req: Suitably qualified acoustician is appointed for advice at <u>pre-bid/briefing</u> stage Credits available for acoustic performance standards (number of credits is building type dependent) 2 credits: Office, Industrial, Retail, Prisons, Courts, Further or Higher Education, Healthcare	comments comments	Team Member	yymmdd
2	2		Hea 06 (2 credits)	Safety and security	N/A	To recognise and encourage effective design measures that promote low risk, safe and secure access to and use of the building	tredit: Safe access (Cycles, pedestrians, deliveries, vehicles, parking, storage of refuse skips, lighting), National Cycle Network Guidelines teredit: Security of site and building, Secure by Design, and/or Safer Parking Scheme at RIBA stage C	comments comments	Team Member	yymmdd
		н	lea section sub	15%						

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27	17	0					Energy			
15	8		Ene 01 (PRE-req + 15 credits + Exemplary)	Reduction of CO2 emissions	6 credits = Excellent 10 credits = Outstanding	To recognise and encourage buildings designed to minimise operational energy demand, consumption and CO2 emissions. Info needed: i. Building floor area (m2) ii. Actual building energy demand (MJ/m2) iv. Notional building energy consumption (kWh/m2) v. Actual building energy consumption (kWh/m2) v. Tareter Finssion Rate (wCO2/m2)	15 credits: Calculate an Energy Performance Ratio for New Constructions (EPR- NC) using BREEAM's Ene 01 calculator starting at: EPR(NC) 0.06 = 1 credit EPR(NC) 0.36 = <u>Excellent</u> ; 6 credits - equivalent to a 25% improvement on the TER. EPR(NC) 0.6 = <u>Outstanding</u> ; 10 credits - equivalent to a 40% improvement on the TER EPR(NC) 0.90 = 15 credits: equivalent to a 100% improvement on the TER i.e. zero net CO2 emissions	comments comments	Team Member	yymmdd
				Reduction of CO2 emissions - Exemplary	N/A	vii. Building Emission Rate (kgC02/m2)	Up to 5 credits 5 credits: carbon negative building			
2	2		Ene 02 (2 credits)	Energy monitoring	1st credit = Very Good, Excellent, Outstanding	To recognise and encourage the installation of energy sub- metering that facilitates the monitoring of operational energy consumption	1 credit: Provision of direct sub-metering of energy uses within the building. 1 credit: BMS (as applicable to building type)	comments comments	Team Member	yymmdd
1	1		Ene 03 (1 credit)	External lighting	N/A	To recognise and encourage the specification of energy- efficient light fittings for external areas of the development.	Energy-efficient external lighting is specified (details on efficacies) and all light fittings are controlled for the presence of daylight.	comments comments	Team Member	yymmdd
5	2		Ene 04 (4 credits + Exemplary)	Low and zero carbon technologies	1 credit = Excellent, Outstanding	To reduce carbon emissions and atmospheric pollution by encouraging local energy generation from renewable sources to supply a significant proportion of the energy demand. - Renewable feasibility study OR Green tariff contract - Reduction in regulated CO2 emissions OR Life Oycle Assessment of the carbon impact of the chosen LZC systems - Free cooling	1 credit: Feasibility study at <u>RIBA Stage C</u> OR renewable energy supply contract for 3 years minimum 2 credits: Feasibility study + Low or zero carbon technology specification and installation with 10% reduction in regulated CO2 emissions OR feasibility study includes a Life Cycle Assessment of the carbon impact 3 credits: Feasibility study + 20% reduction in regulated CO2 emissions OR 10% reduction in Ife cycle CO2 emissions 4 credits: Feasibility study + 20% reduction in life cycle CO2 emissions 1 credit: Free cooling	comments comments	Team Member	yymmdd
				Low and zero carbon technologies - <u>Exemplary</u>	N/A		30% reduction in regulated CO2 emissions OR 30% reduction in life cycle CO2 emissions			
2	2		Ene 06 (2 credits)	Energy efficient transportation systems	N/A	To recognise and encourage the specification of energy- efficient transportation systems	1 credit: Analysis of transport demand, usage and lifts, escalators, etc. 2 credits: 1 + Specification of energy efficient lifts, escalators	comments comments	Team Member	yymmdd
2	2		Ene 08 (2 credits)	Energy efficient equipment	N/A	To recognise and encourage procurement of energy- efficient equipment to ensure optimum performance and energy savings in operation	2 credits: Energy efficient white goods (small power, plug in equipment, swimming pools, communal laundry, IT equipment, Kitchen equipment, Healthcare equipment, data centres, residential white goods, etc.)	comments comments	Team Member	yymmdd
			Ene section sub- totals	19%						
9	9	0					Transport			
з	3		Tra 01 (3 credits)	Public transport accessibility	N/A	To recognise and encourage development in proximity of good public transport networks, thereby helping to reduce transport-related pollution and congestion	Up to 3 credits: Accessibility index depending on building type 1 credit: Dedicated bus service (only available if Al is low)	comments comments	Team Member	yymmdd
1	1		Tra 02 (1 credit)	Proximity to amenities	N/A	To encourage and reward a building that is located in close proximity to local amenities, thereby reducing the need for extended travel or multiple trips	1 credit: for proximity to local amenities (main Grocery shop or food outlet, Post Box, Cash Machine)	comments comments	Team Member	yymmdd
2	2		Tra 03 (2 credits)	Cyclist facilities	N/A	To encourage building users to cycle by ensuring adequate provision of cyclist facilities	1 compliant cycle space per 10 users for the first 500; 1 per 15 for next 500 users and 1 per 20 for any over 1000 users Facilities (showers, changing, etc): 1 shower per 10 users, no. of lockers at least as same as cycle spaces, changing at least 1m2 per cycle space (i.e. adequate to meet the demand).	comments comment comments	Team Member	yymmdd
2	2		Tra 04 (2 credits)	Maximum car parking capacity	N/A	To encourage the use of alternative means of transport to the building other than the private car, thereby helping to reduce transport related emissions and traffic congestion associated with the building's operation	Dependent on Accessibility Index (AI) from Tra 01. Credits are awarded when there is less than 1 parking space per X building users when X is: 1 credit: 3 when Al<4, 4 when 4 <al<8, 5="" al≥8<br="" when="">2 credits: 4 when Al<4, 5 when 4<al<8, 6="" al≥8<="" td="" when=""><td>comments comments</td><td>Team Member</td><td>yymmdd</td></al<8,></al<8,>	comments comments	Team Member	yymmdd
1	1		Tra 05 (1 credit)	Travel plan	N/A	To recognise the consideration given to accommodating a range of travel options for building users, thereby encouraging the reduction of user reliance on forms of travel that have the highest environmental impact.	A travel plan has been developed and tailored to the specific needs of the building users.	comments comments	Team Member	yymmdd
			Tra section sub totals	8%						

	9	9	0					Transport	
	3	3		Tra 01 (3 credits)	Public transport accessibility	N/A	To recognise and encourage development in proximity of good public transport networks, thereby helping to reduce transport-related pollution and congestion	Up to 3 credits: Accessibility index depending on building type 1 credit: Dedicated bus service (only available if AI is low)	co
	1	1		Tra 02 (1 credit)	Proximity to amenities	N/A	To encourage and reward a building that is located in close proximity to local amenities, thereby reducing the need for extended travel or multiple trips	1 credit: for proximity to local amenities (main Grocery shop or food outlet, Post Box, Cash Machine)	со
	2	2		Tra 03 (2 credits)	Cyclist facilities	N/A	To encourage building users to cycle by ensuring adequate provision of cyclist facilities	1 compliant cycle space per 10 users for the first 500; 1 per 15 for next 500 users and 1 per 20 for any over 1000 users Facilities (showers, changing, etc): 1 shower per 10 users, no. of lockers at least as same as cycle spaces, changing at least 1m2 per cycle space (i.e. adequate to meet the demand).	cc
	2	2		Tra 04 (2 credits)	Maximum car parking capacity	N/A	To encourage the use of alternative means of transport to the building other than the private car, thereby helping to reduce transport related emissions and traffic congestion associated with the building's operation	Dependent on Accessibility Index (AI) from Tra 01. Credits are awarded when there is less than 1 parking space per X building users when X is: 1 credit: 3 when AI<4, 4 when 4 <ai<8, 2="" 4="" 4<ai<8,="" 5="" 6="" ai<4,="" ai≥8="" ai≥8<="" credits:="" td="" when=""><td>co</td></ai<8,>	co
	1	1		Tra 05 (1 credit)	Travel plan	N/A	To recognise the consideration given to accommodating a range of travel options for building users, thereby encouraging the reduction of user reliance on forms of travel that have the highest environmental impact.	A travel plan has been developed and tailored to the specific needs of the building users.	co
Ĩ				Tra section sub	8%				

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)	6	0					Water			
5	2		Wat 01 (5 credits + Exemplary)	Water consumption	1 credit = Good, Very Good, Excellent 2 credits = Outstanding	To reduce the consumption of potable water for sanitary use in new buildings from all sources through the use of water efficient components and water recycling systems.	Improvement over baseline case: 1 credit: 12.5% 2 credits: 25% (At least 2 credits should be achieved without grey/rainwater reuse) 3 credits: 40% 4 credits: 50% 5 credits: 55%	comments comments	Team Member	yymmdd
				Water consumption - Exemplary	N/A		65% improvement over baseline case.			
L	1		Wat 02 (1 credit)	Water meter	Water meter on all mains = Good, Very Good, Excellent, Outstanding	To ensure water consumption can be monitored and managed and therefore encourage reductions in water consumption	Specifying a water meter, with pulsed output, on the mains water supply to each building (including borehole or other source). Water-consuming plant or building areas, (with 10% or more of the total water demand) fitted with sub meters or water monitoring equipment.	comments comments	Team Member	yymmdd
2	2		Wat 03 (2 credits)	Water leak detection and prevention	N/A	To reduce the impact of water leaks that may otherwise go undetected.	1 credit: A compliant leak detection system is specified or installed on the building's water supply. 1 credit: A flow control device is fitted to each WC area/facility (time controller, volume controller or presence detector, etc.)	comments comments	Team Member	yymmdd
L	1		Wat 04 (1 credit)	Water efficient equipment	N/A	To reduce unregulated water consumption by encouraging specification of water efficient equipment	EITHER Drip feed subsurface irrigation that incorporates soil moisture sensors with zoning, OR Reclaimed water from a rainwater or greywater system; OR External landscaping and planting relies solely on precipitation during all seasons; OR Planting is restricted to species that thrive in hot and dry conditions; OR no dedicated, mains-supplied irrigation systems (including pop- up sprinklers and hoses).	comments comments	Team Member	yymmdd
			Wat section sub	6%						
			totals							
2	8	0					Materials			
5	3		Mat 01 (5 credits)	Life cycle impacts Life cycle impacts - <u>Exemplary</u>	N/A N/A	To recognise and encourage the use of construction materials with a low environmental impact (including embodied carbon) over the full life cycle of the building	Up to 5 credits: Mat01 calculation points for - external walls, Windows, Roof, Upper floor slab, Floor finishes / coverings The building achieves at least two more points to achieve maximum credits under standard BREEAN requirements.	comments comments	Team Member	yymmdd
L	1		Mat 02 (1 credit)	Hard landscaping and boundary protection	N/A	To recognise and encourage the specification of materials for boundary protection and external hard surfaces that have a low environmental impact, taking account of the full life cycle of materials used	At least 80% of the combined area of external hard landscaping and boundary protection specifications achieve an A or A+ rating, as defined by the Green Guide to Specification.	comments comments	Team Member	yymmdd
3	2		Mat 03 (3 credits + Exemplary)	Responsible sourcing of materials	Timber req = All levels	To recognise and encourage the specification of responsibly sourced materials for key building elements	Up to 3 credits: 80% of the materials are responsibly sourced: Structural frame, Ground floor, Upper floors (including separating floors), Roof, External walls, Internal walls, Foundation/ substructure, and Staircase. Confirmation that all timber used on the project is sourced in accordance with the UK Government's Timber Procurement Policy.	comments comments	Team Member	yymmdd
				Responsible sourcing of materials - Exemplary	N/A	1	70% of the available responsible sourcing points have been achieved			
2	1		Mat 04 (PRE-req + 2 credits)	Insulation	Pre-req = All levels	To recognise and encourage the use of thermal insulation which has a low embodied environmental impact relative to its thermal properties and has been responsibly sourced	Pre-req: All new insulation must be specified. 1 credit: Embodied impact 1 credit: Minimum 80% Responsible sourcing	comments comments	Team Member	yymmdd
L	1		Mat 05 (1 credit)	Designing for robustness	N/A	To recognise and encourage adequate protection of exposed elements of the building and landscape, therefore minimising the frequency of replacement and maximising materials optimisation	Protection is given to vulnerable parts of the building such as areas exposed to high pedestrian traffic, vehicular and trolley movements.	comments comments	Team Member	yymmdd
			Mat section sub							

