

Dated

4 March

2014

**(1) THE MAYOR AND BURGESSES OF THE LONDON BOROUGH OF RICHMOND
UPON THAMES**

-and-

(2) ST JAMES GROUP LIMITED

DEED OF AGREEMENT

made under Section 106 of the
Town & Country Planning Act 1990
relating to the former GPO Sorting Office
London Road Twickenham TW1 1EE

Head of Merton and Richmond upon
Thames London Boroughs Shared Legal Service
Gifford House
67c St Helier Avenue
Morden SM4 6HY

Ref. CS LEG GRC 642-1101

THIS DEED OF AGREEMENT is made the 4 day of March two thousand and fourteen

BETWEEN:

- (1) **THE MAYOR AND BURGESSES OF THE LONDON BOROUGH OF RICHMOND UPON THAMES** of Civic Centre 44 York Street Twickenham TW1 3BZ ("the Council"); and
- (2) **ST JAMES GROUP LIMITED** (company registration number 03190056) whose registered office is situate at Berkeley House 19 Portsmouth Road Cobham Surrey KT11 1JG ("the Owner")

WHEREAS:

- (1) The Council is the local planning authority for its administrative area within which the Property is situate for the purposes of the 1990 Act and for the purpose of Section 106(a) of the 1990 Act is the local planning authority by whom the planning obligations contained within this Deed are enforceable
- (2) The Owner is registered at the Land Registry with title absolute as the proprietor of the freehold interest in the Property
- (3) The Council as local planning authority has resolved to approve the Planning Application and grant planning permission for the Development subject to the prior completion of a deed of planning obligation under section 106 of the 1990 Act to secure the provision of a Community Building financial contributions towards affordable housing, education, health, public realm and transport, the provision of car club facilities and a restriction on availability of on-street parking in the Controlled Parking Zone within which the Property is located
- (4) Policies DM TP2 and DM TP8 of the LDF Development Management Plan 2011 provide that the Council shall only approve new development where the transport infrastructure can accommodate it or be adapted to it and new development should be acceptable in terms of traffic generation and traffic impact in the road
- (5) Policy CP17 of the LDF Core Strategy 2009 provides that health and wellbeing in the Council's area is important and all new developments should encourage and promote healthier communities and places
- (6) Policy CP16 of the LDF Core Strategy 2009 provides that new development shall be expected to provide for additional infrastructure and community needs generated by the development.
- (7) Policy CP18 of the LDF Core Strategy 2009 provides that the Council shall ensure the provision of schools, pre-schools and other educational facilities meet the need for additional educational resources any new development may generate and developers will have to take into account the potential need to contribute to the provision of primary and secondary school places in the borough
- (8) Policy CP15 of the LDF Core Strategy 2009 provides that the Council will ensure that affordable housing is brought forward through development of new units on site and/or some form of contribution towards affordable housing off-site.

AGREED TERMS

1. Interpretation

In this Deed the following words and expressions shall have the following meanings:-

"the 1990 Act" the Town & Country Planning Act 1990

"Accredited Car Club Provider"

means an organisation accredited in the United Kingdom by Car Plus which provides cars for the use of members of a Car Club in consideration of payment therefor

"Affordable Housing"

means housing irrespective of tenure or ownership (provided through a Registered Provider) that shall be available to people who are on a register maintained by the Council and Registered Providers who have properties in the Council's administrative area and whose incomes comply with the requirements set out in the Intermediate Housing Policy Statement of the Council (June 2012) being insufficient to enable them to afford adequate housing locally on the housing market

"Affordable Housing Contribution"

the sum of one million six hundred and fifty thousand pounds (£1,650,000)

"Affordable Housing Units"

means either 11 or 16 Residential Units forming part of the Development (as shall be determined pursuant to paragraph 2 of Schedule 1) the use of which shall be restricted to Affordable Housing in accordance with the provisions of this Deed (as shown on Plan 1 in the event that there are 16 Affordable Housing Units or Plan 2 in the event that there are 11 Affordable Housing Units)

"Car Club"

means a local club operated and managed by an Accredited Car Club Provider which residents of the Development and members of the public may join and in which cars owned by the Accredited Car Club Provider are available to hire to members on either a commercial or part subsidised basis

"Car Plus"

the national charity promoting responsible car use and which operates an accredited scheme for Car Clubs

"Collateral Warranty"

a deed of warranty to be given by the Contractor (if any) and the Professional Team in a form approved by the Council (acting reasonably).

"Contractor"

any building contractor appointed or to be appointed to act and employed in such capacity by the Owner under the terms of a building contract for the construction of the Community Building.

"Commercial Units"

the two restaurants forming part of the Development

"Community Building"

the Community Building forming part of the Development and as identified cross hatched red on Plan 3 and more particularly in drawing

	numbers 12.035-DP-10.F, 12.035-DP-11.E, 12.035-DP-12.D, 12.035-DP-20.E and 12.035-DP-30.F forming part of the Planning Application
"Community Building Site"	that part of the Property on which the Community Building is to be constructed
"Community Building Specification"	the specification for the construction of the Community Building attached to this agreement at Annexure 1 (subject to variation in accordance with the provisions of Schedule 3) for a total cost of up to £4,501,515 as set out in the cost plan attached to this agreement at Annexure 1
"Community Building Target Date"	means 1 March 2016
"Community Building Works"	the construction of the Community Building in accordance with the Community Building Specification
"CPI Index"	means the Consumer Prices Index as published from time to time by the Office for National Statistics (or such other index replacing it or, if none such other index as may be agreed in writing between the Parties)
"the DCM"	the Council's Development Control Manager for the time being or such other person as may be appointed from time to time to carry out that function
"Deed of Release"	means a Deed of Release substantially in the form attached to this agreement at Annexure 2
"Defects Liability Period"	means the period of 12 months from Practical Completion
"the Development"	the development described in the Planning Permission
"Education Contribution"	the Indexed sum of five hundred and nine thousand nine hundred and forty-six pounds (£509,946)
"Event Days"	means days when there are activities at the Rugby Football Union's Stadium on which more than 15,000 spectators are anticipated to be in attendance
"Event of Delay"	means force majeure, fire, lightning, storm, explosion, tempest, or other extreme weather conditions, overflowing of drainage systems, earthquake, aircraft and aerial devices dropped therefrom, war, riot, civil commotion, local combination of workman strike or manufacture or transportation of any goods or materials required for the relevant works, delays in receipt of any relevant consents or approvals or in the unforeseen exceptional site conditions, terrorist

or protest activity, decree of government, archaeological discoveries or any other cause or circumstances outside the reasonable control of the Owner and not due to the negligence or default of the Owner.

"Health Contribution"

the indexed sum of thirty thousand four hundred and ninety-nine pounds (£30,499)

"Heatham House Land"

means land known as Heatham House, Whitton Road, Twickenham TW1 1BH and registered at HM Land Registry with title number MX150195

"IEA"

an independent employer's agent experienced in construction projects similar to the construction of the Community Building.

"Indexed"

increased in accordance with the formula whereby the relevant contribution is multiplied by the fraction $\frac{A}{B}$ where B represents the value of the CPI Index as at the date of grant of the Planning Permission and A represents the value of the CPI Index as at the date of payment of the relevant contribution to the Council.

"Late Events"

a total number of 12 events per annum to be held in the Community Building which shall be permitted to run outside of the Permitted Hours provided that the Council gives prior written notice of each such event to the Owner within 2 working days of the Council applying for a licence to hold such an event (if applicable) and further notice to the Owner at least 5 working days prior to each event taking place.

"LDF"

the adopted policies of the Richmond upon Thames Local Development Framework Core Strategy 2009 and Development Management Plan 2011

"Local Youth Facilities"

the works and facilities referred to in paragraph 18 of Schedule 1

"Local Youth Facilities Contribution"

the indexed sum of ninety-three thousand three hundred and sixty-three pounds (£93,363)

"Long Leasehold Interest"

means a grant of a lease of at least 150 years at a peppercorn rent together with any ancillary land and appurtenant rights at a nominal rent

"Market Units"

residential units forming part of the Development which are not Affordable Housing

"Material Start"

the carrying out in relation to the Development of a material operation as defined in Section 56(4) of the 1990 Act but disregarding for the purposes of this deed the following operations: works of demolition; works of site clearance; ground investigations; site survey works; laying

of services and service media; construction of temporary accesses; archaeological investigation; landscaping works off the public highway; noise attenuation works; decontamination; and the erection of fences and hoardings

"Mixed Use Building"

means that mixed use building within the Development as shown edged brown on Plan 7

"Monitoring Fee"

the Indexed sum of fifty three thousand three hundred and ten pounds (£53,310)

"Occupation"

means in relation to the Development the legal completion of the sale of the Affordable Housing Units and the Market Units (and for the avoidance of doubt the expression shall not include occupation for the purposes of construction or fitting out or for marketing or security purposes) and "Occupied" and "Occupy" shall be construed accordingly

"Owner's Site Rules and Health and Safety Policies"

means the rules prepared by the Owner for the conduct of construction work on land owned by the Owner as may be revised from time to time

"Permitted Hours"

means Monday to Thursday 7am – 11.30pm, Friday and Saturday 7am – 12am and Sunday 9am – 11pm in respect of any cinema viewings but in all other cases shall mean Monday to Friday 7am – 11pm, Saturday 8am – 11pm and Sunday 9am – 10pm

"Permitted Use"

use for any or all of the following purposes:

- (a) Nursery / Playgroups;
- (b) Cinema / Theatre / Concerts / Spoken word or dance;
- (c) Corporate Entertainment;
- (d) Weddings;
- (e) Museum;
- (f) Public Displays, Exhibitions and Meetings;
- (g) Community group meetings, activities and conferences;
- (h) Skills training or educational classes;
- (i) Social functions;
- (j) Offices

(k) Restaurant / cafe

(l) Cultural/sport/leisure/wellbeing activities;

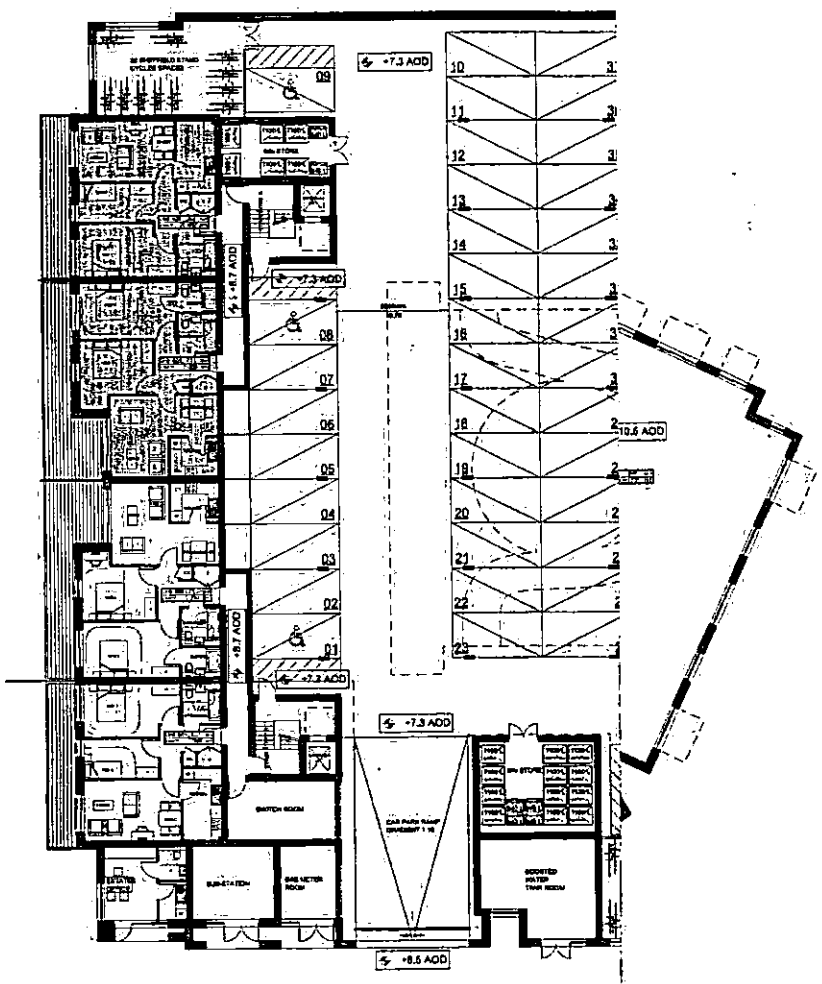
(m) Such other uses or activities for the purpose of the general amenity for the local community as may be agreed between the Owner and the Council.

"Plan 1"	means the plan annexed hereto and marked Plan 1 with drawing number FB_11 Revision P2
"Plan 2"	means the plan annexed hereto and marked Plan 2 with drawing number FB_11 Revision P1
"Plan 3"	means the plan annexed hereto and marked Plan 3 with reference CB and dated 26/02/14
"Plan 4"	means the plan annexed hereto and marked Plan 4 with reference EA and dated 26/02/14
"Plan 5"	means the plan annexed hereto and marked Plan 5 with reference 1305/009
"Plan 6"	means the plan annexed hereto and marked Plan 6 with reference PA and dated 28/02/14
"Plan 7"	means the plan annexed hereto and marked Plan 7 with reference MU and dated 27/02/14
"Plan 8"	means the plan annexed hereto and marked Plan 8 with reference LG and dated 03/03/14
"Plan 9"	means the plan annexed hereto and marked Plan 9 with reference RW and dated 18/12/13
"Plan 10"	means the plan annexed hereto and marked Plan 10 with reference 4616/CIVIL/60 Revision 0
"Plan 11"	means the plan annexed hereto and marked Plan 11 with reference EL and dated 7/11/13
"Plan 12"	means the plan annexed hereto and marked Plan 12 with reference AS and dated 18/12/13
"the Planning Application"	a planning application received by the Council on 19 th November 2012, bearing reference number 12/3650/FUL for the demolition of existing buildings and redevelopment of the Property to provide a mixed use development comprising of a 3 to 5 storey building accommodating 82 residential units, 2 restaurant units (A3 Use Class) with basement car and cycle parking, associated plant equipment and courtyard area; Erection of a 2 to 5 storey community building with associated outdoor space; 28 houses with associated car parking and gardens; New public space, internal

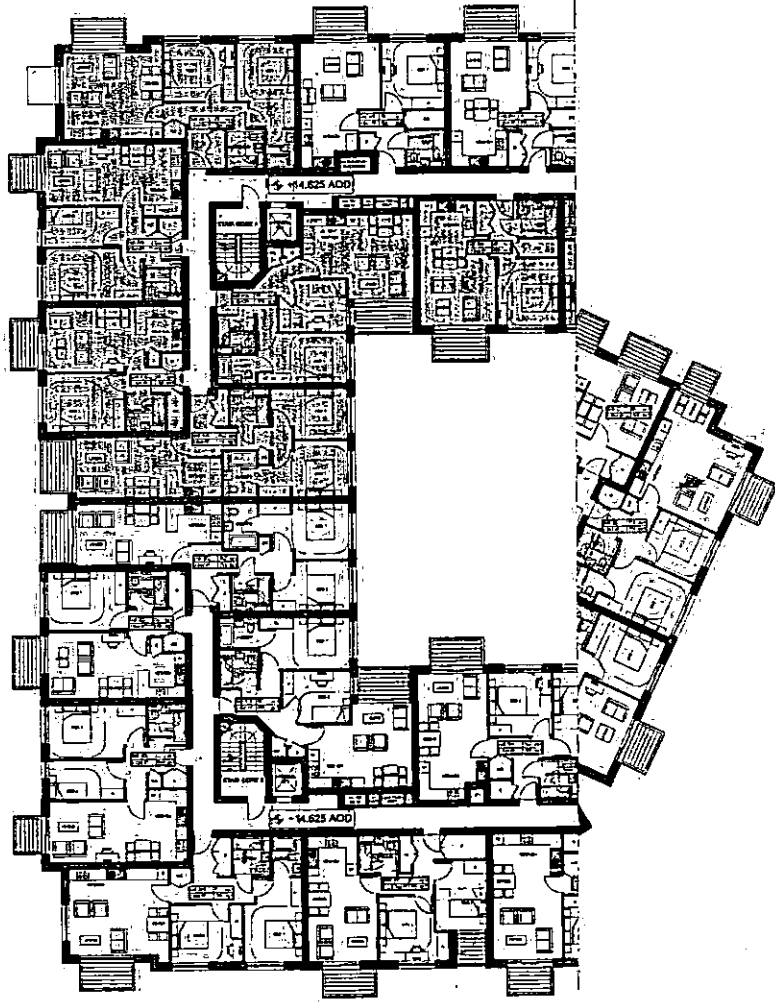
Notes:
 Do not scale from this drawing.
 All contractors must visit the site and be responsible for taking and checking dimensions.
 All construction information should be taken from figured dimensions only.
 Any discrepancies between drawings, specifications and site conditions must be brought to the attention of the supervising officer.
 This drawing and the works depicted are the copyright of John Thompson & Partners.
 This drawing is for planning purposes only. It is not intended to be used for construction purposes. Whilst all reasonable efforts are used to ensure drawings are accurate, John Thompson & Partners accept no responsibility or liability for any reliance placed on, or use made of, this plan by anyone for purposes other than those stated above.

Key
 Affordable Units.

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 [Signature]
 [Initials]



Lower Ground Floor Plan



First Floor Plan

P2	28.03.10	Planning Submission	HS	IF
P1	24.08.12	Planning Submission	RA	IF
Rev	Date	Description	Drawn	Check

Drawing Status: **Planning**

Client: **St. James Group Ltd**
St James
 Designed for life.

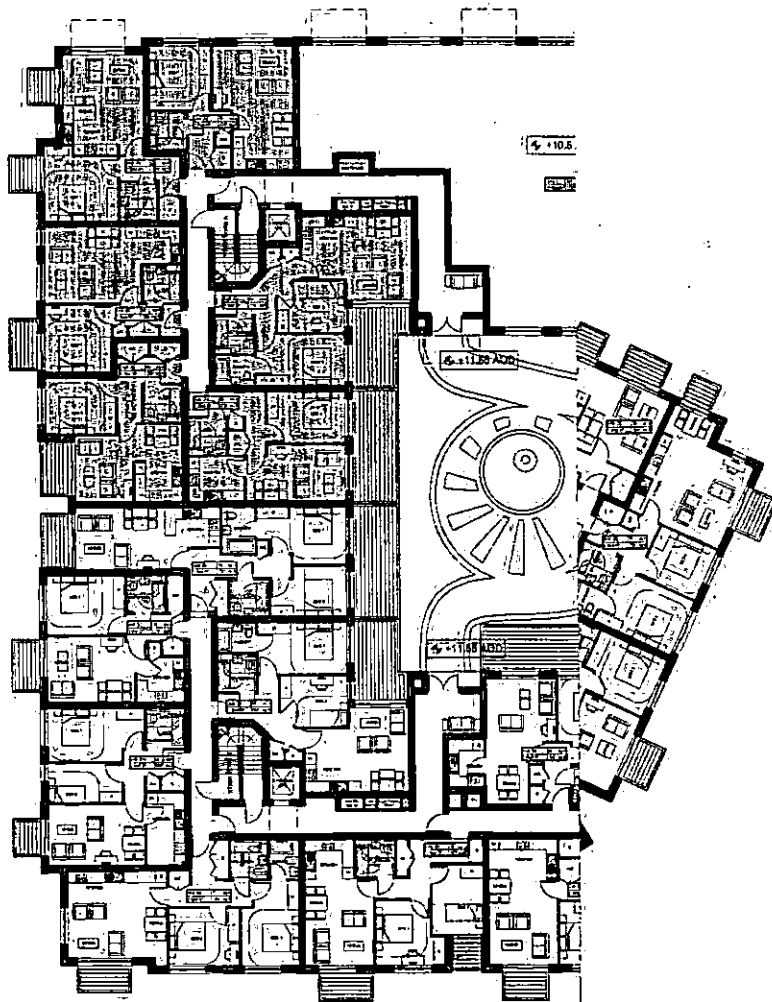
JOHN THOMPSON & PARTNERS
 23-25 Great Sutton Street
 London, EC1V 0DQ
 T: +44 (0)20 7017 1780
 F: +44 (0)20 7017 1781
 W: www.jtp.co.uk

Project: **The Former Royal Mail Sorting Office, Twickenham**

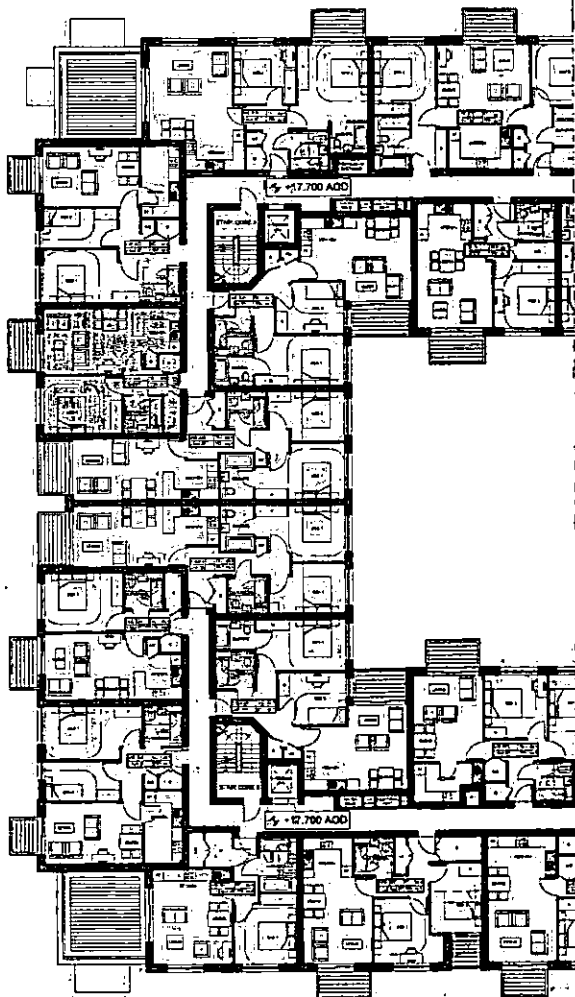
Drawing Title: **Indicative Affordable Housing Plan**

Scale @ A1: 1:100 Job Ref: 00545
 Drawing No: FB_11 Revision: P2
 Scale Bar: 0 1 2 3 4 5m





Ground Floor Plan



Second Floor Plan

Notes:
 Do not scale from this drawing.
 All contractors must visit the site and be responsible for taking and checking dimensions.
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Key

 Affordable Units

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P1	24.06.12: Planning Submission	RA	IF
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Rev	Date	Description	Drawn	Chkd

Drawing Status
Planning

Client
St. James Group Ltd.

St James
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JOHN THOMPSON & PARTNERS