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7	5	0					Waste			
4	4 3	Wst 01 (4 credits + Exemplary)	Construction waste management Wst 01 4 credits +	1 credit = Outstanding	To promote resource efficiency via the effective management and reduction of construction waste	Up to 3 credits: SWMP + pre-demolition audit + the amount of non-hazardous construction waste (m ³ /100m ² or tonnes/100m ²) generated: 1 credit 13.3 / 11.1 2 credits: 7.5 / 6.5 3 credits: 3.4 / 3.2 4th credit: Divert from landfill (volume) - Demolition = 80%, Non-demolition = 70%	comments comments	Team Member	yymmdd	
			Exemplary	Construction waste management - <u>Exemplary</u>	N/A	Di Ar B ^B K S	Divert from landfill (volume) - Demolition & Non-demolition = 85% Amount of non-hazardous construction waste (m3/100m2 or tonnes/100m2) generated = 1.6 / 1.9 Key waste groups identified for diversion at pre-construction stage SWMP			
1	0		Wst 02	Recycled aggregates	N/A	Si but To recognise and encourage the use of recycled and secondary aggregates, thereby reducing the demand for levels matching level and the demand of the second secondary aggregates.	Significant use (25%) of recycled or secondary aggregates in 'high-grade' building aggregate uses. % of high-grade aggregate specified per application must meet the minimum levels.	commonte commonte commonte	Team Member	ummdd
Ţ	Ŭ		Exemplary)	Recycled aggregates - <u>Exemplary</u>	N/A	virgin material and optimising material efficiency in construction	Significant use (35%) of recycled or secondary aggregates in 'high-grade' building aggregate uses. % of high-grade aggregate specified per application must meet the minimum levels.	comments comments		yymmdd
1	1		Wst 03 (1 credit)	Operational waste	1 credit = Excellent, Outstanding	To recognise and encourage the provision of dedicated storage facilities for a building's operational-related recyclable waste streams, so that this waste is diverted from landfill or incineration	Clearly labelled, accessible, dedicated space for segregation and storage of operational recyclable waste. Static waste compactor(s) or baler(s), composting, if applicable.	comments comments	Team Member	yymmdd
1	1		Wst 04 (1 credit)	Speculative floor and ceiling finishes	N/A	To encourage the specification and fitting of floor and ceiling finishes selected by the building occupant and therefore avoid unnecessary waste of materials	Office buildings only: Where the future occupant is unknown: Carpets, other floor finishes and celling finishes have been installed in a show area only (<25% of the net lettable floor area) OR Where the building is developed for a specific occupant: the occupant selects the specified floor and ceiling finishes.	comments comments	Team Member	yymmdd
			Wst section sub totals	7.50%						
10	10	0					Land Use & Ecology			
2	2		LE 01 (2 credits)	Site selection	N/A	To encourage the reuse of land that has been previously developed and discourage the use of previously undeveloped land for building.	1 credit: 75% footprint on previously developed land 1 credit: Contaminated land investigation and remediation.	comments comments	Team Member	yymmdd
1	1		LE 02 (1 credit)	Ecological value of site and protection of ecological features	N/A	To encourage development on land that already has limited value to wildlife and to protect existing ecological features from substantial damage during site preparation and completion of construction works	Site of 'land of low ecological value'. Protection of existing ecological features Construct ecological protection prior to any preliminary site construction or preparation works.	comments comments	Team Member	yymmdd
2	2		LE 03 (2 credits)	Mitigating ecological impact	1 credit = Very Good, Excellent, Outstanding	To minimise the impact of a building development on existing site ecology	1 credit: Change in ecological value of the site is minimal, between -9 & 0 2 credits: Change in ecological value of the site is positive, greater than zero	comments comments	Team Member	yymmdd
3	3		LE 04 (3 credits)	Enhancing site ecology	N/A	To recognise and encourage actions taken to maintain and enhance the ecological value of the site as a result of development	toredit: SQE appointed, surveys site at <u>RIBA stage B or equivalent</u> and makes recommendations that are incorporated 2 credits: 1 - change of ecological value of up to 6 3 credits: 1 + 2 + change of ecological value of +6	comments comments	Team Member	yymmdd
2	2		LE 05 (2 credits)	Long term impact on biodiversity	N/A	To minimise the long term impact of the development on the site and the surrounding area's biodiversity	Mandatory: SQE appointed prior to any site works, UK & EU legislation to be complied with, minimum 5 year landscape management plan. Additional: Biodiversity Champion, train work force, protect & monitor biodiversity during construction stages, create new habitats, programme site works to minimise damage.	comments comments	Team Member	yymmdd
		-	LE section sub totals	10%						

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1	3 9	0	D					Pollution			
3	1			Pol 01 (3 credits)	Impact of refrigerants	N/A	To reduce the level of greenhouse gas emissions arising from the leakage of refrigerants from building systems	3 credits: No refrigerants 2 credits: Refrigerants have Direct Effect Life Cycle CO ₂ equivalent emissions (DELC CO ₂ e) of ≤100 kgCO ₂ e/kW cooling capacity OR GWP less than 10 1 credit: Refrigerants have Direct Effect Life Cycle CO ₂ equivalent emissions (DELC CO ₂ e) of ≤1000 kgCO ₂ e/kW cooling capacity OR leak detection system & automatic pump down	comments comments	Team Member	yymmdd
3	2	2 Pol 02 (3 credits) NOx emissions NOx emissions NOX emissions and therefore a compared to the local environment of the l		$eq:credit: The dry NOx emissions from delivered space heating energy are $100 mg/kWh (at 0% excess 0_). $$2 credits: Dry NOx emissions are $70 mg/kWh. $$3 credits: Dry NOx emissions are $40 mg/kWh. $$ if applicable less than 100 mg/kWh for water heating $$$$	comments comments	Team Member	yymmdd				
Ę	4			Pol 03 (5 credits)	Surface water run off	N/A	To avoid, reduce and delay the discharge of rainfall to public sewers and watercourses, therefore minimising the risk of localised flooding on and off site, watercourse pollution and other environmental damage. Flood risk: 2 credits Surface run off: 2 credits Minimising water course pollution: 1 credit	Flood risk 2 credits: FRA confirming low risk zone 1 credits: FRA confirming medium or high risk zone (not within the Functional Floodplain), with appropriate ground levels. Surface water run off Pre-req: An appropriate consultant is appointed 1 credit: Plooding will not occur if local drainage system fails AND SUD techniques Minimising water course pollution 1 credit: SUDs or source control systems	comments comments comments	Team Member	yymmdd
t	1			Pol 04 (1 credit) Reduction of night time light pollution N/A To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties		External lighting design in line with ILE Guidance notes for the reduction of obtrusive light, 2005	comments comments	Team Member	yymmdd		
1	1			Pol 05 (1 credit)	Noise attenuation	N/A	To reduce the likelihood of noise from the new development affecting nearby noise-sensitive buildings	Either no noise-sensitive areas or buildings within 800m radius OR noise impact assessment in compliance with BS 7445:1991 by an Acoustician, along with any remediation's.	comments comments	Team Member	yymmdd
			_	Pol section sub totals	10%						

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Code for Sustainable Homes 2010 Hitlist 3411 - Lambeth SW2

Lev	evel 1 36 points Level 2 48 points Level 3 57 points Level 4 68 points Level 5 84 points Level 6 90 points													
Int	Credi format	it tion	Current Target	LEVEL 4										
lable	geted	eved	Percentage	71.08%										
edits Avail	redits Targ	edits Achi	Credit Issue	Title	Mandatory Credits	Aim	Summary of Criteria	Comments	Responsible Party	Date Updated				
ō	0	ō		For full details of credit compliance requirements, refer to the CSH 2010 technical manual, which takes precedence to this document.										
31	20	0					Fnerøv							
	20				1	I	Up to 10 credits can be achieved for CO ₂ emissions from the dwelling							
10	5		Ene 1	Dwelling Emission Rate	3 credits = Level 4 9 credits = Level 5 10 credits = Level 6	To minimise carbon dioxide emissions arising from the operation of a dwelling and its services	Illustrating percentage improvement of DER over TER: 1 credit: 8% 2 credit: 16% 3 credits: 25% - mandatory for Level 4 4 credits: 36% 6 credits: 74% 6 credits: 72% 8 credits: 85% 9 credits: 85% 9 credits: 260 - mandatory for Level 5 10 credits: 2ero Net CO ₂ Emissions - mandatory for Level 6	0	0	00/01/1900				
9	4		Ene 2	Fabric Energy Efficiency	7 credits = Level 5 & 6	To improve fabric energy efficiency performance thus future-proofing reductions in CO2 for the life of the dwelling.	$\begin{array}{l} 3 \text{ to 3 credits can be achieved for Fabric Energy Efficiency kWh/m2/year (1st figure is for Apartment Blocks, Mid-Terrace; 2nd figure is for End Terrace, Semi-Detached & Detached) \\ 3 credits: < 48; < 60 \\ 4 credits: < 48; < 55 \\ 5 credits: < 43; < 52 \\ 6 credits: < 43; < 52 \\ 6 credits: < 35; < 42 \\ 7 credits: < 35; < 42 \\ 9 credits: < 35; < 42 \\ 9 \end{array}$	0	0	00/01/1900				
2	2		Ene 3	Energy Display Devices	N/A	To promote the specification of equipment to display energy consumption data, thus empowering dwelling occupants to reduce energy use.	1 credit: Current electricity OR primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device. 2 credits: Current electricity AND primary heating fuel consumption data are displayed to occupants by a correctly specified energy display device OR current electricity consumption data is displayed to occupants by a correctly specified energy display device AND electricity is the primary heating fuel.	0	0	00/01/1900				
1	1		Ene 4	Drying space	N/A	To minimise the energy required for drying clothes	Drying space with posts and footings or fixings capable of holding $4m$ + of drying line for 1-2 bed dwellings, and $6m$ + of drying line for 3+ bed dwellings. The space (internal or external) should be secure.	0	0	00/01/1900				
2	2		Ene 5	Energy Labelled White Goods	N/A	Encourage the provision / purchase of energy efficient white goods.	1 credit: Fridges and freezers or fridge-freezers: A+ rating 1 credit: Washing machines and dishwashers: A rating AND EITHER Washer-dryers or tumble dryers have a B rating OR washer-dryers or tumble dryers are not provided, information on the EU Energy Labelling Scheme is provided. 1 credit: If no white goods are provided, information on the EU Energy Efficiency Labelling Scheme is provided to each dwelling.	0	0	00/01/1900				

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	rmation	Target	LEVEL 4						
ailable	rgeted	Percentage	71.08%						
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õ	υŌ				For full details of credit compliance requ	rements, refer to the CSH 2010 technical manual, which takes preceder	nce to this document.		
2	2	Ene 6	External Lighting	N/A	Encourage provision of energy efficient external lighting	1 credit: Space Lighting is provided by dedicated energy efficient fittings. 1 credit: Security Lighting is designed for energy efficiency and are adequately controlled: All burglar security lights have maximum wattage of 150 W AND Movement detecting control devices (PIR) AND Daylight cut-off sensors. All other security lighting: has dedicated energy efficient fittings AND fitted with daylight cut-off sensors OR timers. OR 1 credit: No security lighting is installed OR 2 credits: Dual lamp luminaires with both space and security lamps can be awarded both credits provided they meet the criteria for energy efficiency.	0	Team Member	yymmdd
2	1	Ene 7	Zero and Low Carbon Energy Technologies	N/A	To reduce carbon emissions and atmospheric pollution by encouraging local energy generation from renewable sources	1 credit: Energy is supplied from local renewable or low carbon energy sources or is designed and installed in a manner endorsed by a feasibility study AND 10% reduction in carbon emissions. 2 credits: 15% reduction in carbon emissions.	0	Team Member	yymmdd
	2	Ene 8	Cycle Storage	N/A	To encourage the use of bikes as transport to reduce the need for short car journeys.	1 credit: Studios, 1 bed - 1 cycle for every 2 dwellings 2, 3 bed - 1 cycle per dwelling 4 bed and above - 2 cycles per dwelling 2 credits: Studios, 1 bed - 1 cycle per dwelling 2, 3 bed - 2 cycles per dwelling 4 bed and above - 4 cycles per dwelling	0	Team Member	yymmdd
						2 double power sockets, 2 telephone points (or double telephone point) or 1			
1	1	Ene 9	Home Office	N/A	To reduce the need to commute to work.	daylight factor (DF) 1.5%, adequate ventilation in a suitable quiet room.	0	Team Member	yymmdd
1	1	Ene 9 Ene section sub- totals	Home Office 36.4%	N/A	To reduce the need to commute to work.	telephone point with cable of broadband, a window, 1.5m waii space, average daylight factor (DF) 1.5%, adequate ventilation in a suitable quiet room.	0	Team Member	yymmdd
1	1 4 0	Ene 9 Ene section sub- totals	Home Office 36.4%	N/A	To reduce the need to commute to work.	daylight factor (DF) 1.5%, adequate ventilation in a suitable quiet room.	0	Team Member	yymmdd
1 6 5	1 4 0 3	Ene section sub- totals Wat 1	Home Office 36.4% Indoor Water Use	N/A 1 credit = Level 1 & 2 3 credits = Level 3 & 4 5 credits = Level 5 & 6	To reduce the need to commute to work.	Water 1 credit:120 l/p/day - mandatory for Levels 1 & 2 2 credits: 110 /p/day 3 credits:105 l/p/day 3 credits:105 l/p/day 3 credits:105 l/p/day	0	Team Member	yymmdd 00/01/1900
1 5 1	1 4 0 3	Ene section sub- totals Wat 1 Wat2	Home Office 36.4% Indoor Water Use External Water Use	N/A 1 credit = Level 1 & 2 3 credits = Level 3 & 4 5 credits = Level 5 & 6 N/A	To reduce the need to commute to work. To reduce the consumption of water in the home To promote the recycling of rainwater and reduce the amount of mains potable water used for external water uses	Itereptione point with cable of broadband, a window, 1.5m wait space, average daylight factor (DF) 1.5%, adequate ventilation in a suitable quiet room. Iteredit:120 //p/day - mandatory for Levels 1 & 2 2 credits: 110 //p/day 3 credits:105 //p/day - mandatory for Levels 3 & 4 4 credits: 30 //p/day 5 credits: 80 //p/day 5 credits: 80 //p/day 6 credits: 80 //p/day 6 credits: 80 //p/day 7 credits: 80 //p/day 8 credits: 80 //p/day 9 credits: 80 //p/day 9 credits: 80 //p/day 9 credits: 80 //p/day 1.2 bed with private garden - 150 litres; 1.2 bed with private garden - 200 litres 8 quirements above can be halved if there is no planting provided and the whole of the external space is covered by a hard surface. Communal gardens: 1 litre/m ² of land allocated to the dwelling with a minimum of 200 litres per communal garden. Requirements can be halved if planting requiring little water has been specified (following the recommendations by ecologist). If a swimming pool or other large water-consuming feature is present, 100% rainwater or grey water to be provided, water to comply with appropriate EU bathing water standards.	0	0 0	yymmdd 00/01/1900 00/01/1900