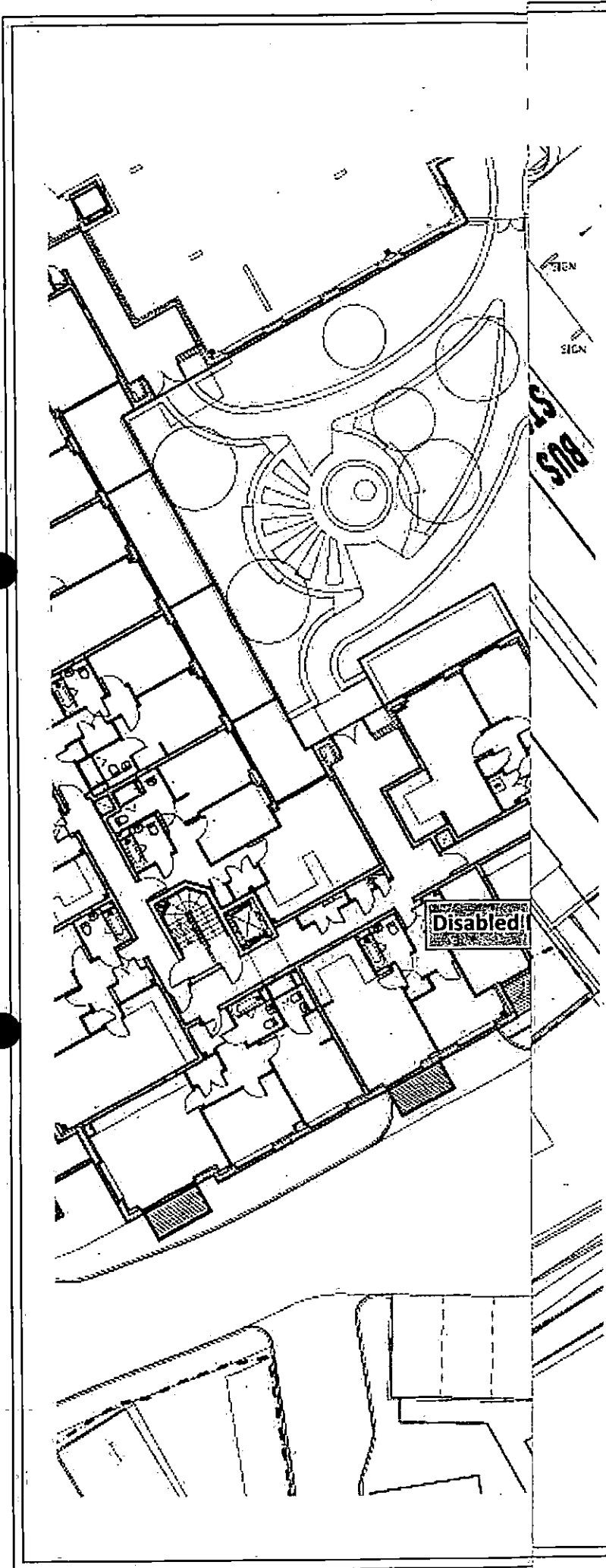


Project
**The Former Royal Mail
 Sorting Office, Twickenham**

Drawing Title
**Indicative Affordable Housing
 Plan**

Scale @ A1: 1:100	Job Ref. 00545
Drawing No. FB_11	Revision P1

Scale Bar: 0 1 2 3 4 5m 

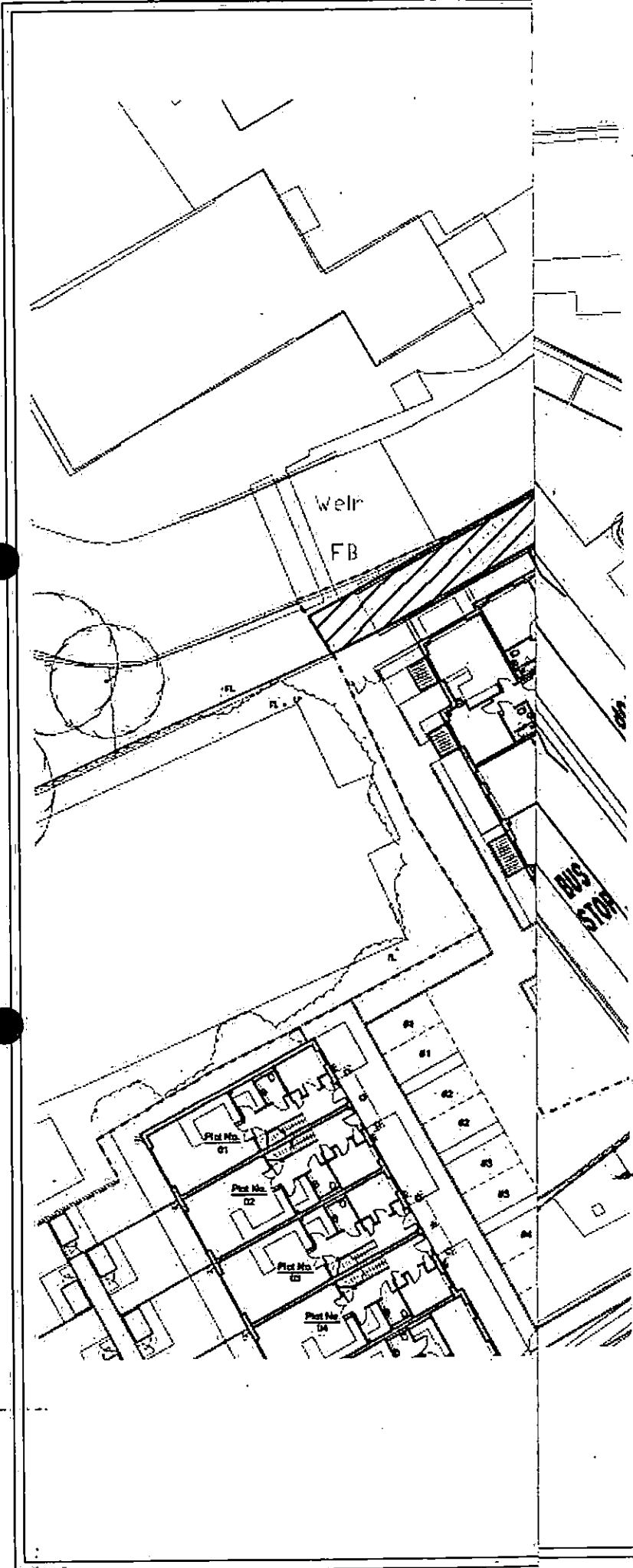


Rev
9
11

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Community Building
Disabled Bay and Combined Service
Bay Locations
CB-26/02/14



Plan
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PL

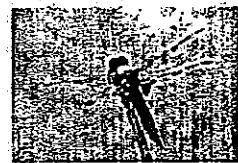
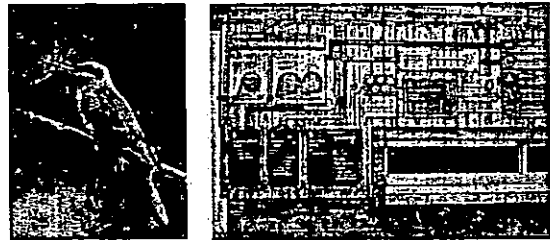
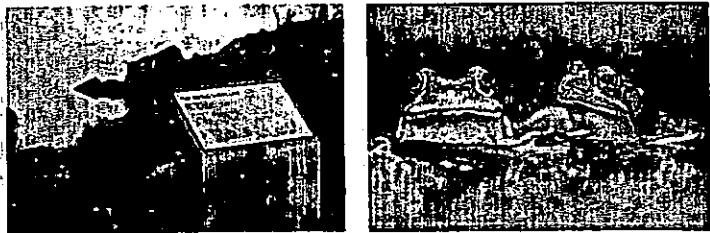
St James

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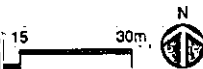
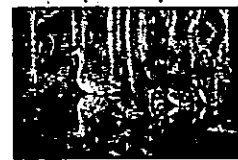
Piazza Vehicular Access for EA and Council Service Vehicles

EA-26/2/14

Educational Signage



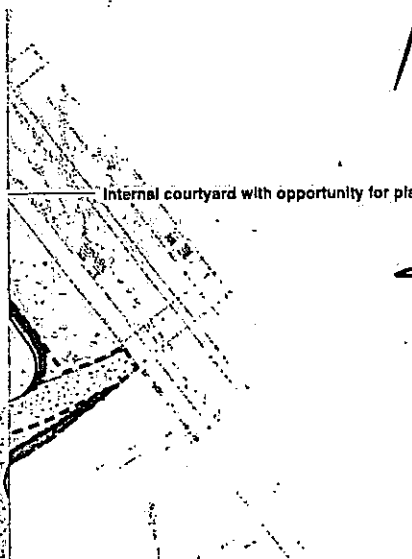
Educational signage located on the access ramp adjacent to the river, and in the Plaza space on London Road would provide informative text and images on the local ecology and wildlife. The signage would be developed in partnership with The Friends of the River Crane group, and would reinforce their vision and objectives



Amenity Space Provision

- PUBLIC OPEN SPACE = 1183m²
including 819m² of play provision
- SEMI-PRIVATE OPEN SPACE = 445m²
including 40m² of play provision
- PRIVATE AMENITY SPACE = 997m²
(including all gardens, balconies and terraces)

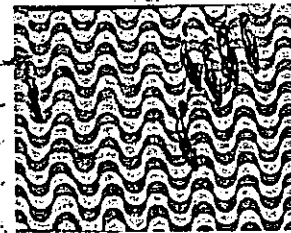
Public piazza with water jet play feature



Internal courtyard with opportunity for play

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Shared Surface



Surfacing patterns adding play value and aiding traffic calming

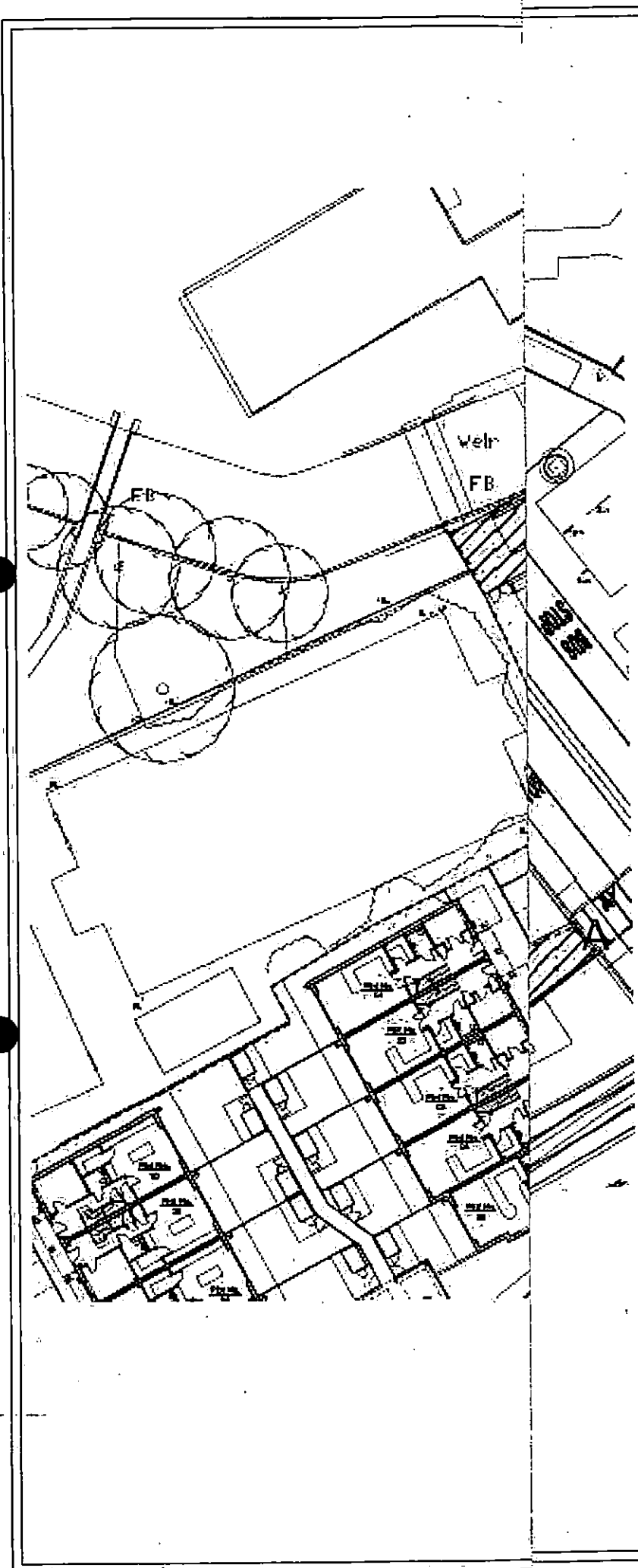
Road articulated with curves and plant beds to provide pinch points for traffic calming

Murdoch Wickham
Landscape Architecture & Masterplanning

2001 Ash Grove
100 St James Street
Apsley
London W12 7LH
Tel: +44 (0) 1874 811208
www.murdochwickham.com

Client: St James
Date: May 2013
Drawn: JM

Twickenham Sorting Office
Amenity Space Plan
1305/009



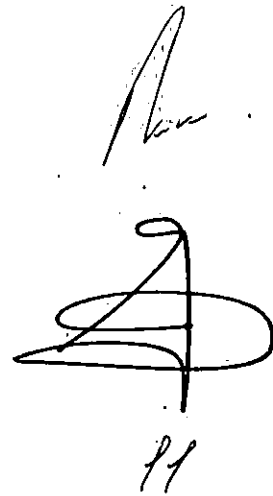
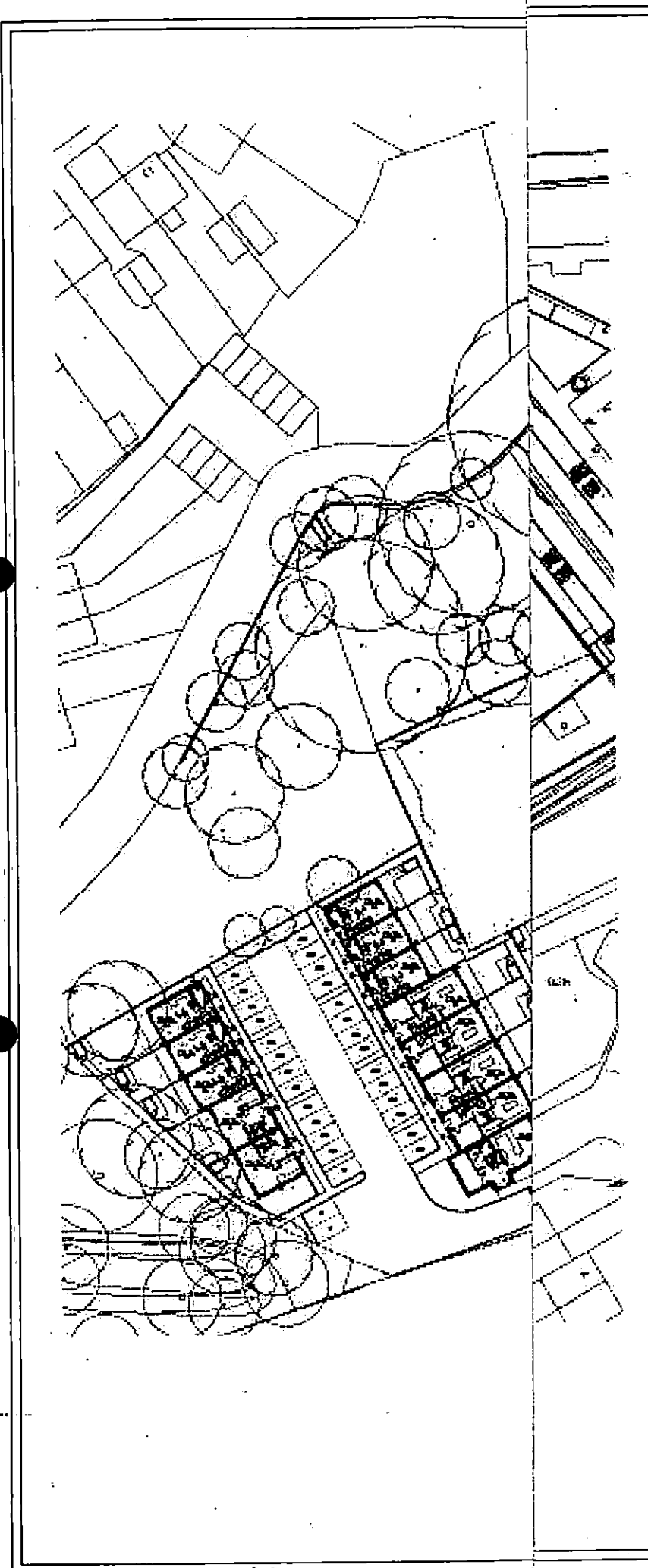
Plan
A
P.1

St James

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Public Access Plan

PA-28/2/14



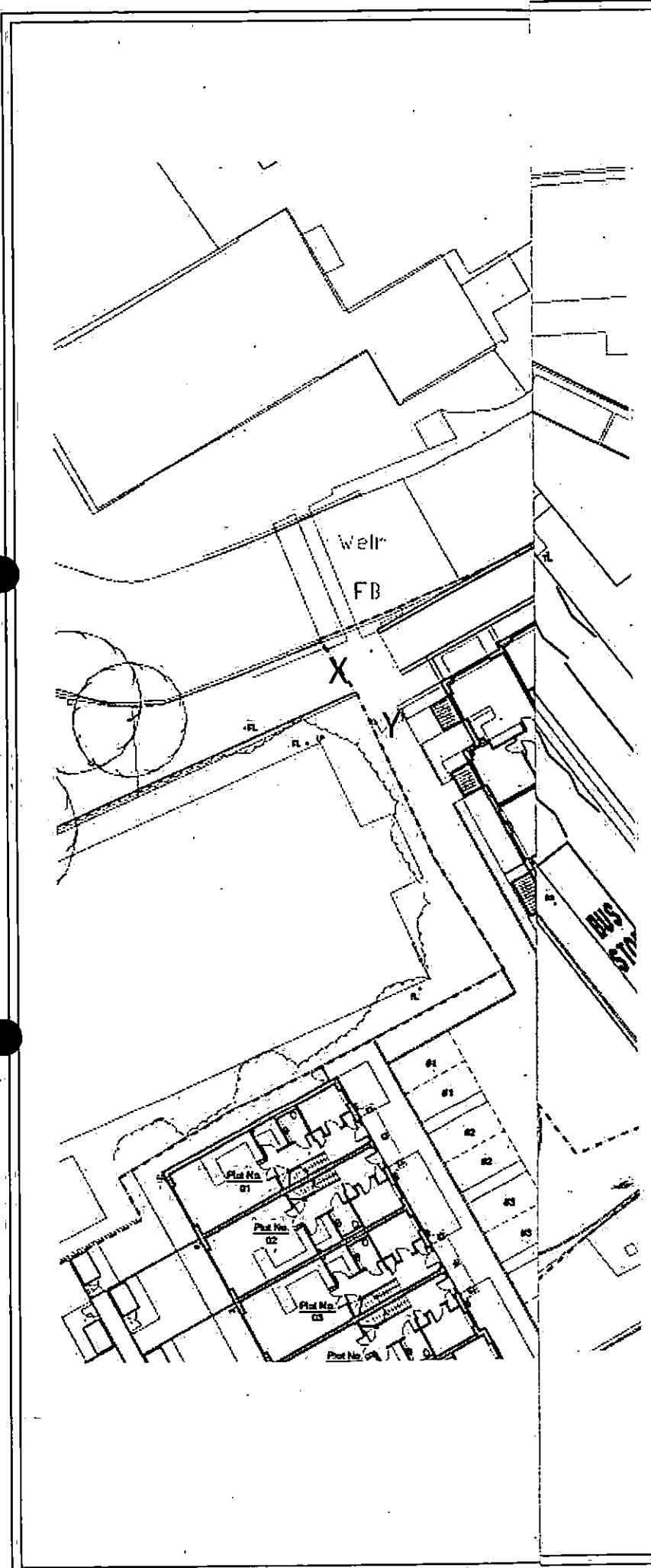
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Mixed Use Building

MU-27/02/14

X Y Lockable Gates

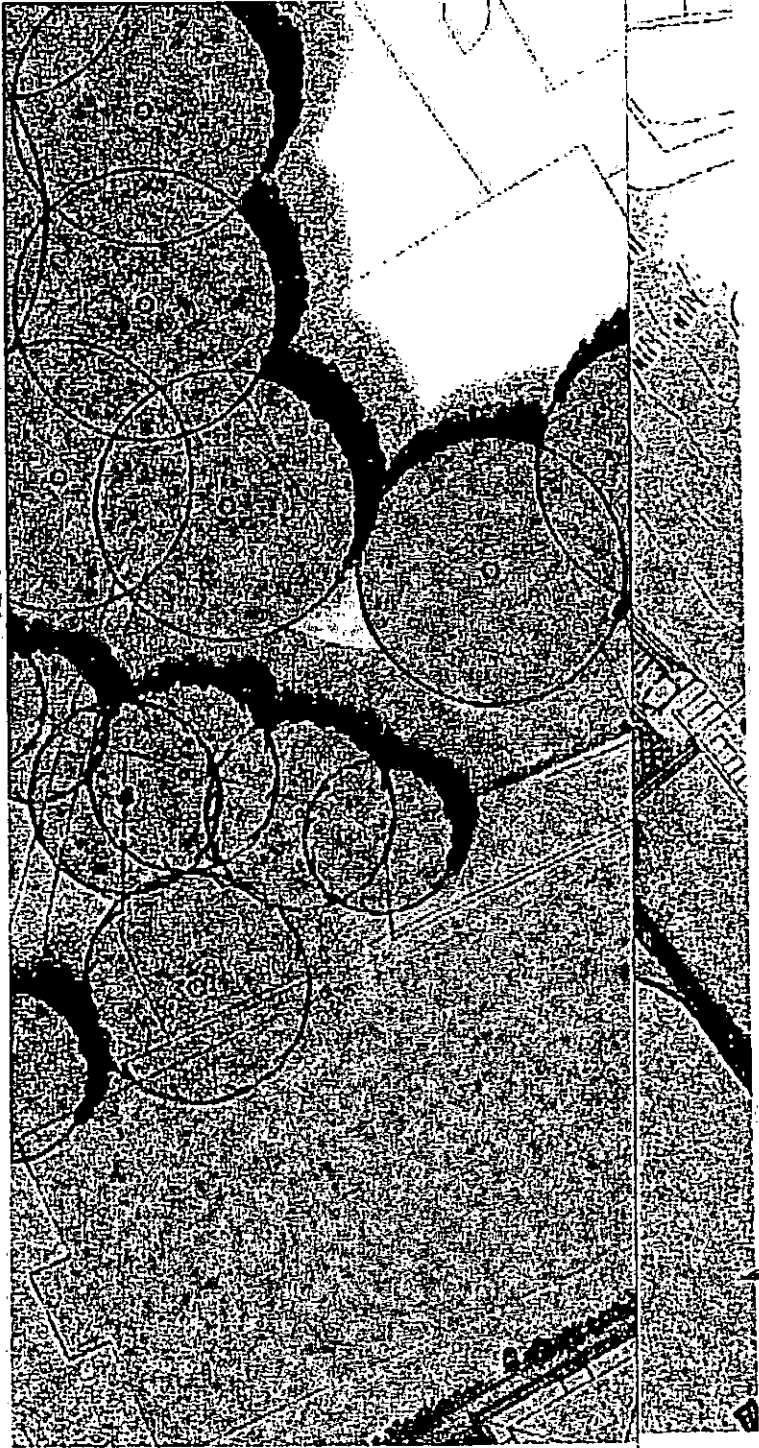


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2
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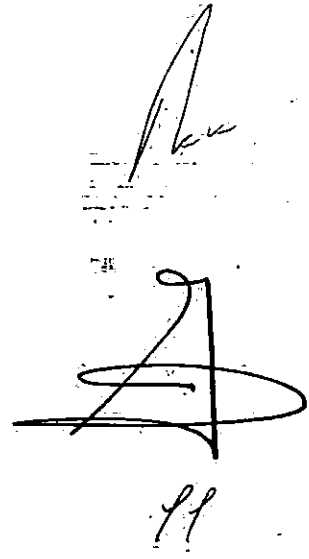
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Lockable Gate Locations

LG-03/03/14



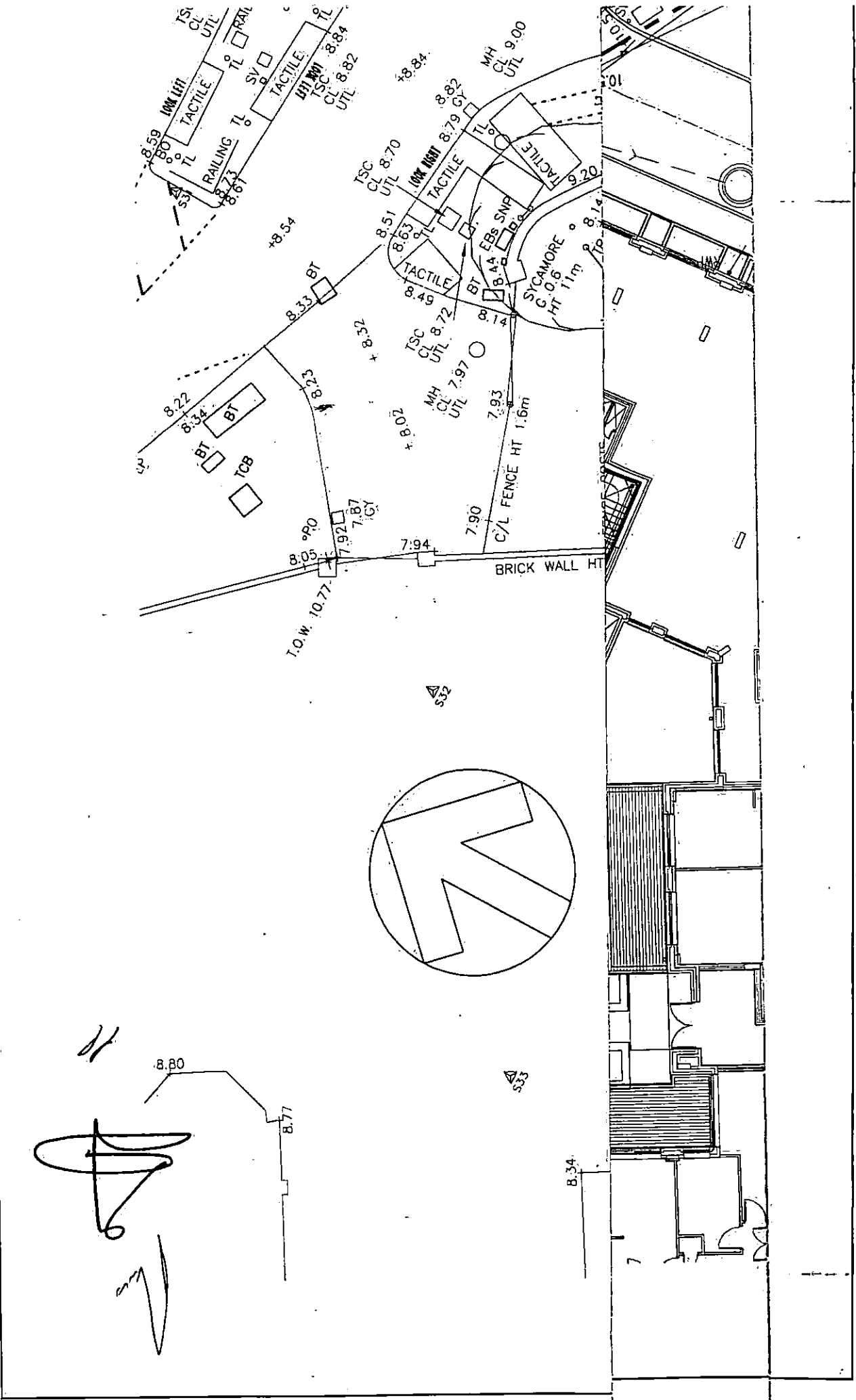
CCTV Positions at X and Y



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River Walkway CCTV


RW-18/12/13



Note: Positions of electric charging points subject to change during design development and due to site conditions