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lable	geted	ieved	Percentage	71.08%						
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ō	Cr	Ğ		•		For full details of credit compliance requ	irements, refer to the CSH 2010 technical manual, which takes preceder	ce to this document.		
24	13	0					Materials			
15	7		Mat 1	Environmental Impact of Materials	N/A	To encourage the use of materials with lower environmental impacts	Mandatory: Green Guide rating of between A+ & D for at least 3 of the following building elements: Roof, External Walls, Internal Walls (including separating walls), Upper and Ground Floors (including separating floors), Windows. Up to 15 credits available depending on GG ratings.	0	0	00/01/1
				Responsible Sourcing of Materials -		To recognize and encourage the specification of	80% of materials are responsibly sourced used in: Frame, Ground floor, Upper floors (including separating floors), Roof, External walls, Internal walls (including separating walls), Foundation/substructure (excluding sub-base materials), Staircase. Materials: Brick, Resin-based composite materials, Concrete, Glass, Plastics			
6	4	4 Mat 2 Responsible Sourcing of Materials - Basic Building Elements N/A To recognize and encourage the specification of responsibly sourced materials for basic building elements		and rubbers, Metals, Dressed or building stone, Timber, wood panel products and wood-based composites, Plasterboard and plaster, Bituminous materials, Other mineral-based materials, including fibre cement and calcium silicate, Products with recycled content Additionally, 100% of any timber in these elements must be legally sourced.	0	0	00/01/19			
3	2 Mat 3 Responsible Sourcing of Materials - N/A To recognize and encourage the specification of responsibly sourced materials for finishing elements		80% of materials are responsibly sourced used in: Stair, Window, External & internal door, Skirting, Panelling, Furniture, Fascias, any other significant use. Materials: Refer list for Mat 2 credit	0	0	00/01/1				
4	4	0	Mat section sub totals	7.2%			Surface Water Run-off			
							Mandatory: Peak Rate of Runoff is no greater than it was for the pre- development site events AND Volume of Runoff is entirely reduced using infiltration AND / OR is made available for use is a replacement for potable water.			
2	2		Sur 1	Management of Surface Water Run-off from Development	N/A	To reduce and delay water run off from hard surfaces to sewers and watercourses	Water Quality Criteria 1 credit: There is no discharge from the developed site for rainfall depths up to 5 mm 1 credit: The run-off from all hard surfaces shall receive an appropriate level of treatment in accordance with The SUDs Manual to minimise the risk of pollution.	0	o	00/01/1
	2		Sur 2	Flood Risk	N/A	Encourage developments in low flood risk areas	2 credits: Site specific Flood Risk Assessment is undertaken AND Site in Zone 1 OR 1 credit: Site in Zones 2 and 3a AND finished ground floor level of all habitable areas and access routes are 600mm above the design flood level. AND FRA demonstrates to the satisfaction of the local planning authority and statutory body that the development is appropriately flood resilient and resistant, including safe access and escape routes, and that any residual risk can be safely managed.	0	0	00/01/1
2			Comparent and and	0.0%						
2			totals	2.2%						

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able eted	eved	Percentage	71.08%						
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e c	Cre		ł		For full details of credit compliance requ	irements, refer to the CSH 2010 technical manual, which takes preceder	ice to this document.		
8 6	0					Waste			
4 4		Was 1	Household Waste Storage and Recycling Facilities	N/A	To recognise the importance of having internal and external storage for waste management	Mandatory: Provide external storage space with inclusive access and usability and containers are not stacked with largest volume EITHER: as per BS 5906 i.e. 100 litres for a 1-bedroom unit, further 70 litres for each additional bedroom, OR total volume of the external waste containers provided by the Local Authority. 2 credits: If there are 3 no. dedicated internal storage bins, minimum total capacity 60 litres and no LA collection scheme. 4 credits: A combination of internal AND LA scheme OR external storage.	O	0	00/01/
3 2		Was 2	Construction Site Management	N/A	To recognise the importance of a site waste management plan	1 credit: Compliant SWMP includes procedures and commitments for reducing waste generated. Includes target benchmarks for resource efficiency, i.e. m ³ of waste per 100 m ² or tonnes of waste per 100 m ² ; procedures and commitments to minimize non-hazardous construction waste at design stage in at least 3 waste groups along with monitoring of waste; procedures for minimising hazardous waste, monitoring, measuring and reporting of hazardous and non-hazardous site waste production according to the defined waste groups. 2credits: SWMP PLUS at least 50% by weight or by volume of non-hazardous construction waste generated by the project is diverted from landfill. OR 3 credits: SWMP PLUS at least 85% by weight or by volume of non-hazardous construction waste generated by the project is diverted from landfill.	0	0	00/01/:
1 0		Was 3	Composting	N/A	To encourage developers to provide facilities to compost household waste	Individual home composting facilities OR a local communal or community composting service, which the LA runs or where there is a management plan in place OR a LA waste collection system. Facilities to be in a dedicated position, accessible to disabled people, have an information leaflet.	0	0	00/01/
	_	Was section sub totals	6.4%						
4 1	0					Pollution			
1 1		Pol 1	Global Warming Potential (GWP) of Insulants	N/A	To reduce global warming from blowing agents emissions arising from manufacture, installation, use and disposal of foamed thermal and acoustic insulants	All insulating materials use substances that have a GWP < 5 (manufacture AND installation): Roofs: including loft access, Walls: internal and external including lintels and all acoustic insulation, Floors: including ground and upper floors, Hot water cylinder: pipe insulation and other thermal stores, Cold water storage tanks: where provided, External doors.	o	0	00/01/2
3 0		Pol 2	NOx emissions	N/A	To reduce nitrous oxide emitted into the atmosphere	1 credit: 100 mg/kWh (Dry NOx level), Boiler Class 4 (BS EN 297: 1994) 2 credits: 70 mg/kWh, Boiler Class 5 3 credits: 40 mg/kWh OR all space heating and hot water energy requirements are fully met by systems which do not produce NOX emissions. Note: No credits are awarded for open flue space and/or water heating systems.	0	0	00/01/1
		Pol section sub totals	2.8%						

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nfo	rmati	ion	Target	LEVEL 4						
	edits Targeteo	dits Achieved	Credit Issue	Title	Mandatory Credits	ory Aim Summary of Criteria		Comments	Responsible Party	Ur
	Cre	Cre		I		For full details of credit compliance requ	irements, refer to the CSH 2010 technical manual, which takes preceder	nce to this document.		
2	8	0					Health & Well Being			
3	1		Hea 1	Daylighting	N/A	To improve quality of life in homes through good daylighting	1 credit: Kitchens - average DF of 2% 1 credit: Living rooms, dining rooms and studies (including home office room under Ene 9) - average DF of 1.5% 1 credit: 80% of the working plane in kitchen, living room, dining room and study (including home office room under Ene 9) receives direct light from the sky.	0	0	00
Ļ	3		Hea 2	Sound Insulation	N/A	To ensure the provision of sound insulation and reduce the likelihood of noise complaints.	Credit: Values are 3dB higher better than Part E. 3 credits: Values are 5dB higher better than Part E OR attached dwellings with separating walls or floors between non habitable rooms only. 4 credits: Values are 8dB higher better than Part E OR detached dwellings. Above demonstrated through EITHER programme of pre-completion testing OR Use of Robust Details Limited (RDL).	0	0	00
	0		Hea 3	Private Space	N/A	To improve the occupiers' quality of life by providing a private outdoor space.	Outdoor space (private or semi-private) is provided of a minimum size that allows all occupants to sit outside, allows easy access to all occupants, including wheelchair users, accessible only to occupants of designated dwellings.	0	0	0
	4	Hea 4 Lifetime Homes 4 credits = Level 6 To encourage the construction of homes that are accessible to everybody and where the layout can easily be adapted to fit the needs of future occupants		3 credits: Where an exemption from Lifetime Homes criteria 2 and/or 3 is applied to selected pathways subject to a steeply sloping plot gradient, but all other principles of Lifetime Homes, applicable to the dwelling being assessed, have been complied with. 4 credits: All principles of Lifetime Homes, applicable to the dwelling being assessed have been complied with.	0	0	0			
			Hea section sub totals	14%						
	٩	0					Management			
;	3		Man 1	Home User Guide	N/A	To encourage the provision of guidance to enable owners/occupiers to understand and operate their home efficiently and to make the best use of local facilities	2 credits: Home User Guide, compiled using Checklist Man 1 Part 1 together with information that the guide is available in alternative accessible formats. 3 credits: Above PLUS guide also covers information relating to the site and its surroundings, compiled using Checklist Man 1 Part 2.	0	0	0
	2		Man 2	Considerate Constructors Scheme	N/A	To encourage that construction sites are managed in an environmentally and sociably considerate and accountable manner	1 credit: Achieving a score of at least 3 in every section, and a total score between 24 and 31.5 under CCS scheme. 2 credits: Achieving a score of over 32 under CCS scheme. Alternative locally or nationally recognised schemes can be used instead of CCS.	0	0	0
	2		Man 3	Construction Site Impacts	N/A	To encourage that construction sites are managed in a manner that mitigates environmental impacts	1 credit: Achieve 2 or more of the following items: Monitor, report and set targets for CO ₂ production or energy use; Monitor and report CO ₂ or energy use arising from transport; Monitor, report and set targets for water consumption; Adopt best practice policies in respect of air (dust) pollution; Adopt best practice policies in respect of water (ground and surface) pollution; 80% of site timber is reclaimed, re-used or responsibly sourced. 2 credits: Achieve 4 or more of the items listed above.	0	0	0
	2		Man 4	Security	N/A	To encourage the design of developments where people feel safe and secure	2 credits: An Architectural Liaison Officer (AL0) or Crime Prevention Design Advisor (CPDA) from the local police force is consulted at the design stage and their recommendations are incorporated into the design of the dwelling. AND Section 2 – Physical Security from 'Secured by Design – New Homes' is complied with (Secured by Design certification is not required).	0	0	0
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	Inform	ation	Target												
	lable seted	leved	Percentage	71.08%											
	edits Avai edits Tari	ed its Ach	Credit Issue	Title	Mandatory Credits	Aim	Summary of Criteria	Comments	Responsible Party	Date Updated					
	5 8	Ö		For full details of credit compliance requirements, refer to the CSH 2010 technical manual, which takes precedence to this document.											
_															
	9 8	0					Ecology								
	1 1		Eco 1	Ecological Value of Site	N/A	To encourage development of sites of little or low ecological value	Site is defined as of low ecological value EITHER by meeting the criteria under Checklist Eco 1 OR confirmed by an ecologist (SQE) OR an independent ecological report of the site, prepared by a suitably qualified ecologist, confirms that the construction zone is of low or insignificant ecological value AND any land of ecological value outside the construction zone but within the development site will remain undisturbed by the construction works.	0	0	00/01/1900					
	1 1		Eco 2	Ecological Enhancement	N/A	To enhance the ecological value of the site	Suitably Qualified Ecologist is appointed to recommend appropriate ecological features that will positively enhance the ecology of the site AND adopt all key recommendations and 30% of additional recommendations in the report.	0	0	00/01/1900					
	1 1		Eco 3	Protection of Ecological Features	N/A	To protect existing ecological features	All existing features of ecological value are maintained and adequately protected during site clearance, preparation and construction works OR if the site has been classified as having low ecological value under credit Eco 1 AND no features of ecological value have been identified.	0	0	00/01/1900					
	4 3		Eco 4	Change in Ecological Value of Site	N/A	To reward steps taken to minimise reductions in ecological value.	The ecological value of site and change in species per hectare is: 1 credit: between -9 and less than or equal to -3 2 credits: greater than -3 and less than or equal to +3 3 credits: greater than 3 and less than or equal to 9 4 credits: greater than +9	0	0	00/01/1900					
	2 2		Eco 5	Building Footprint	N/A	To promote efficient use of the building footprint.	1 credit: Houses - NIFA: NIGFA ratio $\ge 2.5:1$ OR Flats - NIFA: NIGFA ratio $\ge 3:1$ OR combination of houses and flats - Total NIFA: NIGFA of all houses and flats is greater than the area weighted average of the two target ratios. 2 credits: Houses - $\ge 3:1$ OR Flats $\ge 4:1$ OR combination of houses and flats, ratio is greater than the area weighted average of the two target ratios.	0	0	00/01/1900					
			Eco section sub totals	12%											

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SECTION 2: QUALITY AND DELIVERABILITY 2.1.23 CARBON

WHOLE LIFE ENVIRONMENTAL IMPACT

A principal goal for the design has been to integrate One Planet Living (OPL) principles into the proposal. OPL involves achieving very high levels of energy efficiency, water use reduction, resource use optimisation and waste minimisation as an intrinsic part of the design. The ultimate goal of OPL is zero net carbon and zero net water use; this has not proved to be technically achievable with the constraints of the site but there have been significant decisions made about building systems and operation that will ensure that the buildings will function to an exemplary standard. The design is also targeting to exceed the minimum requirements of BREEAM "Excellent" for the new buildings that form the development and Code for Sustainable Homes Level 4 for the new residential units.

Sustainability has formed an integral part of the design team process and client dialogue throughout the development of the project, during this phase of the project the team has worked through a process where we have:

- Established a clear sustainability vision for the various elements of the project (based upon One Planet Living principles
- Set the high level targets to achieve the vision
- Developed strategies to achieve these targets
- Integrated the strategies into the project
- proposal and tested cost and value
 Tested the project proposals in detail for energy and water performance

Typically energy and carbon are the elements that are given a high priority in terms of sustainability because of the impact on all aspects of the physical design as well as requiring key strategic decisions on fuel sources, plant and equipment.

Our approach to developing low carbon solutions is illustrated in the adjacent diagram and follows the basic tenet of designing to minimise demand first, followed by developing energy efficient and passive / active crossover systems (e.g. earth ducts for ventilation or ground source energy for heating and cooling) before considering options for renewable energy from solar and other sources.

Zero and low carbon solutions are proposed to meet the energy demands. The central component of the energy centre will be a Combined Heat and Power (CHP) unit running on biofuel in the form of waste cooking oil sourced from a specialist supplier who recovers oil from restaurants in South London and processes it for use as a fuel stock. The CHP unit will deliver power to the Council office buildings and heating and hot water to all of the buildings around the development through a district heating network. The heat will also be supplied to an Absorption Chiller located in the energy centre to provide very low-carbon chilled water for cooling to the Town Hall and the new civic office building.

The biofuel Combined Heat and Power system will provide the base hot water loads, minimising carbon emissions from the central plant while providing the higher water temperatures required for domestic hot water. The CHP system will feed buffer vessels before secondary pumped systems feed the district heating system and the absorption chiller.

The surrounding new residential development will have significant hot water demand which will be met by the combined heat and power system via the district heating network. The residential units will provide a base load outside of office opening hours which will allow the CHP units(s) to run for longer hours.

This 'zero carbon' energy system at the heart of the project will be an exemplar of how to move the built environment towards the 2020 goals of net zero carbon. It is also an exemplar of 'closed loop' sustainable thinking – where a waste stream (cooking oil) is diverted from disposal and put to beneficial use.

Photovoltaic panels (roof mounted) are being considered to offset further carbon emissions from the site.

In addition the deployment of an extensive solar photovoltaic array on the roof of the new office building is being considered in detail and will form a part of the project.



Defining "Zero Carbon"

SECTION 2: QUALITY AND DELIVERABILITY 2.1.24 ENERGY TARGET AND HEATED VOLUME CALCULATION

ENERGY & RESOURCES

The strategy for the environmental design for the buildings follows the best practice method of:

i. Reducing energy demands through passive measures

ii. Installing energy efficient systems

iii. Incorporating renewable energy systems and technology

The One Planet Living method allows offsite renewables, through the purchase of green energy or other measures, to meet the zero carbon objective.