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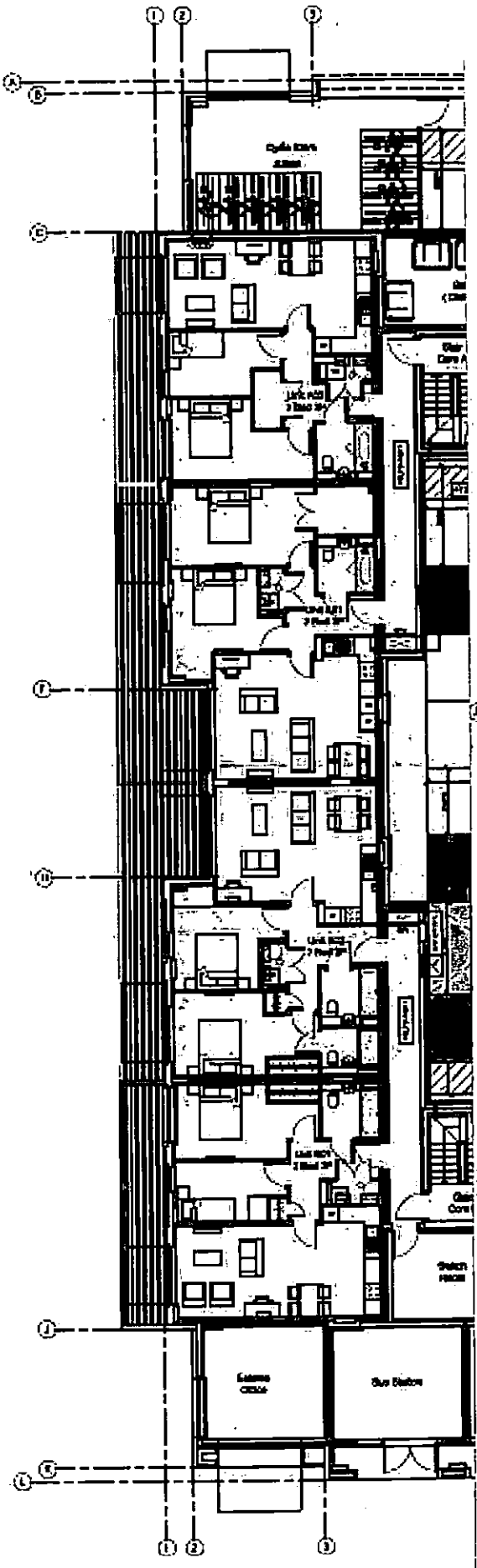
Indicative position of parking bay with access to an electric charging point

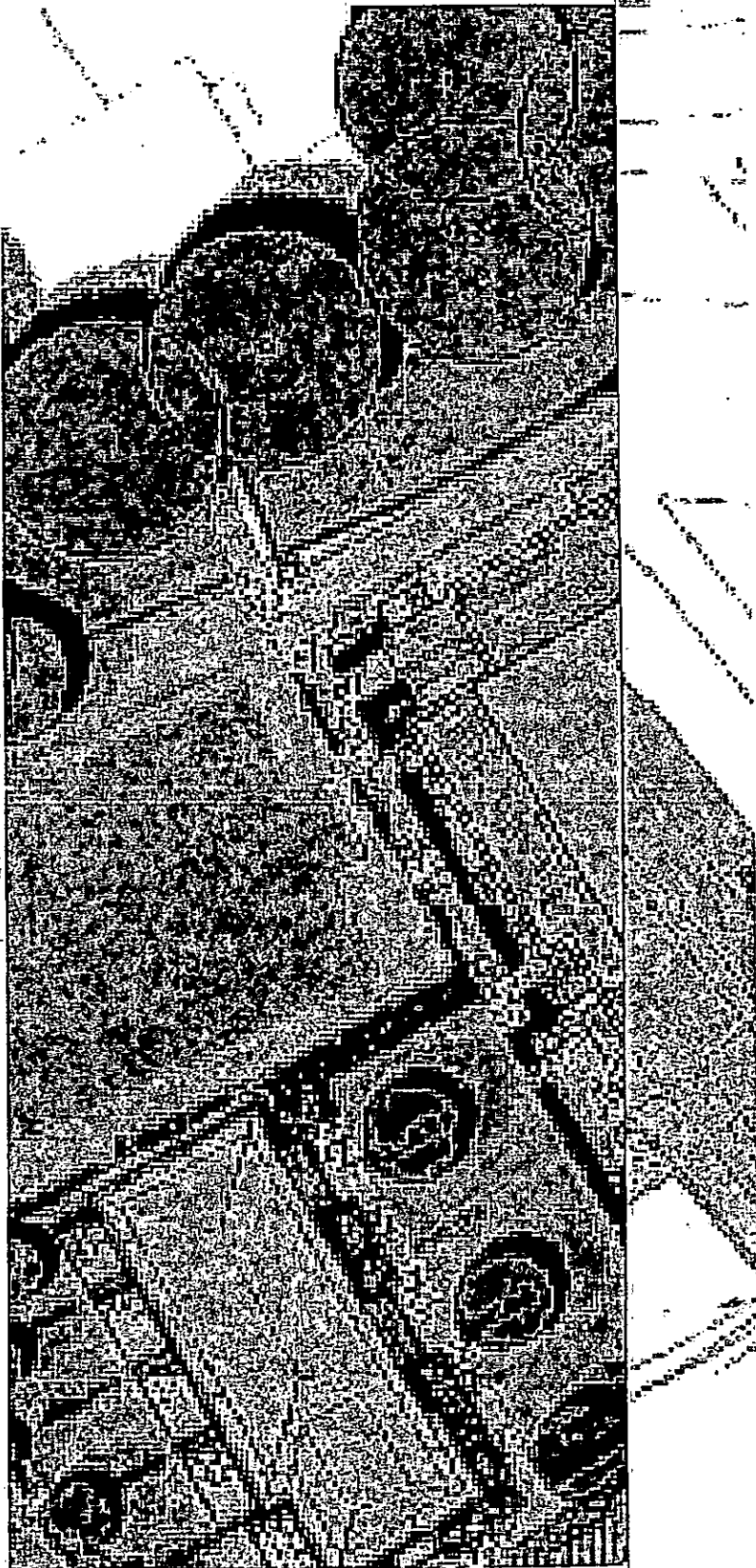


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Electric car charging bays
 EL-7/11/13





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Public Art Strategy

AS-18/12/13

	access road, landscaping and associated infrastructure and utilities.
"the Planning Permission"	a planning permission to be granted by the Council pursuant to the Planning Application
"Play Street"	a road shown coloured turquoise on Plan 5 (excluding the public piazza) that is fully closed to traffic with the exception of vehicles belonging to residents to the Residential Units and emergency vehicles which shall be allowed full access to the entire road but are required to drive vehicles at speeds not exceeding 5mph.
"Practical Completion"	means practical completion of the Community Building certified in accordance with Paragraph 3 of Schedule 3 and Practically Complete and Practically Completed shall be construed accordingly
"Professional Team"	the professional team appointed to have a design function in respect of the construction of the Community Building
"the Property"	land known as the former GPO Sorting Office London Road Twickenham TW1 1EE and registered at the Land Registry with title numbers MX318245, MX318243, MX233537, MX262384, TGL372548, TGL97510
"the Public Realm Contribution"	the indexed sum of one hundred and ninety-four thousand three hundred and thirteen pounds (£194,313)
"Recycled Capital Grant"	the sum of £933,328 to be paid by the Greater London Authority to the Owner or the Registered Provider for the purpose of subsidizing and increasing the volume of Affordable Housing in the Development
"Registered Provider"	means a registered provider as defined in Part 1 of the Housing Act 1996 who is registered as a registered provider with the Tenants Services Authority pursuant to the Housing and Regeneration Act 2008 and complies with the Council's Affordable Housing Supplementary Planning Document Consultation Draft March 2012
"Residential Units"	the Affordable Housing Units and the Market Units together
"Restrictive Covenants"	mean the restrictive covenants imposed in a transfer dated 15 June 1984 and made between (1) The Mayor and Burgesses of the London Borough of Richmond Upon Thames and (2) the Post Office in respect of the freehold property known as land lying to the north west of Brewery Lane, Twickenham and referred to in Entry number 5 of the Charges Register of Title

Number MX262384 as at 18 October 2013 and
timed at 17:55:43

"Site Management Plan"

the plan to be approved pursuant to paragraph
37 of Schedule 1

"Third Party Rights"

the third party rights arising under any building
contract and/or the appointments of the
Professional Team which are to be conferred on
the Council pursuant to the Contract (Rights of
Third Parties) Act 1999

"Third Party Rights Provisions"

the relevant terms set out in any building
contract in respect of the Community Building
and/or the appointments of the Professional
Team

"Working Day"

any day when the United Kingdom clearing
banks are open for business in the City of
London

2. Legal Effect

- 2.1. This Deed is made pursuant to Section 106 of the 1990 Act and the obligations contained in this Deed are planning obligations for the purposes of that section insofar as they fall within the terms of Section 106 of the 1990 Act and receipt of a copy of this Deed pursuant to subsection 106(10) of the 1990 Act is hereby acknowledged by the Council
- 2.2. No person or company shall be liable for any breach of this Deed after he or it shall have parted with all interest in the Property or the part in respect of which such breach occurs but without prejudice to liability for any subsisting breach of covenant prior to parting with such interest
- 2.3. This Deed shall not take effect until the following conditions precedent have been fulfilled:
- 2.3.1. the Permission has been granted for the Development;
 - 2.3.2. the Permission has been implemented by the carrying out of a Material Start
- 2.4. If the Permission expires within the meaning of Sections 91 to 93 of the 1990 Act or is revoked or otherwise withdrawn or modified by any statutory procedure without the consent of the Owner this Deed shall cease to have effect
- 2.5. Nothing in this Deed shall be construed as prohibiting or limiting any right to develop any part of the Site in accordance with a planning permission (other than the Permission) granted by the Council or by the Secretary of State on appeal or reference to him after the date of this Deed
- 2.6. Nothing in this Deed shall derogate from any of the rights powers and duties of the Council pursuant to any of its statutory functions or in any capacity

3. Exclusions of Liability

The obligations under this Deed shall not be binding upon or enforceable against:-

- 3.1. the purchasers mortgagees lessées and occupiers of individual Market Units and Affordable Housing Units
- 3.2. any mortgagee of a Registered Provider or any receiver appointed by such mortgagee or any person deriving title through any such mortgagee or receiver or

- 3.3. any person to whom a Registered Provider grants a shared ownership lease or any successor in title to any such person or
- 3.4. a tenant exercising any right to acquire under a purchase grant scheme or right to buy or similar right conferred by statute or any successor in title to any such person or
- 3.5. any mortgagee of any tenant or person to whom a Registered Provider grants a Shared Ownership Lease or any receiver appointed by such mortgagee or any person deriving title through any such mortgagee or receiver or
- 3.6. any person by whom, by virtue of the terms of a Shared Ownership Lease of an Affordable Housing Unit, is granted or has transferred to such a person either a reversionary interest or a new Lease in such Affordable Housing Unit pursuant to the terms of a Shared Ownership Lease or
- 3.7. any Registered Provider (save in relation to obligations, undertakings and liabilities in respect of the Affordable Housing Units) or
- 3.8. any statutory undertaker or other person who acquires any part of the Property or interest therein for the purpose of the supply of electricity, gas, water, drainage, telecommunication services or public transport services or

4. Owner's Covenants

The Owner hereby covenants with the Council:

- 4.1. to perform the obligations set out in Schedule 1 and the Owner's obligations set out in Schedule 3;
- 4.2. to give notice in writing to the DCM of its intention to commence the implementation of the Development at least fourteen days before a Material Start
- 4.3. to give notice in writing to the Council of its intention to commence the construction of the Community Building at least fourteen days before commencing the construction of the Community Building

5. Council's Covenants

The Council covenants with the Owner:

- 5.1. to use the Affordable Housing Contribution for the provision of Affordable Housing and/or for the provision of facilities that are of benefit to the local community
- 5.2. to use the Education Contribution for the provision of education
- 5.3. to use the Health Contribution for the provision of health care
- 5.4. to use the Public Realm Contribution for the purposes of the provision of Public Realm facilities
- 5.5. to use the Local Youth Facilities Contribution for the provision of Local Youth Facilities and/or other such works and facilities which are of benefit to the local youth community
- 5.6. to use the Monitoring Fee for the monitoring of the obligations on the Owner's part contained in this Deed
- 5.7. Within 10 Working Days of Practical Completion of the Community Building to execute and deliver to the Owner the Deed of Release relating to the release of Restrictive Covenants
- 5.8. In consideration of the Owner's covenants set out in clause 4 of this Deed, the Council (as adjoining landowner with the benefit of the Restrictive Covenants) covenants not to enforce or seek to enforce any of the Restrictive Covenants that

may prevent or hinder the Development and the Council hereby indemnifies the Owner against any such enforcement action taken by the Council.