The strategies adopted for meeting the above three criteria in the new buildings include the following:

i. Passive Measures

- High performance building envelope
- Exceptional levels of insulation
- External and internal shading to glazed facades
- Exposed thermal mass with night cooling

ii. Active Systems

- Displacement air supply with CO2 control
- Automatic night cooling
 Low-energy density lighting (7W/m²) with LED
- Daylight dimming in perimeter office areas

Efficient CHP system in

Absorption chiller fed from CHP unit for office cooling (to new and old Council buildings)

- iii. Renewable EnergyBiofuel used for CHP systems using recovered waste cooking oil
- Photovoltaic panels on roof to supplement power generation

The team also considered the use of Ground Source Heat Pumps for the base heating and cooling loads but the zero carbon biofuel systems were preferred.

The energy performance of the new office building has been modelled to illustrate the enhanced performance compared to the Building Regulations 2010 'National' Building. The results of the various measures that have been incorporated are tabulated and illustrated in the graph below in terms of kg CO2/year.

(Note: The office building shares central plant with other buildings on the district heating network, including the existing council office, which are yet to be modelled in detail. The balance of energy drawn from the CHP system for the new offices is an estimate.)

Atelier Ten have considerable experience in the design of biofuel powered biomass district heating/cooling systems and recently completed a 9.3 MW waste wood powered CCHP plant in Singapore to power and condition the Garden's by the Bay project.

FORECAST ENERGY CONSUMPTION: NEW CIVIC OFFICES

The new Civic Offices have been designed to the most efficient standards, utilising natural ventilation and thermal mass, natural daylighting and high performance controls, thermal insulation and glazing. Based on the proposed design, together with benchmark data for other similar modern office buildings, we estimate energy consumption at this stage for the new build Civic Offices follows:

REGULATED

- Heating and Hot Water 60-100 kWh/m2/yr
- Lighting, fans, pumps etc 30-50 kWh/m2/yr

UNREGULATED (depends on building users)

- Equipment 30-40 kWh/m2/yr
- Catering etc 3-5 kWh/m2/yr

On the basis that the building is well designed and that the Council operate the building efficiently, we estimate that energy consumption will be 123 kWh/m2/yr. This corresponds to an annual energy cost of circa £93,000.

FORECAST ENERGY CONSUMPTION: TOWN HALL

With regard to the Town Hall, without detailed information in relation to u-values for the existing fabric, and without surveys to determine those areas of the existing fabric that can be improved to current standards, an accurate forecast of energy consumption is more challenging.

As a minimum, the glazing, lighting, systems and controls will be upgraded to current performance standards, the lightwells will become internal spaces and the roof will be fully insulated. Furthermore, more than one third of the refurbished and extended town hall will be new build accommodation.

However, the refurbished and extended Town Hall will be subject to higher occupancy/user numbers, accommodating 400-450 desks, customer services and a large number of meeting rooms, all of which will be mechanically ventilated in order to achieve modern occupancy comfort levels, and without the ability to use thermal mass and night time cooling as can be achieved in the new Civic Offices

National Building Target	25.6 kg C02/m ²
Building with passive measures incorporated	21.0 kg C02/m ²
Contribution of high performance active systems	17.2 kg C02/m ²
Renewable energy*	10.0 kg C02/m ²

*includes contribution from biofuel CHP as zero carbon fuel

REGULATED

 Heating and Hot Water 110 kWh/m2/yr Lighting, fans, pumps etc 60 kWh/m2/yr

UNREGULATED (depends on building users)

- Equipment 30 kWh/m2/yr
- Catering etc 3 kWh/m2/yr

On the basis that the building is well designed and that the Council operate the building efficiently, we conservatively estimate that energy consumption will be 203 kWh/m2/yr reflecting higher occupancy, increased area and the higher levels of both winter heating and summer cooling required for the building to achieve current occupier standards. This corresponds to an annual energy cost of circa £156,659. Further analysis and modelling will be undertaken during detailed design, once surveys have been undertaken to the existing fabric. This will identify further areas of the building fabric that can be improved through refurbishment, and will permit a more accurate energy consumption forecast.

CLIMATE CHANGE MITIGATION AND ADAPTATION

To allow for future climate changes affecting the development measures will be designed into the building to mitigate these effects.

Measures will include such items as flood water attenuation, night cooling combined with passive thermal mass to offset summer cooling needs, drought resistant plants to limit watering needs.

Furthermore features such as green roofs, natural ventilation, passive shading, and provision of amenity space shall also contribute to minimising these effects.

SW2 Enterprise Centre Energy Schematic Diagram



SW2 Enterprise Centre Energy Schematic Diagram



Waste oil as biodiesel



Local recycling

Waste oil as biodiesel



CHP generator

SECTION 2: QUALITY AND DELIVERABILITY 2.2.1 PROJECT AND QUALITY MANAGEMENT - QUALITY PLAN

PROVIDING A QUALITY SCHEME

As an investor and developer, Kajima focuses its energy on only a small number of projects at any one time. We are not turnover-driven like a contractor-led organisation. Quality, not quantity, is at the heart of everything we do. We stake our reputation as a developer of high quality London commercial office space on every project we deliver. The SW2 Enterprise Centre is a high profile project both in the London context but also further afield. Delivering a high quality and successful scheme for the London Borough of Lambeth (the Council) will have a positive impact on both Kajima and the Council's brand, locally, nationally and internationally.

We have assembled the highest quality, appropriately experienced team in London at present for this project

The quality of each building that Kajima delivers is the product of close collaboration with planners, our architects and engineers, building contractors, specialist subcontractors, legal and financial advisers, and cost and project management consultants. Kajima seeks to work with a limited number of best in class preferred suppliers, dedicating the time and commitment to building solid long term relationships.

We have assembled the highest quality, appropriately experienced design team in London at present for this project

Our skill lies in bringing together, for each project, appropriate and well balanced teams of consultants and suppliers, who are subject to the same rigorous testing of quality control good practice principles as ourselves. From that basis we then manage and lead.

For this project we have assembled what we strongly believe is the highest quality and most appropriately experienced design team for this project in London at present. This, together with our approach to developing the design to Stage E before handing over to a top tier building contractor to construct, underpins our approach to ensuring that a quality scheme will be delivered for the Council.

Challenges and opportunities The SW2 Enterprise Centre project has specific challenges and opportunities in terms of delivering a high guality scheme. A good example of such challenges and opportunities is the listed Town Hall. This is a complex building, with significant basement accommodation, highly cellularised space, and has been the subject of numerous extensions and additions of varying quality. It is a poor environment to work within, too hot in summer and with very limited ability to vary heat input in winter. It has significant areas of heritage that must be preserved and restored, and there are significant issues in relation to accessibility. It is, however, the real public face of the Council, and will always be regarded as such. Delivering a high quality solution in this building is by far the most important, and challenging, aspect of this project. It requires a developer who

thrives on such a challenge and is experienced in successfully delivering listed building refurbishment and extension projects, and a design team with the experience, imagination and enthusiasm required to develop high quality solutions to complex and challenging problems. Finally, it requires a contractor to be selected who can demonstrate significant experience of working in such an environment, with close monitoring of quality during construction Kajima and our agents, the design team and the Council.

The best way to illustrate and evidence our good practice principles for quality control methods of the whole development process in a practical sense is through a case study example of a project we have recently completed.

CASE STUDY: THE GROVE

Kajima recently completed The Grove, a speculative commercial development in Marylebone involving the refurbishment and extension of a listed building located directly between two separate conservation areas. The development, owned by Kajima, has been completed to the highest quality, and is now fully let to a number of 'blue-chip' organisations. Our architect for The Grove development was Allford Hall Monaghan Morris, with whom we are working to deliver the SW2 Enterprise Centre.

Setting the brief and objectives

The driver in setting the development brief for The Grove was recognising and utilising the qualities of the building which included its strong presence and relationships to adjacent buildings. Despite these qualities, internally the building was tired and no longer offered modern day office facilities and amenities, reliable services, adaptability or flexibility. The interior condition of the building was not conducive in attracting and retaining tenants. Further, with the availability of alternative rentable space around the Marylebone area, it was clear that a refurbishment was needed to position the property as an obvious and desirable place to work and visit.

Kajima set a development and investment strategy to harness and capitalise upon the buildings inherent qualities and location with a programme to refresh, restore and possibly expand the floor space with a specification that would attract tenants and offer class leading facilities and services in an attractive setting. The economic case was to provide a level of investment which would in return yield quality rents, leases and iustify the commitment. The development plan was therefore created on this basis.

The Grove Project Quality Plan

Taking these objectives forward required a robust management approach to ensure proposals were well informed, coordinated and took account of both the risks prevailing and the opportunities available. The importance of enabling the project team to be creative, enthusiastic and innovative including allocating sufficient time to prepare and develop proposals was recognised. The issue was how to manage, control the work to be done and satisfy the array of interests involved.

An essential tool in managing the processes was creating and following a documented Project Quality Plan addressing all aspects of the project from beginning to end and highlighting the critical stages of the project in terms of where and when key decisions – both investment and design, had to be made.

The Quality Plan was a written document stating the project approach and strategy including highlighting how the project was expected to develop and how the team will work to provide and coordinate information to inform the decision making process. It defined the objectives and deliverables and referenced important benchmarking targets to guide the team individually and collectively on a stage by stage basis.

On one hand the Quality Plan was an active document enabling and admitting further detail as proposals developed, the objective being to add clarity as proposals developed and therefore serve the procurement and tendering stage. In many respects we were assigning a design quality priority to the proposals. On the other hand we maintained the review and management protocol set out within the document where at all times we should demonstrate that proposals remained consistent with the development brief and met the critical objective of delivering maximum value for the minimum cost.

In preparing the Project Quality Plan it was clear that in order to secure a successful outcome, all aspects and stages of the project had to be addressed. Project initiation and governance, the role and responsibilities of the development manager and the framework within which objectives are designed and delivered were described. Applicable compliance and statutory approvals were coordinated into the design as well as value added benefits such as incorporating requirements to deliver BREEAM Excellent and a green EPC "B" rating. The logic of the Project Quality Plan enabled these added value items to be identified and incorporated as the project progressed instead of being after-thoughts.

An objective of the Project Quality Plan was ensuring that the information for procurement and tendering of the works was coordinated and clear. Essentially the desire was to enable the successful contractor to adopt the plan, appreciate the priorities and understand the constraints in the interest and context of his delivering quality work and supporting his own Quality Plan.

The successful completion of the project has been achieved, however at times the contractor was challenged. The existence and use of the Project Quality Plan was an important tool in maintaining and managing quality throughout the works and then onward into testing, commissioning and finally managing the property post completion. The lesson is that a Project Quality Plan properly structured and managed from the outset will serve the implementation and delivery of a project to satisfy all interests. This same approach will be applied to the SW2 Enterprise Centre.







Quality control at The Grove, before and after photos











SECTION 2: QUALITY AND DELIVERABILITY 2.2.1 PROJECT AND QUALITY MANAGEMENT - QUALITY PLAN

POLICIES, SYSTEMS AND RESOURCES TO DELIVER A QUALITY SCHEME

Our approach is underpinned at all times by our Integrated Management System (IMS). Kajima is certified to ISO 9001:2008 and our IMS complies with this standard.

All members of our project team have responsibility for elements of quality appropriate to their function, experience and seniority. Project Director, Stewart Small, has overall responsibility for delivering the project objectives. The Project Director is supported by Development Director, John Harcourt, Technical Director, Craig Smailes, and Project Manager, Darren O'Connell. CV's for the project management team can be found in section 2.2.2.

We have attached, at Appendix A2.4 an extract from Kajima's Integrated Management System outlining how Kajima as developer will monitor and control quality in order to ensure that a high quality completed scheme is handed over to the Council for its occupation.

Kajima is certified to ISO 9001:2008

Our design proposals to date have completely re-imagined how the Town Hall will function, and propose a modern, highly efficient new office building on Brixton Hill. Through instructing and gathering comprehensive survey information, management of the detailed design process and close working with planning and heritage in order to obtain satisfactory planning consent, the team will prepare a suite of design and condition information. This will be issued to an agreed long-list of top tier contractors with strong experience of delivering high quality new build and refurbishment projects for them to respond to in a competitive tendering process. A significant part of our analysis of tenders will be focussed on quality of delivery. As part of the tendering and selection process we will make site visits to comparable developments currently in construction and recently completed, and require a comprehensive Construction Quality Plan to be produced for the project by the successful selected contractor for review and approval by the Council. This overall approach is detailed in the Quality Plan Method Statement below.

QUALITY PLAN METHOD STATEMENT

General

Quality Policy

Reference should be made to Kajima's Quality Policy Statement attached at [Appendix A2.5] in conjunction with this method statement.

Document Control

Quality Assurance procedures have been and will continue to be implemented in accordance with Kajima's ISO 9001:2008 certified Integrated Management System (IMS) to control the issue and receipt of all documentation related to the project; this includes all drawings, specifications, information or correspondence. Verification of all documentation will take place ensuring up to date information is being used at all times.

Quality Audits

A system of planned and documented internal audits will be carried out as part of each stage gate review to verify whether guality assurance activities comply with the procedures laid down in the IMS. If corrective action is necessary those areas will be re-visited. All audit results will be issued to the relevant management personnel. Management reviews will be carried out involving Senior Management to review the effectiveness of the quality system and analyse audit results.

Number and type of QA staff responsible for quality control

All members of our project team have responsibility for elements of quality control appropriate to their function, experience and seniority within the Development Team. Project Director, Stewart Small, has overall responsibility for delivering the project objectives. The Project Director is supported by Development Director, John Harcourt, Technical Director, Craig Smailes, and Project Manager, Darren O'Connell. CV's for the project management team can be found in section 2.2.2.

Pre-Planning

Design Development and co-production to Planning Submission

After the Conditional Development Agreement has been signed, design development and co-production will continue in partnership with the Council, managed by Kajima. A key part of this process is the monitoring and recording of proposed design changes resulting from design development and co-production and any impact upon the cost plan to ensure quality and value for money are maintained.

Gate review process

As a prerequisite to the planning submission, the design and associated supporting documents forming the planning application will be approved and signed off by the Council and by Kajima at the Planning Application Gate Review.

Post Planning Design Development

RIBA Stage D and Stage E Design Development

Upon granting of planning consent for the development, detailed RIBA Stage D design will begin. Upon completion of this stage of design development, and prior to the start of Stage E and / or the start of any contractor tendering exercise, the Stage D design will be approved and signed off by the Council and Kajima at the Stage D Gate Review.

The Stage E design development process will be developed in tandem with the contractor tendering and selection process and will form a key part of the final Employer's Requirements document. The Stage E design will be approved and signed off by the Council and Kajima prior to the appointment of the selected building contractor.

Contractor Selection

In order to get the right contractors on the tender list e.g. those of an appropriate size, experience,

available workload, financial stability, guality and experience of proposed team and so on, a pre-gualification process will be undertaken. We will invite a selection of 8 – 10 suitable contractors to pre-qualify to tender for the project. From this, a shortlist of four contractors will be invited to tender for the project.

The contractors will be asked to tender on a set of Employer's Requirements made up of drawings, specifications and reports detailing exactly what the Council wants the building(s) to look like, perform like and provide for the Council.

The contractor's tender will be a response to the Employer's Requirements and include the Contractor's Proposals which form the "what and how" they are going to deliver the Employer's Requirements. They will submit their cost and programme for the works. The quality will be defined within the Employer's Requirements.

A contractor will be selected on an appropriately weighted combination of best price, best programme, best quality, best team and best overall submission.

Simultaneously with the Development Agreement becoming unconditional, Kajima will enter into a standard Design and Build construction contract with the selected oontractor. At this point, Kajima's design team, having developed the design to RIBA Stage E, will be novated to the contractor, who will then complete the design and build of the project in full accordance with the Employer's Requirements.

The contractor tenders and agrees a Contract Sum and a programme to complete the works. This form of contract transfers the risk of the completion of the design, the cost and the time to complete the project to the contractor and unless the Council makes changes the project will be delivered on time and to the agreed Contract Sum.

This approach ensures that the Council's requirements are fully established and developed and that design quality cannot be compromised by being "designed out" by the contractor in order to save cost, as can happen when design responsibility is handed to a contractor earlier in the development process.

Construction phase

During construction, Kajima as developer and client to the Building Contractor will actively and directly monitor quality thorough both regular planned and unannounced site visits and inspections and regular, frequent project progress / review meetings.

We will also appoint Davis Langdon as Employers Agent, further enhancing the skills and experience of the Kajima team. A key part of the Employers Agent scope will be to ensure quality is maintained throughout the construction process and ensuring that the construction site is run in a clean, proper and efficient manner. The Employers Agent will produce a monthly report supported by detailed photographic evidence of progress and quality. The Employers Agent will also chair the monthly project meetings, and Quality Management will be a standard agenda item.

Commissioning

Kajima will employ the specialist services of a Commissioning Manager, to supplement Handover the skills and experience of both Kajima A significant element of effective Quality personnel and Davis Langdon personnel, who Management is the creation and maintenance will be based on site throughout the testing of a building user manual and the training of & commissioning periods for the Town Hall key end users in the running and operational maintenance of the buildings and their systems. and the new council offices, and who will act autonomously from the Building Contractor. Kajima will ensure that this requirement of the Building Contractor is delivered in a complete, timely and professional manner and to the satisfaction of the Council. Practical Completion will be determined by an

Completion

Independent Certifier, jointly appointed by Kajima

Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2008

This is to certify that:

55 Baker Street London W1U SEW

Holds Certificate Number:

FS 547570

and operates a Quality Management System which complies with the requirements of ISO 9001:2008 for the following scope: Project management relating to design, construction and management of buildings in the public and private sector. For and on behalf of BSI: Gary Fenton, Global Assurance Director Originally registered: 21/10/2009 Latest Issue: 08/10/2012 Expiry Date: 21/10/2015 Page: I of I making excellence a habit."



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and the Council, in order to certify completion.



Kajima Partnership Ltd

United Kingdom

SECTION 2: QUALITY AND DELIVERABILITY 2.2.2 PROJECT AND QUALITY MANAGEMENT - PROJECT MANAGEMENT

PROJECT MANAGEMENT STRUCTURE

Kajima has established a robust project management structure to support this project from bid stage through to building handover. The key points of contact at Kajima will remain consistent throughout the entire development process and will be familiar to the London Borough of Lambeth (the Council) already from the dialogue phases of the project. Kajima do not separate the bid team from the delivery team ensuring continuity, consistency of quality and homogeneous accountability of the project risks and their management.

KAJIMA DEVELOPMENT TEAM

m for this project, and are responsible for taking the project from start until completion, enabling the relationships between the Council's team and Kajima team to grow and develop further in parallel with the project. This approach on all Kajima projects. See the principal point of contact for the project.

by by an

in relation to technical matters.

CV's for these key project management staff are provided at the end of this section and roles and responsibilities in relation to the delivery of the SW2 Enterprise Centre are summarised below.

In accordance with our own internal governance as defines within out Integrated Management System, the Kajima Development Team will report at regular intervals to both the Kajima Project Board, consisting of members of Kajima's Board of Directors, and to the Project Steering Group, principally formed by the Council's Project Team.

ROLES AND RESPONSIBILITIES





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SECTION 2: QUALITY AND DELIVERABILITY 2.2.2 PROJECT AND QUALITY MANAGEMENT - PROJECT MANAGEMENT

PROJECT STEERING GROUP

The Kajima Development Team will work with and report to the Council's Project Steering Group over the course of the entire development process. This will be the principle forum for day to day monitoring and decision making, liaison, co-production and progress reporting.

KAJIMA PROJECT BOARD

The Kajima Development Team will also report to the Kajima Project Board. This forum focuses on strategic project delivery to ensure that all key risks of the project are identified, allocated and effectively managed. It also ensures that the correct resources are allocated to the project at the correct time, optimising opportunities and providing support to the Kajima Development Team. The project board are all based in London and will meet monthly and on an ad-hoc basis as and when required by the project.

PROJECT TEAM

Our experienced best in class Project Team, led and managed by the Kajima Development Team, consists of Allford Hall Monaghan Morris as lead designer, Studio Egret West, Coffey tt Wood, Grant , and DP9. At a later Architects, A Associates, stage the Pr d selected building contractor, shall provide a forum for reporting, reviewing and where appropriate escalation of issues from the four work streams (design, planning, construction and property). Project Team meetings will be held fortnightly and the minutes made available to all parties.

PROJECT MANAGEMENT ORGANISATION CHART

The organisation chart illustrates the project management structure and lines of reporting and responsibility as described above.

PROJECT MANAGEMENT METHOD STATEMENT

The scope of our role as development partner to the Council, and the management process used throughout the development process includes, but is not limited to, the Development Management Services Scope attached at Appendix A2.6.





Confidential
SECTION 2: QUALITY AND DELIVERABILITY 2.2.2 PROJECT AND QUALITY MANAGEMENT - PROJECT MANAGEMENT



Kajima Partnerships Limited

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SECTION 2: QUALITY AND DELIVERABILITY 2.2.2 PROJECT AND QUALITY MANAGEMENT - PROJECT MANAGEMENT



Kajima Partnerships Limited



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SECTION 2: QUALITY AND DELIVERABILITY 2.2.3 PROJECT AND QUALITY MANAGEMENT - SUPPLY CHAIN MANAGEMENT

ACHIEVING BEST VALUE THROUGH SUPPLY CHAIN MANAGEMENT

As lead developer and investor, Kajima's fundamental objective for this project is to deliver a high quality and best value scheme for London Borough of Lambeth (the Council). One of the ways in which we will achieve this is by utilising our extensive experience in effective supply chain management.

We will utilise established procedures, key control measures and performance criteria to effectively manage our supply chain

As developer, our supply chain consists of our design and consultancy team and the building contractor once appointed. Our design team will be novated to the selected building contractor when the Building Contract is signed. The main contractor will, from that point, take on full responsibility for the construction supply chain under the terms of the building contract.

We will utilise established procedures, key control measures and documents and performance criteria to manage our supply chain, and will insist and ensure, via the competitive tensions of the contractor tendering process, that such procedures are in turn used by our selected main contractor during construction. These include:

- Development and logic-linked construction
- programme including procurement functionsDavis Langdon Cost Plan (Contractors Cashflow during construction)
- Design programme and an inclusive and collaborative approach to design
- Management of and close consultation with all design consultants
 Early engagement by Kajima of specialist
- consultants as required e.g. acoustics, ecology, lighting and so on
- · Early engagement by Kajima with key suppliers (e.g. cladding) to 'design out' any issues that may cause uncertainty of delivery.
- Key subcontractors chosen from an extensive and well trusted supply chain
- Ensure the contractor actively manages supply chain risk through a recognised collaborative supply chain accreditation system, such as Achilles, to carry out background checks, references, credit checks and in addition to these forensic examination of performance
- Timely planning and procurement of each subcontractor package to ensure the right resources are on site at the right time
- Weekly subcontractor progress and coordination meetings
- Engagement with the Council, a long time prior to handover, to effect smooth handover from the contractor and a soft landing procedure
- Provision of all necessary handover documentation and building manuals at completion by the contractor

MAIN CONTRACTOR AND SUPPLY CHAIN MANAGEMENT EXPERIENCE

Kajima has a wealth of experience of successfully working with and managing a wide variety of top tier main contractors. Most recently we completed an office development in Marylebone with Wates. We are on site currently with Balfour Beatty delivering a community hospital in Oxfordshire, and we are presently mid-way through the procurement process to select a main contractor for a major office development opposite the Bank of England in the City, where we have shortlisted through a formal prequalification process Morgan Sindall, Galliford Try and McLaren to tender for the project. In each of these very recent examples, the approach outlined above was and is being effectively utilised to successfully deliver high quality and best value developments.

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OUR APPROACH

A well considered, and informed programme of works, phasing and decant for the SW2 Enterprise Centre project is vital to both the financial viability of the project and to ensure that the London Borough of Lambeth (the Council) can continue to perform its day to day duties and serve its residents without interruption. Our approach is therefore in the first instance to minimise the frequency of staff decanting through the process and allow sufficient buffer in the programme to allow decant to be carefully planned, explained, resourced and then executed by the Council as seamlessly as possible. It is our intention to take possession of the Town Hall, The Press and Town Hall Parade simultaneously.

CONDITIONAL DEVELOPMENT AGREEMENT TO PLANNING SUBMISSION

Immediately upon the Conditional Development Agreement being signed, a comprehensive range of surveys and investigations will be commissioned in order to inform the design development and planning process.

Also at this point a CDM Coordinator (CDMC) will be appointed. This will either be the novation of the Council's CDMC or a direct appointment by Kajima, who work with a variety of CDMC's on projects throughout the UK. Once appointed, the CDMC will issue an F10 notification to the HSE, and the Health and Safety File will be started.

A programme of stakeholder co-production and consultation will take place during the preplanning stage, and the design and planning application supporting information will be developed collaboratively with the Council in response to and in conjunction with this activity. The ten months allowed for consultation in our programme is the minimum timeframe we believe will be possible. In order to avoid having to amend the design after planning is submitted, we recommend that the preplanning consultation period is comprehensive, and given the scale and complexity of the project, it is possible that this period will need to be extended to permit full consultation.

PLANNING CONSENT TO UNCONDITIONAL DATE

Upon planning consent being granted, and during the judicial review (JR) period, any outstanding Section 106 (S106) and Community Infrastructure Levy (CIL) negotiations will be finalised. During this period, Stage D design development will start, alongside the contractor pre-qualification process.

Following expiry of the JR and sign off of the Stage D design, Stage E design will start, in conjunction with the competitive contractor tendering process. The preferred contractor will be selected around the point of completion and sign off of the Stage E design, and the point of optimised price and quality certainty.

We have allowed a six week period for final construction price and terms and conditions negotiations with the selected Building Contractor. During this period, and prior to the Building Contract being entered into, the project Viability Test will be conducted. Our programme from this point assumes that the project is viable and we have authority to proceed to the unconditional date and on to construction.

DECANT

We have allowed at this stage a period of one month immediately following the Development Agreement becoming unconditional in January 2016 for the Council to execute its decant from these buildings into Ivor House, Olive Morris House, Phoenix House, International House, and other buildings within the Council's estate. The detail and timescale of decant is to be discussed and agreed with the Council during detailed design stage. If the Council need a longer period of time to decant, this will extend the completion date by the same amount of time. We note the Council's draft Development Decant document dated 25 March 2013. The principal difference between our proposed programme and the Council's draft Development Decant strategy is that our programme assumes the Town Hall and new Council offices are delivered in parallel, thereby minimising the construction period to deliver the SW2 Enterprise Centre project and reducing the frequency of staff moves during the process.

We are also proposing that the Council vacate Hambrook House to enable its purchaser to undertake construction of the Porden Road residential development simultaneously with the construction of the new Council offices and the refurbishment and extension of the Town Hall. The Council will therefore benefit from both early revenue from the completion of the sale of that site, and also avoid the inconvenience of a construction site being established immediately adjacent to its newly completed offices.

CONSTRUCTION – NEW CIVIC OFFICES

Construction of the new Council offices will take place over an eighteen month construction programme, with start on site in February 2016 and the completed building handed over to the Council in September 2017. The Council will take immediate possession of the new civic offices upon completion, and staff will decant from Ivor House, International House and Phoenix House into the new Civic offices. The sale of Ivor House can then be completed upon vacant possession.

CONSTRUCTION – TOWN HALL

The refurbishment and extension of the Town Hall will take place over a 24 month period, starting on site in February 2016 with the completed building being handed over in February 2018. The Town Hall will require an additional six months compared to the new civic offices as a result of the extended period of soft-strip and demolition at the start of the construction programme along with the more sensitive nature of the refurbishment and construction works in that building. The Council will take immediate possession of the newly refurbished and extended Town Hall upon completion, and staff and the customer services function of the Council will decant from Olive Morris House into the Town Hall. The sale of Olive Morris House can then be completed upon vacant possession.

The Triangle will be constructed over a six month construction programme to be coterminous with the completion of all hard and soft landscaping to the new shared surface on Buckner Road connecting the Town Hall to the new civic offices.

SURPLUS SITES

The marketing and sales of the surplus sites will begin at the appropriate point following the granting of outline planning consent and agreement regarding S106 and CIL.

CONCLUSION

We have included within this section our proposed development and construction programme, detailing phasing requirements and how these will be managed within the context of the scheme. The programme identifies the timeframe to handover, the assignment of responsibilities and the critical path in green throughout the entire process with dependencies clearly shown.

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KAJIMA AS A SPECIALIST RISK MANAGER

Kajima has developed a clear, well thought out approach to developing a risk mitigation strategy that offers the London Borough of Lambeth (the Council) both value for money and, crucially, protection from key risks over the lifetime of the SW2 Enterprise Centre project.