- 5.9. to perform the Council's obligations set out in Schedule 1 and Schedule 3

6. Miscellaneous Agreements and Declarations

It is hereby agreed and declared:-

- 6.1. Nothing contained in this Deed constitutes planning permission
- 6.2. Nothing contained or implied in this Deed shall prejudice or affect the rights powers duties and obligations of the Council in the exercise of its functions as local authority and its rights powers duties and obligations under all public and private statutes by-laws and regulations may be as fully and effectually exercised as if the Council were not a party to this Deed
- 6.3. On the written request of the Owner at any time each or all of the Owner's obligations have been performed satisfied or otherwise discharged the Council shall without delay issue written confirmation to the Owner of such performance satisfaction or discharge (as appropriate)
- 6.4. Any approval consent direction authority agreement or action required to be given by the Council under this deed shall not be unreasonably withheld or delayed
- 6.5. If any provision in this Deed shall be held to be void invalid illegal or unenforceable or if voidable is avoided this shall not affect the operation validity legality and enforceability of any other provision of this Deed provided severance therefrom is possible
- 6.6. Reference to the masculine feminine and neuter genders shall include the other genders and reference to the singular shall include the plural and vice versa
- 6.7. A reference to a clause is a reference to a clause contained in this Deed
- 6.8. The expressions "the Council" and "the Owner" shall include their respective successors in title and assignees

7. Local Land Charges Provisions

- 7.1. This Deed is a Local Land Charge and shall be registered by the Council in the Council's Register of Local Land Charges immediately on completion thereof
- 7.2. The Council shall, upon written request by the Owner effect a cancellation of any entry made in the Local Land Charges Register in regard to this Deed forthwith after the obligations of the Owner have been wholly performed or discharged

8. Reference to statutes and statutory instruments.

References in this Deed to any statutes or statutory instruments shall include and refer to any statute or statutory instrument amending consolidating or replacing them respectively from time to time and for the time being in force

9. Variations

- 9.1. The covenants undertakings and restrictions contained in this Deed shall only be capable of being varied by a memorandum to be endorsed upon or annexed to this Deed by or on behalf of the relevant parties hereto or by a subsequent deed of variation
- 9.2. This Deed shall continue to be valid and enforceable following an amendment or variation to the Planning Permission achieved through the submission of a planning application pursuant to Section 73 of the 1990 Act as if this Deed had been completed pursuant to such an application

10. Dispute Provisions

- 10.1. In the event of any dispute arising in respect of any matter contained in this Deed save as to matters regarding its legal construction then unless the relevant part of the Deed indicates to the contrary the same shall be referred to an expert being an independent person to be agreed upon between the parties hereto or at the request and option of either of them to be nominated at their joint expense by or on behalf of the President for the time being of the Royal Institution of Chartered Surveyors and such expert shall act as an expert and not as an arbitrator and whose decision shall be final and binding on the parties hereto and whose costs shall be in his award
- 10.2. The expert shall be appointed subject to an express requirement that he reaches his decision and communicates it to the parties within the minimum practicable timescale allowing for the nature and complexity of the dispute and in any event not more than twenty eight (28) days from the date of his appointment to act
- 10.3. The expert shall be required to give notice to each of the said parties inviting each of them to submit to him within ten (10) working days written submissions and supporting material and shall afford to each of the said parties an opportunity to make counter submissions within a further five (5) working days in respect of any such submission and material and his decision shall be given in writing within twenty eight (28) days of this appointment with reasons and in the absence of manifest error shall be binding on the said parties
- 10.4. The costs of any reference of any dispute shall be paid jointly by the Owner and the Council subject always to any determination in the independent person's award.

11. Jurisdiction

The construction validity and performance of this Deed shall be governed by English law

12. Effect of Revocation of Planning Permission

In the event of the Planning Permission being revoked by the Council or any other authority having powers in relation to planning matters or otherwise withdrawn or modified by any statutory procedure without the consent of the Owner or their successors in title the obligation of the Owner under this Deed shall thereupon cease absolutely and in that event the Council shall repay to the Owner such moneys as have been paid to it pursuant to the obligations contained within this Deed to the extent that they remain unspent (save in respect of any monies paid in respect of the Council's legal fees which shall be not be repaid to the Owner in any circumstances).

13. Waivers

No waiver (whether express or implied) by the Council of any breach or default by the Owner in performing or observing any of the terms and conditions of this Deed shall constitute a continuing waiver and no such waiver shall prevent the Council from enforcing any of the said terms or conditions or from acting upon any subsequent breach or default in respect thereto by the Owner

14. Contracts (Rights of Third Parties) Act 1999

The provisions of the Contracts (Rights of Third Parties) Act 1999 shall not apply to this Deed and no person who is not a party to this Deed is to have the benefit of or is capable of enforcing any term in this Deed and no party is to have any rights to enforce this Deed other than those falling within the definitions of the Council and the Owner

15. Release

This Deed shall be deemed to have been revoked and be of no effect (without any further act or deed on the part of either the Council or the Owner) if a Material Start has not taken place within 3 years of the date of this Deed or the Planning Permission having been granted

shall be varied or revoked other than at the request of the Owner or the Planning Permission having been granted is quashed following a successful legal challenge and in any such case any sums paid by the Owner under this Deed shall be repaid to the Owner by the Council forthwith (other than the Council's legal costs in the preparation of this agreement provided that any revocation has not been caused by the actions of the Council) together with interest at the Base Rate of Barclays Bank plc from the date such sums were received by the Council until the date of repayment

16. VAT clauses

- 16.1. All consideration given in accordance with the terms of this Deed shall be exclusive of any VAT properly payable in respect thereof
- 16.2. If at any time VAT is or becomes chargeable in respect of any supply made in accordance with the terms of this Deed then to the extent that VAT had not previously been charged in respect of that supply the person making the supply shall have the right to issue a VAT invoice to the person to whom the supply was made and the VAT shall be paid accordingly

17. Interest on Late Payment

If any of the contributions payable by the Owner under this Deed are not paid to the Council within timescales stipulated in Part II and Part V111 of Schedule 1 then interest shall be paid on such contribution at the rate of 4% above Barclays Bank base rate from time to time in force from the date that the contribution became due to the date of actual payment

18. Community Infrastructure Levy Regulations 2010

The terms of this deed comply in all respects with the requirements of Regulation 122 of the Community Infrastructure Levy Regulations 2010 in that the obligations contained herein are necessary to make the Development acceptable in planning terms, directly relate to the Development and fairly and reasonably related in scale and kind to the Development

19. Notices

- 19.1. Any notice given under this contract must be in writing and signed by or on behalf of the party giving it.
- 19.2. Any notice or document to be given or delivered under this contract may be given by delivering it personally or sending it by pre-paid first class post to the address and for the attention of the relevant party as follows:
- 19.2.1. to the Owner at:
- 19.2.1.1. the registered office of the Buyer from time to time and initially to St James Group Limited, Berkeley House, 19 Portsmouth Road, Cobham, Surrey, KT11 1JG and marked for the attention of the Managing Director; and
- 19.2.1.2. the Legal Department, St James Group Limited, Berkeley House, 19 Portsmouth Road, Cobham, Surrey KT11 1JG marked for the attention of Wendy J Pritchard
- 19.2.2. to the Council at:
- 19.2.2.1. The Civic Centre 44 York Street Twickenham TW1 3BZ marked for the attention of the DCM; and
- 19.2.2.2. The Legal Department, London Borough of Richmond upon Thames, the Civic Centre 44 York Street Twickenham TW1 3BZ
- 19.3. Any such notice or document shall be deemed to have been received:
- 19.3.1. if delivered personally, at the time of delivery provided that if delivery occurs before 9.00 am on a working day, the notice shall be deemed to

have been received at 9.00 am on that day, and if delivery occurs after 5.00 pm on a working day, or at any time on a day which is not a working day, the notice shall be deemed to have been received at 9.00 am on the next working day;

- 19.3.2. in the case of pre-paid first class post, at 9:00 am on the second working day after posting.
- 19.4. In proving delivery, it shall be sufficient to prove that delivery was made or that the envelope containing the notice or document was properly addressed and posted as a prepaid first class letter, as the case may be.
- 19.5. A notice or document delivered under this contract shall not be validly given or delivered if sent by e-mail or fax.

IN WITNESS whereof with the intent that these presents should be executed as a deed the parties hereto have duly executed the same the day and year first before written

SCHEDULE 1

Covenants by the Owner

Part I – Affordable Housing

1. The Owner shall obtain all necessary consents and construct the Affordable Housing Units in accordance with the Greater London Authority Housing Design Guide: Design and Quality Indicators applicable to new schemes as in force at the date of this Deed as well as in accordance with Level 4 of the Code for Sustainable Homes ("Standards") or such other versions of the Standards as the Owner is obliged to comply with as a condition of its Grant for the Property
2. The Owner shall use its reasonable commercial endeavours to secure the Greater London Authority's approval for the use by the Registered Provider of Recycled Capital Grant towards the provisions of Affordable Housing and in the event that within one year of a Material Start such approval is given or the Greater London Authority confirms unequivocally that such approval shall be given the definition of Affordable Housing Units shall mean 16 such units. In the event that the Owner or the Registered Provider does not secure such approval or unequivocal confirmation of approval of the use of Recycled Capital Grant within one year of a Material Start then the definition of Affordable Housing Units shall mean 11 such units
3. By whichever is the later of one year after a Material Start or Occupation of 50% of the Market Dwellings all of the Affordable Housing Units shall be constructed to the construction standard set out in paragraph 1 of this Schedule 1 and have been offered for sale to the Registered Provider by way of a Long Leasehold Interest inter alia on the following terms:
 - 3.1. the grant by the Owner to the acquiring Registered Provider of all reasonable rights of access support entry and passage of services and other rights reasonably necessary for the beneficial enjoyment of the Affordable Housing Units;
 - 3.2. a reservation of all rights of access light air support entry passage of services and other rights reasonably necessary for the purposes of the remainder of the Development; and
 - 3.3. such other covenants as the Owner may reasonably require for the construction and maintenance of the Development and the preservation of its appearance
4. If the Registered Provider fails to accept the offer referred to in paragraph 3 above by the Owner for the purchase of the Affordable Housing Units within sixty working days after receipt of the offer the Owner shall no later than five working days after the expiration of the sixty working day period advise the Council in writing of this and of the reasons for the failure (if known) and shall then offer the Affordable Housing Units to another Registered Provider whose identity and details shall first and as soon as practicable be provided to the Owner by the Council in accordance with the provisions of paragraph 3 and such process shall be repeated until the Affordable Housing Units shall have been sold to a Registered Provider by way of the grant of a Long Leasehold Interest
5. Subject to the Registered Provider accepting the offer referred to in paragraph 3 the Owner shall grant the Long Leasehold Interest in the Affordable Housing Units to the Registered Provider
6. The Owner shall not use the Affordable Housing Units other than for Affordable Housing as fully rented units or by persons paying rents but who may also in accordance with provisions of the Council's adopted Intermediate Housing Policy Statement (as amended from time to time) purchase a share in the equity of such Affordable Housing Units and:

- 6.1. one third of the Affordable Housing Units shall be affordable by residents of the London Borough of Richmond upon Thames with an income per household (i.e. the total income of all occupants of an Affordable Housing Unit) not exceeding sixty-four thousand pounds (£64,000) per annum gross such sum to be further revised in accordance with any revision of the Council's Supplementary Planning Document on Affordable Housing or other equivalent document under the LDF PROVIDED THAT such threshold shall not be revised to less than £64,000 and PROVIDED FURTHER THAT the Owner may apply to the Council to vary the figure of £64,000 in respect of any specific disposal and the Council shall not unreasonably refuse such request and in the event of dispute the matter shall be resolved in accordance with Clause 10 of this Deed; and
- 6.2. two thirds of the Affordable Housing Units shall be affordable by residents of the London Borough of Richmond upon Thames with an income per household (i.e. the total income of all occupants of an Affordable Housing Unit) not exceeding forty two thousand pounds (£42,000) per annum gross such sum to be further revised in accordance with any revision of the Council's Supplementary Planning Document on Affordable Housing or other equivalent document under the LDF PROVIDED THAT such threshold shall not be revised to less than £42,000 and PROVIDED FURTHER THAT the Owner may apply to the Council to vary the figure of £42,000 in respect of any specific disposal and the Council shall not unreasonably refuse such request and in the event of dispute the matter shall be resolved in accordance with Clause 10 of this Deed; and
7. The Owner shall not Occupy permit or allow to be occupied more than 75% of the Market Units until the Owner has granted the Long Leasehold Interest in the Affordable Housing Units in accordance with paragraph 5. RP
8. The Owner shall liaise with the Council to ensure that the sale and resale of any Affordable Housing Unit is in accordance with the Council's aforesaid Intermediate Housing Policy Statement (as amended from time to time) regarding prioritisation of potential purchasers and in particular:
- 8.1. to market all Affordable Housing Units that are being resold in a timely manner;
- 8.2. to notify the Council when an Affordable Housing Unit becomes available to a new occupier and to request the Council for a list of Housing Register applicants for marketing purposes;
- 8.3. to provide the Council with such evidence as it shall reasonably require of evidence of marketing in the Council's administrative area for a period of no less than eight weeks from the date notice is given to the Council under paragraph 8.2 of this Schedule 1
9. The provisions of paragraphs 6 and 8 of this Schedule 1 shall not be binding on;
- 9.1. any chargee of the Registered Provider or any person deriving title from or a successor in title to a chargee of the Registered Provider
- 9.2. any purchaser from a mortgagee of an individual Affordable Housing Unit pursuant to any default by the individual mortgagor giving rise to the mortgagee using its power of sale

Part II - Contributions

10. The Owner covenants to pay to the Council:
- 10.1. One million pounds of the Affordable Housing Contribution on or before a Material Start and the balance of the Affordable Housing Contribution (six hundred and fifty thousand pounds) before occupation of any of the Market Units; RP

- 10.2. The Local Youth Facilities Contribution and the Public Realm Contribution on or before a Material Start;
- 10.3. One half of the Education Contribution and the Health Contribution within one year of a Material Start;
- 10.4. The balance of the Education Contribution and the Health Contribution within two years of a Material Start

Part III – Car Parking Permits

11. The Owner covenants not to Occupy or dispose of or allow any person to Occupy or dispose of any of the Residential Units or the Commercial Units unless a notice has been served on such person that pursuant to the Council's policies to which reference is made in recital (4) hereof or any other policy replacing the same such person shall not be entitled (unless such person is or becomes entitled to be a holder of a Disabled Persons' Badge issued pursuant to Section 21 of the Chronically Sick and Disabled Persons' Act 1970) to be granted a resident's permit to park a vehicle in any marked highway bay or other place within a controlled parking zone within the Council's area nor shall the Council enter into a contract (other than individual contracts for one occasion) with such person to park in any car park controlled by the Council

Part IV – Car Club

12. Within six months of a Material Start the Owner shall submit to the Council details of the name of and correspondence with an Accredited Car Club Provider indicating the intention of the Owner to establish that occupiers of the residential and commercial units to be constructed as part of the Development have membership of a Car Club;
13. The Owner covenants with the Council not to Occupy or permit or allow the Occupation of any part of the Development until:-
 - 13.1. an Accredited Car Club Provider for the Development has been approved by the Council (such approval not to be unreasonably withheld or delayed) ("Approved Car Club")
 - 13.2. it has procured at its own expense that each eligible Residential Unit being an apartment or a flat (but not any houses) has one free membership of the Approved Car Club (one per household) for a period of not less than three years or such other period as may be agreed with the Approved Car Club and has provided a copy of the completed contract with the Approved Car Club to the Council
 - 13.3. it has promoted and advertised to each potential occupier of the apartments to be constructed as part of the Development which do not have car parking spaces the value and benefits of membership of a Car Club; and
14. In the event that the Car Club is no longer able to provide the Car Club for the Development the Owner shall notify the Council in writing and shall then use reasonable commercial endeavours to secure another Accredited Car Club Provider for the Development in accordance with the provisions of this Deed

Part V – Provision of Community Building

15. In respect of the Community Building the Owner shall:
 - 15.1. prior to or contemporaneously with the commencement of the construction of the apartments in the Mixed Use Building forming part of the Development commence and thereafter carry out the construction of the Community Building in accordance with the provisions of Schedule 3;

- PP
- 15.2. not Occupy permit or allow to be occupied more than 50% of the Market Units until the Community Building has been Practically Completed and the transfer of the freehold offered to the Council in accordance with paragraph 15.3.
- 15.3. on Practical Completion offer the freehold of the Community Building for transfer to the Council at nil consideration together with such additional rights and easements as the Council shall reasonably request over the remainder of the Property to facilitate public access from London Road to the Community Building and if the Council accepts such an offer then the provisions of paragraph 17 shall apply.
- 15.4. before the Occupation of no more than 50% of the Market Units to be formed in the implementation of the Development to grant to the Council for its benefit and for the benefit of the public generally access across the part of the Property giving access to the entrance to the Community Building to the underpass beneath London Road leading towards Twickenham Railway Station to the parking area and service bay the plaza the Play Street and other areas within the Development to which it is intended that the general public should have access all such areas being shown hatched red on Plan 6
16. Once the Community Building has been transferred to the Council pursuant to paragraph 17 the Council shall procure that the Owner has the facilities reasonably necessary and by arrangement with the Owner full access to the Community Building to enable any minor defects and minor items of outstanding works to be repaired or completed.
17. In the event that the Council accepts the Owner's offer made pursuant to paragraph 15.3 then this shall give rise to an agreement for sale of the Community Building and the following conditions shall apply:
- 17.1. The Owner with full title guarantee shall sell and the Council shall purchase the freehold of the Community Building at nil or nominal consideration and completion of the sale and purchase shall take place within 28 days of the Council's acceptance of the Owner's offer made pursuant to paragraph 15.3.
- 17.2. The sale of the Community Building shall be with vacant possession on completion.
- 17.3. The title to the Community Building has been provided to the Council prior to the date hereof and the Council shall be deemed to purchase the Community Building with full knowledge of all matters contained or referred to therein and shall make no requisitions thereon or objection thereto
- 17.4. The Standard Commercial Property Conditions (2nd edition) shall apply so far as they are not inconsistent with the terms hereof.
- 17.5. The transfer of the Community Building shall contain:
- 17.5.1. such additional rights and easements as the Council shall reasonably request over the remainder of the Property to facilitate public access from London Road and the entrance to the underpass leading to Twickenham Railway Station located on the Property to the Community Building
- 17.5.2. a reservation of all rights of access light air support entry passage of services and other rights reasonably necessary for the purposes of the remainder of the Development; and
- 17.5.3. such other rights and reservations as the Owner shall reasonably request over the Community Building to ensure the practicable efficient and economic development of the remainder of the Development including where required the running and supply of services under the Community Building.

- 17.5.4. such other covenants as the Owner may reasonably require for the construction and maintenance of the Development and the preservation of its appearance
 - 17.5.5. a restrictive covenant not to use the Community Building (or any relevant part) or allow or suffer it (or any relevant part) to be used at any time other than for a Permitted Use
 - 17.5.6. a restrictive covenant not to use the Community Building for any illegal immoral or illicit use nor to do anything that may be a nuisance or annoyance to the owners or occupiers from time to time of the remainder of the Property including without limitation any use of the Community Building as a sex shop betting shop erotic dancing premises or for any use in connection with drug or criminal rehabilitation or management
 - 17.5.7. a restrictive covenant not to hold events or meetings at the Community Building outside the Permitted Hours (other than the holding of twelve Late Events) without the prior written consent of the Owner (such consent not to be unreasonably withheld or delayed provided always that the Owner shall be entitled to withhold its consent in the event that the Owner considers that holding such an event or meeting would materially adversely affect or cause annoyance to the owners and/or the occupiers of the Residential Units)
 - 17.5.8. a restrictive covenant not to park or allow parking at the Community Building overnight and not to park or allow parking of any commercial vehicles, trailers, caravans, boats or similar vehicles on the estate roads within the Development at any time.
 - 17.5.9. provisions requiring the Council to participate in and pay a reasonable and fair proportion according to user of the service and estate charges in respect of the maintenance of the common parts of the Property.
 - 17.5.10. a restriction on title preventing the disposition of the Community Building without a certificate signed by the Owner or by their conveyancer confirming that the disponee has entered into a deed of covenant in such a form as the Owner shall reasonably require which obliges the disponee to observe and perform the provisions of this paragraph 17.5.
 - 17.5.11. a provision stating that the transfer is subject to an option in favour of the Owner and their assigns (but for the avoidance of doubt such option shall only apply in the circumstances specified in Schedule 2) to the intent and so as to bind the Community Building and each and every part of it to benefit the remainder of the Property and each and every part of it to repurchase the Community Building from the Council on the terms and in the circumstances specified in Schedule 2 of this Deed which shall also be set out in the transfer
- 17.6. Once the Community Building has been transferred to the Council pursuant to this paragraph 17, the Owner shall grant a licence in a form to be agreed between the Council and the Owner acting reasonably for nil consideration to the Council for the use of a total of 23 car parking spaces to be used in conjunction with the Community Building to be located at such location as shall reasonably be determined by the Owner from time to time and such licence shall allow daytime and overnight parking for all vehicles associated with the Community Building.

Part VI - Heatham House

18. The Owner shall:
- 18.1. submit (if the Council shall have requested the same) a planning application within 6 weeks of receipt from the Council of a specification that the Council may reasonably demand for the implementation of the floodlighting to the three sports pitches at Heatham House;
 - 18.2. Subject always to having reasonable access to the Heatham House Land to carry out the relevant works, the Owner shall not Occupy or permit to be Occupied more than 50% of the Residential Units to be constructed as part of the Development until the Owner has implemented planning permission Council reference number 13/1397/FUL granted on 13th August 2013 for the installation of a three metre wide footpath and cycleway across the Heatham House Land and the installation of fencing and gates ball-stop netting surrounding the sports pitches and electronically controlled lockable gates at the footbridge across the River Crane together with associated landscaping
19. Subject to the Owner complying with its obligations set out in paragraph 20 of this Schedule 1, the Council (as the current owner of the Heatham House Land) shall allow the Owner its contractors, sub-contractors and their respective agents, workmen, sub-contractors, licensees, invitees and all other persons or bodies engaged in the implementation of planning permission referred to in paragraph 18.2 of this Schedule 1 to enter onto the Heatham House Land and to remain there with vehicles, plant and equipment and materials for the purpose of implementing the planning permission referred to in paragraph 18.2.
20. The Owner shall give at least one month's written notice to the Council of its intention to commence the implementation of the planning permission referred to in paragraph 18.2 of this Schedule 1.

Part VII – Construction Method Statement

21. Prior to a Material Start the Owner shall submit a construction method statement including a dust strategy to the Council and receive the Council's approval thereto such approval not to be unreasonably withheld or delayed and thereafter to comply with the provisions of such construction management statement

Part VIII – Controlled Parking Zone (CPZ) Review

22. The Owner shall appoint an independent transport consultant to be agreed with the Council or in default of agreement an expert appointed in accordance with Clause 10 of this Deed to undertake before first occupation of any of the Residential Units traffic surveys (within a survey area being CPZs no further than 200m away from the Property first having been agreed with the Council) (1) at the time of appointment; (2) three months from the date of first occupation of the Community Building; and (3) twelve months after the date of first occupation of the Community Building or on receipt by the Council of complaints by local residents about parking congestion within the survey area whichever is the sooner;
23. The Owner shall pay within one month of a request from the Council the cost of any expenditure it has incurred in connection with the traffic surveys (such cost to be determined at the time the traffic survey in question is commissioned) to ascertain if a variation of the hours of operation of such CPZs or any of them is required as a result of changed parking usage arising as a consequence of the implementation of the Development and to pay such further sums that may be required following discussion and subsequent agreement with the Council in connection with public consultation regarding any proposed variation to the hours of operation of CPZs which appear to be necessary as a result of such Traffic Surveys (up to a maximum sum of £25,000

Indexed) and any additional sums required following discussion and subsequent agreement with the Council towards the cost of implementing changes if such action is taken following such consultation (up to a maximum sum of £25,000 Indexed) all such sums to be Indexed;