As a developer, Kajima is a specialist in systematically identifying, quantifying and mitigating risk until the optimum point in the development process is reached at which a top tier Building Contractor will accept the residual risks through a tightly-specified building contract with Kajima for a set price.

An offer to accept unlimited liability for all risks at this stage would expose the Council unnecessarily

Kajima has demonstrable experience of reducing and removing risks both as a developer and, globally, as a contractor. As a subsidiary of one of the world's largest contractors, and from our direct experience of successfully developing over 2.35 million sq ft (220,000 sq m) in the UK and some 1 million sq ft (100,000 sq m) in London alone over the past ten years, we know that the best price and best risk transferral is available only after risks have been identified and quantified through the process of detailed design and site investigation.

Any offer at this stage to accept unlimited liability for all risks would, in our experience, expose the Council unnecessarily. Such a process would result in the Council agreeing a fixed price and basis of appointment at the worst possible time in the development process, before any cost savings can be realised through a methodical de-risking process. The Council's risk profile is in fact increased significantly as the flexibility to adapt to the risks, enhance the design and reduce costs through the development process in a transparent manner is lost.

In any development or build contract, undefined and un-scoped risks are assigned a Provisional Sum – this means that the element at risk is not apportioned under a fixed price.

Kajima's proposal as Development Partner offers the Council the best of both worlds

By adopting Kajima's intelligent and adaptive risk mitigation strategy, the Council will benefit from the optimum risk transferral at the most advantageous time ensuring the best price and therefore financial viability. Kajima's proposal as Development Partner offers the Council the best of both worlds; the expertise of Kajima de-risking the project and at the same time the benefit of 100% of the resultant cost savings that knowledge and design brings. The Council is only committed to proceed with the development when they – exclusively – are satisfied that:

• The project is financially viable with sufficient committed surplus site receipts

and a fixed price building contract; and

- The project is sufficiently surveyed and designed to ensure all relevant risks can be transferred to the Building Contractor; and
- The project is designed in line with the Council's brief through genuine co-
- Production with stakeholders; and
 All appropriate statutory consents have
- been obtained with all relevant conditions discharged and free of challenge; and
- Financial due diligence relating to the selected Building Contractor is satisfactorily completed; and
- Value for money is proven through a robust and transparent contractor tendering process

Until all of these Conditions Precedent have been fulfilled, the Council exclusively retains the sole right to not proceed. The Council also retain the sole right to waive these Conditions Precedent if, in their opinion, it is prudent and advantageous to do so.

PROTECTING LAMBETH: KAJIMA'S INTELLIGENT AND ADAPTIVE RISK MITIGATION STRATEGY

Kajima fully understand and appreciate that the Council is seeking a robust risk mitigation strategy that protects them from key risks over the life time of the project. Such a strategy will identify what the major risks are, when they occur and how they are mitigated.

Risks are not evenly applicable across the project lifetime. Risks may be higher or lower at different times; our proposal is to systematically, actively manage and reduce each risk such that after the point of unconditionality the Council is no longer exposed to any material residual risk. We would define a material risk as a risk that could either physically or financially impact on the fundamental ability to deliver the development's objectives.

A detailed Project Residual Risk Register (which forms the basis of the Risk Register for this project) is attached. This outlines the risks that a project of this nature will face and the process of risk mitigation in three steps:

1 Identify the risk event

2 Establish what drives the risk to occur

3 Undertake appropriate mitigation measures to remove the risk.

Once each known and most importantly each currently unknown, risk has been identified, the appropriate measure is undertaken to mitigate it. This will take the form of one of the following measures:

- Reduce the risk through a redesign; or
- · Eliminate the risk or hazard by removal; or
- Transfer the risk to a third party; or
- Avoid the risk through planning ahead; or
 Pool the risk by reviewing alternative
- methods of execution; or
- Insure the risk or allow a sufficient
- contingency to cover potential downside.

PRIMARY RISKS AND MITIGATION PROPOSALS

At this stage of the project it is appropriate to first utilise the team's collective experience to approximate the extent of risk within the project. This is the reason the Council will benefit from Kajima's systematic approach. Kajima's role as the Council's Development Partner throughout the pre-construction phase of development is to systematically analyse each risk event and what is driving the risk, and then take the appropriate steps to ensure the risk does not have a negative impact on the development.

The savings that will be achieved through Kajima's risk strategy are transparently reflected as a 100% benefit to the Council

At the point of Unconditional Development Agreement (UDA) signature and when construction is due to start, the Council can be confident that all risks are objectively and fairly priced based on reality, physical assessment and detailed design.

The development cost savings that will have been achieved through Kajima's systematic risk mitigation strategy are then reflected as a 100% benefit to the Council.



Kajima's value for money risk mitigation strategy

SW2 Enterprise Centre

ISFT Submission 13 September 2013

Project Residual Risk Register

			Risk			gale	ne	
					VIOI			
Ref	Risk Event	Risk Driver		er te				Mitigation/ Contingency
ILCI	NSK LVCIII	NISK DIIVEI	Ce	na sfe	σ		e	wingauon coningency
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4	Site	Duilding leastion			v			Dealdes study to be undertaines. SUNO Suprov to be completed to confirm leastings
2	Groundwater table too bigb	Evendation and drainage design			X			Desktop study to be undertaken. SUMO Survey to be completed to continim locations
3	Bearing Strata weaker than expected	Foundation solution			x			Valentable to be commended by an obtendies Site Investigation to be completed and rock properties confirmed
4	Rock properties found to be weaker	Foundation solution			X			Site Investigation to be completed and further historical evidence located
5	Excessive ground contamination	Bulk earthworks and foundation design					Х	Samples to be taken and analysed. Remediation costs to be included in agreed Contract Sum
6	Ground conditions below existing buildings	Building location		X	_			Desktop survey of historical site use and, if required, trial holes to be completed. Foundation solution deeper than existing
7	Below ground structures Basement on Town Hall Parade	Foundation design/construction techniques			x			Survey to be completed and dimensions/condition confirmed. Trial holes to be completed
8	Basement of Town Hall	Foundation design/construction techniques			X			Survey to be completed and dimensions/condition confirmed. That have to be completed
9	Adjoining properties (The Electric)	Foundation design/construction techniques			Х			Site survey to be completed. Extent of basements to be confirmed. Party Wall Consultant to be engaged
10	Excessive hard dig	Foundation design					Х	Site Investigation to be completed and rock/soil properties confirmed
11	Excessive underpinning required	Foundation design/existing properties		X				Site survey to be completed. Extent and condition of basements/exisiting foundations to be confirmed. Party Wall Consultant to be engaged
12	Site not big enough	Building location and GIFA			X		v	Accurate measured survey to be completed
13	Party wall claims	Building Design/Construction methodology					×	PW Surveyor to be engaged. Party wail awards to be included in development costs
15	Drainage connections not available on site	Statutory authority			¥		^	Not source you to be engaged. Not settlements to be included in development costs
16	Accessibility to site for construction	Statutory authority			~	X		Construction methodology to be agreed with LBL Highways & key stakeholders
17	Site levels not accurate	Quality of existing topo information			Х			Accurate survey to be completed
18	Asbestos discovered in existing properties	Type 2 Survey					Х	Type 3 Asbestos Survey and removal included in enabling works package
19	Maintenance of adjacent third party access	Construction techniques/local environment			Х			Early stakeholder consultation. Known landowners and tenants
20	Unrecorded mineworkings/tunnels	Site history/building footprint					х	Desktop study to be completed/SUMO Survey to be completed/trail holes to be completed/boreholes to be sunk
~ 1	Planning	T 11 1						
21	Site boundary dispute	Title search		X				Legal title search and accurate land survey
23	Challenge to ownership of land titles	Acquisition strategy		^	X			Legal search Due diligence and legal searches
24	No support from LBL Planning Department	Statutory Regulations and Guidance	X		~			Good degree of dialogue undertaken to date. Proper allowance for pre-application design, discussion and reviews
25	Non compliant planning submission	Planning Submission requirements			Х			Specialist Planning Consultant appointed
26	Onerous planning restrictions to site	Site History & LBL guidelines			Х			Specialist Planning Consultant Appointment/Local Knowledge/Early Consultation with LBL
27	Onerous planning discharge conditions	Planning policy	v		X			Appointment of Specialist Planning Consultant/Pre-application dialogue with LBL
28	Design changes required to secure planning	LBL Planning Dept	X				v	Appointment of specialist Planning Consultant
29	Onerous Section 278 agreement	I BL Planning Dent			¥		^	Identify and engage with key stakeholders and statutory consumers
31	Excessive Section 106 agreement	LBL Planning Dept			X			Sufficient consultation/Adequate bugget included in Development Budget
32	Covenants or wayleaves	Site History			X			Title Due diligence completed.
33	Integration with traffic management plan	Local Government/Planning policy	X					Co-ordinated travel plan to be deleloped between KPL and LBL
34	Non realisation of public realm	Planning Aspiration	X					Detailed dialogue to be undertaken with planners to convey design intent
35	Watering down of design principles	Detailed planning conditions			X			Detailed dialogue to be undertaken with planners to convey design intent
30	Delayed planning approval	Change in law	¥		X			LBL Buy-in to project schedule/ otential continuation of design development winits awaiting decision Market intelligence. Strength of design beam/conference intelligence and the strength of
57	and e to comply with changes to building regs.	Change in law	^					market intellegence. Orengen to design teamprofessional stationing early warning
	Design							
38	Non-compliance with statutory legislation	Detailed design			X			Project governance and ongoing compliance checks
39	Non-compliance with planning brief	Detailed design			X			Cross discipline compliance checks
40	Incomplete design information	Design programme/scope			X			Bid management/agreed scope of deliverables/regular design team meetings
41	Building doesn't fit on site	Site boundary			X			Accurate measures survey to be completed
43	Poor coordination of design	Design management			x			Project opverance/internal design team exertings
44	External security considerations missing	Scope gap			X			Develop strategy based on Safe by Design guidelines, including consultation with the Metropolitan Police
45	Vehicle movements and access not considered	Scope gap			X			Co-Production with Council departments and neighbours/Vehicle tracking studies to be completed
46	DDA guidelines not met	Compliance check			X			Building Regulations Consultant to comple a draft audit
47	Accessibility not fully considered	Compliance check	×		X			Urant accessioning audit to be completed
40 40	No consideration of CDM issues	Scope gan	~	x				re-assessment compreservoit all available GRUIts taken Innut of CPM Coordination to the design process. Design pazard assessments
49 50	Space required for electric substation	Statutory requirement		X				Input or CDW Coordinator to the design process besign frazerul assessments
51	No Stakeholder buy-in	Concept design		X				Sendback from co-production events/Ongoing stakeholder dialogue protocol
52	Insufficient maintenance access	CDM Regulations			Х			CDM process/Co-Production with Council FM contractor. Maintenance strategy to be developed
53	Acoustic non-compliance	SOR/TRD/Detailed design			X			Fully designed acoustic report to be developed
54	Failure of Council to meet approvals schedule	Reviewable Design Data			X			Agreement of schedule contents and management protocols
	Project Management							
55	Non delivery of Project	Project governance plan			X			Developer strength and experience/Fully resourced programme
56	Skill gap in consortium	Design team appointments			X			Scope of appointments confirmed. Previous relevant experience
57	Overall programme slippage	Construction Programme			X			Logic linked schedule. Key milestones identified. Weekly monitoring
58	Construction programme slippage	Archaelogical discoveries					Х	Desktop surveys. Brownfield site
59	Construction programme slippage	Unexploded ordnance					Х	Desktop surveys. Correct site procedures
60	Ammendments to programme	LBL				X		Accurate logic linked programme to help facilitate schedule changes
61	Failure to achieve Council design approvals	Design team capability			X			Project governance. Agreed release schedule. Regular design meetings. Project design manager.
62	Poor design coordination	Design Development			X			Project governance. Kegular design meetings. Project design manager. Peer reviews
03 64	Scope madequacy Failure to complete Council familiarisation	Commisisoning Process			X			Decipie or appointments commined, interview relevant experience.
65	Constant change to signed off design	Change Management Procedure			x			Contract administration/Employers Agent
66	Outstanding information	Information Required Schedule			X			Project governance and contractual arrangements

Key: Reduce - significant redesign Eliminate - remove the hazard Transfer - assign to others Avoid - plan ahead Pool - review alternative methods Insure - accept and quantify costs

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SW2 Enterprise Centre

ISFT Submission 13 September 2013

Project Residual Risk Register

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RISK							
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67	7 Failure to secure utility supply Utility Companies					_	Quotations to be obtained. Existing capacity to be comfirmed
	Failure to get approval/permits/discharge						
68	Party wall agreement	Programme			X		Consultant to be appointed/Scope understood
69	Section 278	Programme			X		Scope to be agreed with LBL/Provision made
70	Section 106	Programme			X		Scope to be agreed with LBL/Provision made
71	Planning conditions	Programme			X		Appointment of specialist planning consultant
72	Utility provision	Programme			X		Due dilligence/Agree timescales and requirements, place orders early
73	Building Regulations	Programme			X		Consultant to be appointed
74	HSE F10	Programme			X		Appointment of CDM Co-ordinator
75	HSE Asbestos notification	Programme			X		Appointment of CDM Co-ordinator/Sufficient lead in time within construction programme
76	Agreement of utility providers	Programme		X			Early notification of authorised signatories/Details of Council framework providers
77	Restrictive construction practices/methodology	Stability of existing structures				X	Programme sequence and activity durations to recognise methodology restrictions
78	Poor build sequence	Construction methodology			X		Programme sequence to be optimised, logic linked. Critical path analysis to be completed
79	Residents and Traders disputes	External stakeholder management			X		Early engagement and co-production, and regular ongoing liaison. Meetings and newsletters/web page/Facebook & Twitter feeds
80	Vandalism to completed works	Site security					X Historical evidence. Company procedures and best practice
81	Industrial disputes generate construction delays	Market forces/Working conditions			X		Considerate Constructors Scheme/Good communication channels/Procurement policy
82	Restrictive practices generate construction delays	Construction techniques/design		X			Covenant of D & B Contractor/Procurement of subcontractor packages
83	Finished product of poor quality	Supervision/Procurement			X		QMS and audit
84	Non-availability of tower cranes	Inclement weather				X	Sufficient float within construction programme/Alternative material distribution strategy
85	Abortive/Defective work	Coordination of trades/activities			X		QMS/Fully resourced programme/procurement schedule/design release schedule
86	Non-production of H&S File	Handover procedure			X		Specific retention within D&B contract
87	Failure to provide handover certification	Handover procedure			X		Early agreement and accountabilit for required test certification/Previous experience
	Environmental						
88	Accidents or dangerous occurances	Construction Techniques			X		Company policy and agreed site procedures
89	Insufficent construction staff parking	Existing Environment		X			Company policy/travel plan. Contract conditions. Availability of surrounding public car parks
90	Pollution	Construction Techniques			X		Company policy and agreed site procedures
91	Inconvenience to residents	Construction Techniques				X	Considerate Constructor Scheme registration/Good comms/planning conditions
92	Tree preservation orders	Site Location building footprint	X				No known requirements
93	Contamination of surrounding highways	Construction Techniques			X		Wheel wash facilities in line with best practice
94	Disturbance of wildlife	Existing Environment			Х		Mitigation as identified within the ecology survey
95	Environmental Impact Assessment	Site and Design			Х		Planning requirement
96	Excessive noise and dust	Planning restrictions/construction methods				X	Company policy and agreed site procedures
97	Excessive construction waste materials	Construction techniques/procurement				X	Project to be registered under WRAP scheme

Key: Reduce - significant redesign Eliminate - remove the hazard Transfer - assign to others Avoid - plan ahead Pool - review alternative methods Insure - accept and quantify costs

KAJIMA

2



Confidential

DELIVERABILITY

Prior to start on site, the following primary risks will be addressed and resolved.

Town Hall

- Post signing of the Conditional Development Agreement (CDA) Kajima will immediately scope and commission a detailed measured survey of the entire building and site to provide reliable and warranted data and plans.
- Kajima's design limits risk by retaining the existing historic element of the Town Hall with limited structural interventions. Most new build is replacing of 1950's extensions.
- An intrusive survey of the existing building fabric will be commissioned to identify structural limitations to the interventions in the Town Hall.
- A Management Asbestos Survey (formerly Type 1 & 2) will be undertaken to establish the likely scope of asbestos. A Demolition / Refurbishment Asbestos Survey (Type 3) will be required to transfer asbestos risk to the main contractor (with sufficient contingency in place). Such a survey is intrusive and can typically only take place after staff decant.
- Existing ground conditions will be surveyed and trial holes will be excavated to identify geotechnical conditions, existing foundation conditions, water table, unrecorded mines and tunnels and any contamination.

New Civic Offices

- A full site survey will be undertaken to scope the extent of the site prior to commencement of detailed design.
- Part of the site is leased to UK Power Networks (UKPN) as a substation, but there are no 'lift and shift' provisions permitting its relocation. UKPN's agreement will therefore be required.
- Existing ground conditions will be surveyed and trial holes will be excavated to identify geotechnical conditions, existing foundation conditions, water table, unrecorded mines and tunnels and any contamination.

General site and neighbourly matters

- Full consultation with the owners of The Electric will take place to understand and ensure their continued operation during construction and post development.
- Although not an injunctable risk, due to the Council's commitment to utilise its powers under Section 237 of the Town & Country Planning Act, Rights of Light compensation will need to be agreed with affected parties.
- A detailed strategy for access and stopping up
- A comprehensive utilities survey of sites and roads will need to be undertaken to understand the physical extent of utilities and also that existing services are sufficient to support the development proposals.
- A Party Wall Surveyor will be appointed to undertake a condition survey in relation to the party walls with The Electric.
- Co-ordination with potentially concurrent development of the Porden Road/Hambrook House site

Statutory and other consents

Planning Permission and Listed Building Consent will be required, including a full programme of statutory and community

consultations and co-production, preapplication meetings and appropriate supporting planning documentation. We have appointed highly experienced planning consultants, DP9, to support our applications to reduce risk and ensure any third party challenge or call-in does not materially impact on the cost or deliverability of the scheme.

- Consultation with Highways and TFL in relation to access during construction, stopping up and any other issues affecting roads within the site or immediately adjacent to the site.
- Consultation and negotiation with utilities providers regarding the isolation of supplies, any redirection of supplies and any increased capacity required to serve the new development.

Project Viability Risk

With Kajima as Development Partner, the Council will be in partnership with an independent London developer, with shared objectives with the Council, motivated to achieve financial viability and risk transfer on a transparent basis, using the best available Building Contractor at the time. Other approaches, such as early commitment to a named contractor and a guaranteed maximum price prior to surveys and detailed design, would result in different project outcomes. The motivation of such a partner is to maintain their construction margins through the design development process, with far less transparency within the partnership.

Working with Kajima:

- The Council will retain the ability through design development to vary the scope and scale of development at the pre-construction stage without suffering a change penalty (as would be the case if a price were fixed now). This is particularly relevant in relation to elements of uncertainty (The Electric, Fridge Bar, Olive Morris House and so on);
- The Council will capture all of the cost savings and risk elimination enabled by the various condition surveys and detailed design development as well as 100% of any value enhancement.
- If the development is not viable the Council retains all their unsold assets and in addition will benefit from secured additional value for all sites (including Council accommodation) as a result of planning permission being obtained.

Should an unexpected funding gap materialise, Kajima (either directly through project finance gap funding on a basis to be agreed or through third party financing or institutional funding) can work with the Council to seek acceptable ways to finance the shortfall.

Should a funding gap materialise Kajima can work with the Council to seek acceptable ways to finance the shortfall

Residential market risk

Market indicators, published research and our own research commissioned for this project indicate that sale prices for residential units are expected to climb.

This will be more acutely apparent in better value, fashionable locations including Brixton. Brixton has experienced growth of between 8% and 25% over the past year alone.

Kajima propose that 100% of the improvement in surplus site values, between signing of the Conditional Development Agreement (CDA) and sale, will go to the Council.

This capture of best value by the Council, rather than sites being sold cheaply to the private sector before planning and long before vacant possession, has a resultant de-risking of the development in terms of viability.

Kajima's approach removes the risk that overage does not materialise and ensures that all surplus land is sold on an open-market, competitively bid basis. This approach will attract the purchasers best able to deal with the individual characteristics of each site, maximise their own investment and so be willing to bid a higher price.

In the unlikely event - given the extent of London's housing shortfall - surplus site values stagnate, the Council will be in no worse a position than today and will retain the flexibility to not proceed with the development, and will retain the surplus sites.

Sale of surplus sites is a condition precedent to unconditionality of the development agreement. The Council is not committed to proceed until the sites have been sold at an acceptable price.

From the signing of the CDA, the Council's risk profile starts to steadily decrease as site conditions become known, design develops and planning is secured. Kajima will assume all responsibility for the removal of risks from the Council so that, at the point when the DA is unconditional and the Council is committed to the project the risks have been removed.

The Council also avoids committing unilaterally to a Building Contractor now, whose financial health in two years time, when construction is likely to start, cannot be known with certainty at this time. Rather, the Council can judge at the time which of the available contractor covenants it judges adequate.

The Council will also be protected against any suggestion of 'selling land to developers cheaply' by an open market tender process that will be in accordance with the Local Government Act 1972.

OUR APPROACH TO RISK MANAGEMENT

We will continue to adopt a realistic and collaborative approach to further identify and quantify risks throughout the development process. Through the correct allocation and risk management processes we will reduce and where possible remove the risk exposure of all parties, including the Council, throughout the delivery of this project. Successful risk management is a process that is initiated at the start of the project creating the accountability needed to effectively and progressively mitigate all elements of uncertainty. This process will be controlled and governed by regular risk management meetings attended by principal representatives of the team throughout the duration of the project.

Risks are not just passed down the contract hierarchy but allocated to the best party abl to effectively manage and mitigate them on individual risk basis; this is a collaborative p necessitating buy-in from the whole team.

ONGOING RISK MANAGEMENT

The process so far has mapped, prioritised informed the project team. However implen a risk response is the activity that adds value to the project with the overall objective beir prevent a threat occurring or, if it is unavoid minimise the negative effects. Key to the successful implementation of a risk mitigati strategy in this case will be the integration a buy-in of the selected Building Contractor a associated wider project team. This integrat will ultimately be documented through owne and accountability as recorded on the proje register and, equally importantly, associated will be captured within the construction cos

It is important to continue to iteratively revie and reduce wherever practicable the contin risk as the project becomes better informed ever more clearly defined in the period up to date of unconditional DA signature. Kajima work closely with the Council and its advise ensure the whole team is regularly informed key project risks during the preferred bidder with the ultimate aim of improving best valu

CONSTRUCTION RISK TRANSFER

The process of tendering and final contract selection will be designed to secure the req level of risk transfer that, at the same time, best value and protects viability. The use of competitive tension will form part of that pro-

Kajima's proposal offers the Council the opportunity to benefit from the maximum po level of risk transferral to the main contracto with Kajima offering a significant wrap-arour guarantee in addition to the main contracto own liabilities. We are happy to offer this guarantee as a direct result of the due dilige and design work Kajima will have undertak during the conditional stage of the DA.

Our intention is to undertake a single stage competitive tendering exercise based on RIBA Stage D and emerging RIBA stage E design information. This process will involve finalisation of the Employers Requirements collaboration with the Council, identification and agreement of a suitable list of 8-10 contractors, a tender period, a period to an tenders, make a recommendation and sign contract, followed by contractor mobilisatio

In our experience, robust terms and conditions with very few (if any) contractor amendments, caveats, qualifications and / or caps on liability can be achieved if:

- The tender list is selected carefully;
- Tenderers are issued with robust terms ar conditions at the outset and it is made cle the terms and conditions are non-negotia
- Any contractual issues or concerns there might be are flushed out mid tender;
- Tenderers are not allowed to proceed with the tender process if they raise or indicate that there might be contractual points which

ctual	are not reconciled and agreed mid tender.
ie an process	Once the design has been de-risked, we anticipate that discussions over risk with contractors will focus on the following items of the contract, all other items of liability being accepted. Under the DA we are committing to the use standard of "all reasonable endeavours" to ensure
and nenting le ng to ablo	that these risks are transferred to the contractor.
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Key risk	Kajima mitigation
Contractor Insolvency or Default	This is largely dependent on the calibre of contractor appointed for the job, and an important reason why commitment to a single contractor now is a major risk to the Council. Kajima are offering this protection to the Council by conducting a genuine independent contractor tendering process.
	Any contract Kajima enter into will be protected by a performance bond set at 10% of the contract value. This will be more than sufficient to cover the cost of retendering the contract and will cover:
	 Any premium or price increase a replacement contractor may require for completing the job; Liquidated damages for the period of delay resulting from the change in contractor and any changes in the programme as a result; Any reduction in the rate of liquidated damages which the replacement contractor may require; Any deficiencies in replacement warranty cover for works undertaken by the previous contractor;
	There will be scope to increase the value of the performance bond should the Council wish to; however there will be a cost increase to do so. 10% is an industry standard, and any requirements for higher provisions attract a disproportionately increased cost as bond issuers assume that there must be unusual risks in the contract.
	In addition to the performance bond, the contract will include a standard retention provision to hold back 3% of the total contract costs as they are included until Practical Completion, with a further 50% of the retention held until expiry of the Defects Liability Period of one year (or longer if agreed at tender standard standard).
Single Point Design Responsibility	Most contractors are currently prepared to assume full responsibility for all aspects and elements of the design of the works, even those aspects and elements designed by others for and on behalf of the Developer. As a consequence, contractors cannot claim additional time or money for errors, inconsistencies or omissions in design (or quantities).
	A very small number of major contractors are still reluctant to accept responsibility for what they term 'Concept Design'. Our PQQ process will identify and exclude such firms.
Liability Caps for Design Errors	The JCT Design and Build contract envisages capped liability for certain categories of loss – loss of use, loss of profit and other consequential losses – arising as a consequence of errors in design. This provision is now routinely deleted.
Co-ordination of Works	The contractor is usually responsible for co-ordinating works which are to be carried out on site by third parties and/or works which need to be co- ordinated with the Main Works with his own and is not entitled to any additional time or money for any delay or disruption resulting from such works.
Changes in Law	For Building Contracts of less than two years in duration the contractor is expected to assume responsibility for Change in Law risk.
Extensions of Time	The list of Relevant Events entitling the contractor to extensions of time is now generally a lot more restricted than previously – inclement weather, civil commotion / terrorism, and force majeure are all routinely deleted.
	Delay on the part of statutory undertakers / utilities is another risk which we anticipate will be negotiated away to the contractor.
Site & Ground Conditions	For new build jobs such as the new civic offices, assuming site investigations confirm a relatively "clean" site, we expect the contractor to take full responsibility for site and ground conditions and anything encountered in the ground, with no additional time or money for dealing with unforeseen site or ground conditions.
	Some contractors are prepared to accept the risk of unforeseen environmental conditions on "dirty" sites and / or the risk of unforeseen asbestos / pre-existing building conditions on refurbishment jobs but this tends to be the exception rather than the rule, and where such risks are taken, they are robustly priced.
	We will tender the project on the expectation that contractors will accept ground risk on the new build element of the project but doubt that they will accept all unforeseen asbestos / pre-existing building condition risk in relation to the works within the existing Town Hall.
	If (as we are currently doing on another project similar to the Town Hall) we are able to undertake an extensive strip out and targeted demolition of the Town Hall prior to tendering the main contract it is possible that this risk may be fully assigned.
	If this is not possible the contingency within the final development budget will adequately cover unexpected costs associated with these works.
Compliance with Third Party Agreements	Contractors are now prepared to commit to carrying out works in accordance with the requirements of third party agreements to which they are not a subject to being provided with copies or relevant extracts of such agreements. The contractor will generally commit to perform in accordance with the expectations and requirements of such agreements and will covenant not to knowingly put the Developer in breach of such agreements. This reduces risk of having to instruct the contractor to do or desist from doing something which might otherwise have constituted a Change under the Building Co
Aggregated Caps on Liability of Liquidated Damages	Contractors no longer typically seek to cap their aggregate liability for liquidated damages at 10% of the Contract Sum. However we expect the contract to include a 'grace period' – usually 4 to 8 weeks - before liquidated damages take effect.
	The DA will reflect any grace period agreed with contractors in this respect.
Price Fluctuations	Price Fluctuation provisions in the JCT contract are always deleted and therefore not a risk.
Trespass and Nuisance	Building Contracts now routinely contain provisions requiring the contractor to indemnify in respect of any trespass or nuisance caused to neighbours or Third Parties.



KAJIMA'S WRAP-AROUND GUARANTEE

The table below illustrates the layering of security that will benefit the Council in relation to the project. In addition to the security that will be provided through selecting a financially robust and competent top-tier building contractor later in the development process after surveys, planning and detailed design work has been undertaken and immediately prior to the unconditional date, Kajima will obtain from the selected building contractor a 10% performance bond and a 3% retention. A further layer of security is provided through Kajima's 7.5% profit margin, which is fully at-risk and will erode on a 'pound for pound' basis in the event of contractor default or cost overruns during construction. In addition Kajima will provide a further wrap-around guarantee of the contractor's liabilities up to two times the value of our profit, equating to a further 15% of the contract value, giving the Council an aggregate protection of 22.5% of the contract value over and above the contractor's liability cover, performance bond and the retention.

To put this into context, based on the expected Cat B contract value of approximately £50m the Council is protected from default or the cost increasing by £17.75m - based on 35.5% of cover from the building contract and Kajima's profit erosion and guarantee. This level of cover is exceptional in the context of any project, and particularly given that it will be a fixed price construction contract with a top tier Building Contractor.

This level of cover is exceptional in the context of any project

The same Kajima guarantee will also protect the Council from protracted delay and cost over-runs over and above the fixed price of the contract and the robust Liquidated Damages provisions that will form part of the construction contract.

For all intents and purposes, this provides the Council with a meaningful commitment to full construction delivery risk transfer, which is a clearly stated objective of this project. This also allows the Council to benefit fully and transparently from the cost savings and value enhancements that will make the project viable.

Total cover	35.5%
Kajima wrap around guarantee	15%
Kajima profit erosion	7.5%
Contractor retention provision	3%
Contractor performance bond	10%

Layering of security benefitting the council

BUSINESS CONTINUITY & EMERGENCY PREPAREDNESS

Kajima has in place a comprehensive Disaster Recovery and Business Continuity Plan (BCP) that clearly defines the responsibilities, actions and procedures for Kajima staff after an incident or the threat of an incident, has taken place at, or in the vicinity of, our head office in Baker Street, London.

This BCP defines what Kajima will do during the escalation of an incident, the invocation of the recovery plan and the recovery process in order to ensure that Kajima can at all times continue to operate its critical business functions. We have attached our BCP at Appendix A2.7.

A plan that is bespoke to the SW2 Enterprise Centre project can, if required, be developed in collaboration with the Council, taking into account the specific needs and requirements of the Council. Kajima's BCP should give the Council sufficient comfort that Kajima has in place the appropriate structure and procedures to be able to continue to fully support this project regardless of unforeseen events that may take place elsewhere in our business. For example, if for some reason there is a major failing within the company IT systems the Council can be assured that the appropriate measures have been taken to ensure continuity of the project as soon as is practicable and recovery of all key project data.

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SECTION 2: QUALITY AND DELIVERABILITY 2.2.6 PROJECT AND QUALITY MANAGEMENT - HEALTH & SAFETY

As lead developer and investor, the health and safety of our team and everyone on and surrounding our developments is Kajima's highest priority and is the responsibility of every one of our employees. Kajima Partnerships Ltd is accredited to ISO 18001 (Health & Safety Management). We have included our full Health and Safety Policy at Appendix A2.8.

CONSTRUCTION DESIGN AND MANAGEMENT (CDM)

As Client under CDM and in the context of the appointment and management of the design team and ultimately the Building Contractor, Kajima's health and safety responsibilities start with the choice of design team and advisers. Ensuring those who work with us in a design and technical capacity are highly experienced, competent and suitably qualified and resourced instilling in that team from the outset of the project the importance to Kajima of ensuring that health and safety forms an inherent part of the design and construction process. One of the most important health and safety considerations as the developer is to ensure that we have allowed sufficient time and resources for all stages of the development process. Our programme, described earlier in section 2.2.4, is compliant with all such requirements.

Upon selection as the London Borough of Lambeth's (the Council) Development Partner, we will appoint a suitably qualified and experienced CDM Coordinator. It may be possible to novate the Council's CDM Coordinator if such an appointment has already been made, subject to agreeing terms and conditions and so on. The appointed CDM Coordinator will collate, retain and provide access to the health and safety file during the development process and liaise with the selected contractor in relation the Construction Phase Health & Safety Plan.

CDM COORDINATOR SCOPE OF SERVICE

Scope

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The scope of services will ensure that the statutory duties of a CDM Coordinator (CDMC) within the Construction (Design and Management) Regulations 2007, and any further revisions to the regulations are complied with and will therefore include the following tasks and deliverables:

- 1 Provide advice to the Client on the health and safety competence and resources of proposed designers;
- 2 Ensuring that the Client is aware of their legal obligations under the regulations, and assisting in complying with the requirements and duties therein;
- 3 Taking possession of and identifying gaps in the pre-construction information provided by the Client; complete an audit of information currently available and advise on what additional is required, if any;
- 4 Assist the Client in the development of compliant management arrangements for the works;
- 5 Take reasonable steps to ensure cooperation between designers; this will include attendance

at selected design team meetings and risk workshops as well as setting up ad-hoc CDM reviews to assess the compliance of the design to the CDM Regulations;

- 6 Ensure, so far as is reasonably practicable, that enough attention has been paid to health and safety during design; and that the design includes adequate information about anything which might affect the health or safety of people carrying out the strip out of the building, construction, use, cleaning, maintenance, refurbishment and possible future demolition of the building, or anyone else who might be affected by this work;
- 7 Have mechanisms in place for dealing with late changes in design that affect hazards and or risks inherent in the design;
- 8 Ensure that the project is notified to the local Health and Safety Executive office;
- 9 Ensure that pre-construction information is adequate and prepared in good time for both the decant/demolition and the construction phases of the project;
- 10Advise on the initial contents of the construction phase plan developed by the Principal Contractor both at demolition and at construction phase;
- 11 Advise the Client on the competence and adequacy of the Principal Contractors' resources when considering appointments.
- 12Ensuring enough time has been provided for the proper planning and preparation of the works (CDM 07 Regulations identify this as the "mobilisation period").
- 13Ensure that the welfare facilities on site are suitable and sufficient
- 14Ensure that a Health and Safety File is prepared, reviewed and amended as necessary and deliver the prescribed copies to the Client in a timely manner after the project is completed.

Schedule of Duties

Stage C. Outline Proposals

- Carry out competence assessment on designers/consultants;
- 2 Review of the design work completed for the feasibility study as developed by the architects and consultant engineers to identify major areas of health and safety risks during demolition, construction, use and maintenance works;
- 3 Issue the initial F10 notice to the local Health and Safety Executive office.
- 4 Attend selected design team and Client meetings with an intention of addressing any CDM issues that may arise.
- 5 Ensure that designers address health and safety issues during their activity; this will involve assisting design teams in the preparation of initial hazard identification for the design choices developed so far.
- 6 6Provide the appropriate amount of information for the preparation of the Stage C Report.

- 7 Assist the project team with the preparation of a pre-qualification questionnaire for demolition contractors and for the main construction contract. Provide advice, if requested, on the final tender list.
- 8 Preparation of pre-construction information for the demolition works and initial compilation of pre-construction information for the main construction works.

Demolition Works

- 1 Issue of revised F10 notice with details of the demolition contractor to the local HSE office.
- 2 Review and collation of relevant health and safety information provided by the demolition contractor for the preparation of health and safety file for the strip out works (e.g. asbestos report, demolition report, services and utilities drawings etc).
- 3 Review and provide advice on the contents, of the construction phase plan for the strip out works prepared by the Principal Contractor.

Stage D, Detailed Proposals

- Continuous review of CDM issues and risk assessments developed by design teams. CDM reviews will be timed with key decision points in the design process.
- 2 Prepare pre-construction information for the main works.

Stage E - F, Final Proposals and Production Information

Carry out CDM review meetings to assist the design teams in completing the identification of residual risks for incorporation in the preconstruction information for the main works.

Tender Review

Provide advice on the competency of the tendering Contractors and on the accuracy and completeness of the H&S documentation (typically a draft construction phase plan) they have submitted for the tender.

Main Works (Stages J – L) 1 Issue of revised F10 with details of

- Principal Contractor to the local Health and Safety Executive office.
- 2 Review of the Principal Contractor's construction phase plan and assessment of the adequacy of the welfare arrangements.
- 3 Ongoing revision role for design risk assessment process developed by the specialist contractors' design team.
- 4 Attend selected meetings with an intention of addressing any CDM issues that may arise.
- 5 Carry out selected site visits to assess design implications on the progress of construction works.
- 6 Receive and review information from Designers, Principal Contractor, Contractors and Specialists for inclusion into the Health and Safety File.

bsi. Certificate of Registration

OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM

This is to certify that:	Kajima Par 55 Baker S London W1U 8EW United King
Holds Certificate Number:	OHS 5475
and operates an Occupational Health and OHSAS 18001:2007 for the following scope	Safety Manag e:
Project management rela and private sector.	ting design, o

For and on behalf of BSI:

Originally registered: 21/10/2009



This certificate was issued electronically and remains the property of An electronic certificate can be authenticated <u>online</u>. Printed copies can be validated at www.bsigroup.com/ClientDirectory ains the property of BSI and is bound by the conditions of contract

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SECTION 2: QUALITY AND DELIVERABILITY 2.2.6 PROJECT AND QUALITY MANAGEMENT - HEALTH & SAFETY

PRE-CONSTRUCTION HEALTH AND SAFETY PLAN

Clear strategies for Fire, Traffic Management, Business Continuity, Achieving Safe Site, Testing Emergency Preparedness and improving the effectiveness of response activities and procedures will be achieved by the creation of a project specific Pre-Construction Phase Health and Safety Plan, developed in collaboration with the Council, which will address business critical continuity and key project issues. This plan, which is a statutory requirement, is a live document that is developed as the design progresses.

Contractor selection

Our process of selecting our construction partner for this project will place health and safety at its heart. Kajima works with a wide range of highly competent top tier building contractors including Morgan Sindall, Sir Robert McAlpine, Wates, Carillion, Balfour Beatty and McLaren all of whom share Kajima's safety-first philosophy.

The contractor competitive procurement selection process will require submissions to demonstrate competence, experience and proactive Health and Safety procedure and protocols. The process will include dialogue and application tests to validate responsibility through all levels of management and supervision. We will ensure that the selected contractor puts in place suitable management arrangements for project welfare facilities and that construction work does not start until a Construction Phase Health and Safety Plan is complete.

CONSTRUCTION PHASE HEALTH AND SAFETY PLAN

On appointment of a Principal Contractor the Pre-Construction Phase Health and Safety Plan will be developed into the Construction Phase Health and Safety Plan incorporating all site and construction specific risk assessment and process methodologies. As a minimum, these will include the following.

Fire precautions

The selected Building Contractor's Construction Project Manager will appoint a Fire Coordinator who will ensure that a fire risk assessment is made, that emergency preparedness against fire is adequate and that a fire safety plan is in place.

The Fire Coordinator will complete the emergency arrangements and review this on a regular basis referring deficiencies to the contract manager for action. Site inspections of emergency arrangements against fire will be carried out fortnightly.

Where fire escape routes are long, involve stairs, buildings have multiple occupancy, or may be used by the disabled or the general public, fire drills will be carried out frequently.

Traffic management

All areas of work that involve vehicle movements and the interface with personnel will have a Traffic Management Plan (TMP). The TMP will be managed by an appointed person who will act as the Traffic Management Coordinator.

The site layout will be planned to provide safe segregation between plant, vehicles and pedestrians wherever practical. The reversing of site plant, vans and lorries will be avoided if possible but where this is necessary will be under the supervision of a vehicle banksman / controller.

Car parking arrangements and access routes will be clearly identified in the plan. Particular consideration will be given to the delivery, loading and offloading of materials.

Interfaces with visitors, the public and others

Interfaces between site activities, visitors and the public will be considered when developing the site plan, planning points of site ingress / egress and works outside the site boundaries to ensure that site operations do not endanger visitors and the public. Such consideration will apply to others such as Council staff who may need access to or through the site.

The following measures to protect the public from site activities will be taken:

- Secure fencing with signage to perimeter of site
- Vehicle and pedestrian gates for site operatives and visitors only
- Construction signage erected on roadside
- with approval from the local authority and be erected to AA road sign standards

Lifting operations

All lifting operations using cranes will be planned and authorised in accordance with the selected Building Contractor's processes, standards and guidance. Where applicable the Contract Manager will appoint a competent appointed person for cranes and a crane supervisor.

All lifting machinery, equipment and gear will be checked prior to use and on arrival to site. This will include the use of piling rigs. Checks and inspections of lifting plant and equipment will be recorded in the site register.

Lone working will be avoided whenever feasible. If it cannot be avoided, a specific risk assessment and method statement for the activity is required to include the arrangements for lone working.

Manual handling

Manual handling risk assessments will be carried out prior to manually lifting a load. Methods of assessing the risks of manual handling and consideration to alternative methods will be considered where practical.

Material storage and distribution

The storage of materials will be planned before the site is established to meet logistical and safety requirements and to ensure that wastage of materials through poor storage, damage or theft is minimised.

Suitable and adequate means of

distributing materials about the site when needed will be planned beforehand.

Noise

If work environments are likely to exceed occupational action levels at any point, specific noise assessments will be carried out prior to commencement of works.

Occupational health monitoring and surveillance

Requirements for occupational health monitoring will be assessed on a task specific basis and in line with the selected Building Contractor's company policies process, standards and guidance. Risk assessments may identify circumstances when additional health surveillance is required (unless already identified by existing legislation).

Permits to work

The use and issue of permits shall be in accordance with the selected Building Contractor's permit to work systems and contract specific requirements.

These will include for this project:

- Excavations
- Permit to lift
- Hot work operations
- Entry into confined space
- Work on non-isolated electrical equipment
- Work on isolated electrical equipment
- Out of hours supervision
- General permit (e.g. roof access /
- work in occupied premises) • Use of ladders and step ladders

Personal Protective Equipment (PPE) The selected Building Contractor and its subcontractors will supply to and ensure the use of PPE of all personnel and visitors.

The minimum requirement is for:

- Safety helmet
- Light eye protection
- Gloves
- Safety footwear
- Hi-vis coat, jacket or vest (where there are plant movements or as directed by the Construction Project Manager)

The issue of PPE will be recorded. Other PPE required will be specified in activity risk assessments and method statements.

Pressurised systems

Pressurised system can contain potential energy that may be released under certain conditions. When working on pressurised systems specific risk assessments and precautions will be taken.

Steel erection

Steel erection will be carried out by a specialist contractor approved via our vendor approval process and will be subject to acceptable risk assessments, method statements and correct supervision and control.

Temporary works

Temporary works will be co-ordinated by an appointed Temporary Works Coordinator (TWC) who will be responsible for ensuring that the planning, erection, use, maintenance and dismantling of temporary works is undertaken in line with the appointed contractors temporary works process and as agreed with the relevant Temporary Works Manager. A temporary works schedule will be put in place on the contract which will be reviewed and updated at regular intervals.

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