Part IX – Local Employment Agreement

24. The Owner shall prepare an Employment and Skills Plan in accordance with Appendix C of the Client Based Approach (Construction) document published by the National Skills Academy in May 2012 in a form approved by the Council (such approval not to be unreasonably withheld or delayed) and which shall set out the means by which the Owner and the Council shall work together to maximise employment and training opportunities for local residents and businesses and insofar as it is able to do so having due regard to the Construction (Design and Management) Regulations 1994 and the Owner's Site Rules and Health and Safety Policies to target employment opportunities arising in connection with the implementation of the Development to local residents including:
- 24.1. adopting appropriate recruitment practices;
 - 24.2. working with Job Centre Plus;
 - 24.3. using reasonable commercial endeavours to ensure that 50% of jobs are filled by residents of the London Boroughs of Richmond upon Thames Hounslow Kingston upon Thames and Wandsworth and Elmbridge and Spelthorne District Councils;
 - 24.4. encouraging local training providers and others to ensure that at least 50% of the jobs at the Property during the construction phase of the Development are filled by residents of the Councils set out in c. hereof including 15% from the Council's administrative area
 - 24.5. liaising with operators of employment generating uses at the Property to encourage them to work with Job Centre Plus and others to maximise local recruitment opportunities
25. The Owner covenants not to Occupy or permit to be Occupied more than 50% of the Residential Units to be constructed as part of the Development until the Employment and Skills Plan has been prepared and submitted to the Council pursuant to paragraph 24 of this Schedule 1

Part X – Travel Plans

26. The Owner shall submit to the Council within one year of first Occupation of any Residential Unit a travel survey of residential occupants and their visitors in accordance with a survey methodology to be agreed with the Council
27. Within 14 months of the first occupation of any Residential Unit the Owner shall submit to the Council a travel plan based on the results of the survey to which reference is made in paragraph 26 of this Schedule 1 with objectives targets actions and timeframes to manage the transport needs of residents and visitors to the Development to minimise car usage and achieve a shift to alternative transport modes and following approval of such travel plan by the Council the Owner shall implement such actions to secure to secure the objects and targets of the aforesaid travel plan are approved
28. The travel plan to which reference is made in paragraph 27 of this Schedule 1 shall be revised annually and a written review of such travel plan shall be submitted to and agreed by the Council acting reasonably by the anniversary of its first approval and yearly thereafter and at the third anniversary the travel plan (including surveys) shall be re-written and resubmitted for further approval by the Council acting reasonably and this review and re-write cycle shall take place until the date which is three years

after substantial completion of the Development and any approved revision of the travel plan shall be implemented within three months of the date of its approval

29. Travel surveys of staff and visitors occupying the Commercial Units and Community Building shall be undertaken in accordance with a survey methodology to be agreed with the Council within 3 months of the commencement of use of the Commercial Units and/or Community Building and a Travel Plan for each Commercial Unit and the Community Building based on the results of the surveys shall be submitted to the Council within a further 3 months with objectives, targets, actions and timeframes to manage the transport needs of staff/visitors to minimise car usage and to achieve a shift to alternative transport modes (the "**Commercial Travel Plan**") and following approval by the Council acting reasonably the Owner shall then implement these actions to secure the objectives and targets within the approved Commercial Travel Plan.
30. The Commercial Travel Plan (including surveys) shall be annually revised and a written review of the Commercial Travel Plan submitted to and agreed by the Council by the anniversary of its first approval and yearly thereafter and at the third anniversary the Commercial Travel Plan (including surveys) shall be re-written and resubmitted for further approval by the Council and this review and re-write cycle shall take place until the date which is three years after substantial completion of the Development and any approved revision shall be implemented within three months of the date of its approval

Part XI – Environmental Provisions in leases of Restaurants

31. The Owner shall use reasonable endeavours to include the following obligations within any commercial leases of the Commercial Units (but not so as to delay the Development or materially prejudice its negotiations with any proposed tenant):
 - 31.1. A provision to the effect that the tenant may with the landlord's consent (not to be unreasonably withheld or delayed) carry out alterations to the relevant premises aimed at reducing energy use or water consumption or improvement of waste management provided such alterations do not adversely affect the performance or life cycle of any mechanical or electrical services or any other plant, equipment or services in the premises and are not structural alterations.
 - 31.2. A provision to the effect that the landlord shall consider any reasonable suggestions made by the tenant to avoid or minimise so far as reasonable practicable, any adverse impact on an existing EPC rating or the efficiency of the use of energy or water of the premises which may be caused by any works to be carried out by the landlord.
 - 31.3. A provision to the effect that the tenant shall not be required to reinstate any tenant's alterations which have been carried out lawfully during the term and which improve the energy or water efficiency of the premises unless such reinstatement is reasonably required by the landlord having regard to its intentions in respect of the use or re-letting of the premises after the expiry of the term.
 - 31.4. Provisions to the effect that the landlord and the tenant shall, from time to time, consider any actions which could reduce energy and water use and recycling waste in respect of the premises and to agree targets and strategies to implement any such actions.
 - 31.5. A provision to the effect that the landlord and the tenant will agree to work collaboratively to improve the environmental performance of the premises.

Part XII – Public Access Agreements

32. The Owner shall permit insofar as the Owner is able and prior to 1 March 2016 public access including use (without charge) by pedestrians bicycles and cars to those areas shown hatched red on Plan 6 attached to this Deed and comprising the front half of the site including the piazza access and egress to the Heatham House section of the footpath alongside the River Crane and to the underpass leading to Twickenham Railway Station at the point shown marked "A" on Plan 6.
33. The Owner shall allow reasonable public access to the Play Street which for the avoidance of doubt includes the whole of Brewery Lane and is shown coloured turquoise on Plan 5 except at such times as it is in use as a Play Street in accordance with the Play Street Strategy as described in paragraph 35 of this Schedule 1 or at such times as it is closed in accordance with the provisions of the Site Management Plan (including Event Days) and at all times to use the Play Street in accordance with the aforesaid Play Street Strategy and to reimburse to the Council its reasonable costs incurred in obtaining a Traffic Management Order or such other statutory permission as may be needed to fulfil the provisions of this paragraph of this Schedule 1
34. The Owner shall allow the Council and the Environment Agency reasonable access solely for the purposes of its service vehicles and personnel across the piazza and riverside walk forming part of the Development and shown hatched blue on Plan 4 attached hereto
35. The Owner shall submit to the Council within one year of a Material Start a strategy ("**Play Street Strategy**") for the delivery of the Play Street and to implement the approved Play Street Strategy within 12 months of the date of the Council's approval (such approval not to be unreasonably withheld or delayed).
36. The Owner shall not Occupy or permit to be Occupied more than 50% of the Residential Units to be constructed as part of the Development until the Owner has submitted the Play Space Strategy to the Council.

Part XIII – Site Security and Site Management Plan

37. The Owner shall not to permit the Occupation of more than 50% of the Market Units until it has agreed the provisions of a site management plan ("**Site Management Plan**") with the Council (such agreement not to be unreasonably withheld or delayed) to include:
 - 37.1. automatically lockable gates timed to close between dusk and dawn each day at the points marked "X" and "Y" on Plan 8;
 - 37.2. a CCTV to the riverside walk at the points marked "X" and "Y" on Plan 9;
 - 37.3. the maintenance and recording on a repeated loop of CCTV images as part of the site management of the Property;
 - 37.4. the erect signs to a design and at points agreed by the Council showing shared surface arrangements with cyclists;
 - 37.5. provisions for the locking of gates to the riverside walk on any Event Days;
 - 37.6. implementation by all affected parties of the site management plan within three months of the date of its approval and operation of such site management plan or any revision approved by the Council at all times thereafter

Part XIV – Road Junction alterations

38. Within six months of a Material Start the Owner and the Council shall enter into an agreement under section 278 of the Highways Act 1980 under which the Council shall undertake the works shown on Plan 10 attached to this Deed which shall include but not be limited to the alteration of the position of the kerb to the pavement

at the junction of the new internal access road and the Owner shall not permit occupation of any of the Residential Units until the Owner has entered into such agreement

39. The Owner and the Council shall prior to the signing of the section 278 agreement pursuant to paragraph 38 of this Schedule use reasonable endeavours to agree on the estimated costs of the works and the Owner shall pay the Council 16% of the estimated costs of the works as supervision fees for the Council's Engineer to oversee the works to ensure that they are carried out to the reasonable satisfaction of the Engineer and in the event that the costs of such works is more or less than the estimated cost then the amount paid as supervision fees shall be adjusted between the parties such that the amount paid shall be 16% of the actual cost of the works.

Part XV – Charging Points for Electrically Propelled Vehicles

40. The Owner shall provide and maintain charging points for electrically propelled vehicles in the positions shown marked blue on Plan 11.
41. The Owner shall not Occupy or permit to be Occupied more than 50% of the Residential Units to be constructed as part of the Development until the Owner has provided the charging points for electrically propelled vehicles in accordance with paragraph 40 of this Schedule 1

Part XVI – Noise Mitigation Measures

42. The Owner shall not dispose of a Residential Unit without notifying the potential occupier or purchaser of the location of the floodlit playing pitches at Heatham House and shall inform future occupants that noise complaints to the Council shall be assessed on the basis of the noise mitigation measures designed into the Residential Units being in operation
43. The Owner shall undertake further sound proofing measures to Residential Units where noise readings of over 55db created by the activities on the Heatham House land as referred to in paragraph 42 are witnessed by the Council acting reasonably for a period of 2 years after first occupation of the last of the Residential Units

Part XVII – Provision of Public Art

44. The Owner shall provide a Public Art Strategy for the Property to be approved by the Council (such approval not to be unreasonably withheld or delayed) and shall provide an item of art to be approved by the Council (such approval not to be unreasonably withheld or delayed) within a part of the Property that is accessible to the public and is within the area shown hatched red on Plan 12.
45. The Owner shall not Occupy or permit to be Occupied more than 50% of the Residential Units to be constructed as part of the Development until the Owner has provided a Public Art Strategy for the Property to the Council in accordance with paragraph 43 of this Schedule 1.

Part XVIII – Water Framework Directive

46. The Owner shall within 12 months of a Material Start by the Owner submit to the Council information to the approval of the Council to demonstrate compliance with the Water Framework Directive Assessment
47. The Owner shall not Occupy or permit to be Occupied more than 50% of the Residential Units to be constructed as part of the Development until the Owner has submitted information to demonstrate compliance with the Water Framework Directive Assessment in accordance with paragraph 45 of this Schedule 1.

Part XIX – Legal Costs and Monitoring Fee

48. On the date hereof the Owner shall pay the Council's reasonable and proper legal costs in the preparation and completion of this Deed in the sum of £1,000 and the Indexed Monitoring Fee.

SCHEDULE 2

Option to Repurchase

1. For a period of 80 years from the date of this Deed the Owner and its assigns have the option to repurchase the Community Building for the sum of One Pound (£1.00) in the circumstances described in paragraph 2 of this Schedule 2.
2. The circumstances referred to in paragraph 1. above are where the Council passes a resolution or otherwise decides to appropriate the Community Building or part thereof exercising its statutory powers under Section 122 of the Local Government Act 1972 or Section 237(1) of the Town & Country Planning Act 1990 or under any other statutory power or regulation for a purpose other than the use of the Community Building for a Permitted Use.
3. The Owner may exercise its option by service of a notice in writing on the Council and such notice shall constitute a contract for the sale and purchase of the Community Building and Part 1 of the Standard Commercial Property Conditions (Second Edition) shall apply save that no deposit shall be payable.

SCHEDULE 3

Construction of the Community Building

1. Community Building Works

1.1. The Council and the Owner shall use all reasonable endeavours to agree as soon as reasonably practicable and in any event prior to the commencement of any above ground level works in respect of the Mixed Use Building the exact specification and/or finishes to the following aspects of the Community Building Specification taking into account the outline specification of these works set out in the Community Building Specification and provided that such works do not exceed the cost allowed for such works as set out in the costs plan annexed to this agreement at Annexure 1:

1.1.1. Subsection 3.1 (Public Health Systems (within the building));

1.1.2. Subsection 3.2 (Mechanical Systems);

1.1.3. Subsection 3.3 (Electrical Services);

1.1.4. Subsection 4.3 (External Walls);

1.1.5. Subsection 4.4 (Windows and External Doors);

1.1.6. Subsection 4.6 (Internal Construction);

1.1.7. Subsection 4.7 (Internal Doors, Hatches and Ironmongery);

1.1.8. Subsection 4.8 (Floor Finishes);

1.1.9. Subsection 4.9 (Sanitary Fittings);

1.1.10. Subsection 4.10 (Other Fittings);

1.1.11. Associated Room Data Sheets;

And the parties shall submit the proposed specification and/or finishes of the above aspects of the Community Building Specification to the IEA in accordance with paragraph 2.2.4 of this Schedule.

Any dispute regarding the exact specification and/or finishes of the above aspects of the Community Building Specification may be referred by either party to an Expert in accordance with clause 10.

1.2. Once the exact specification and/or finishes to those aspects of the Community Building Specification set out in paragraph 1.1 of this Schedule have been agreed or determined pursuant to paragraph 1.1 of this Schedule, these specifications and/or finishes will form part of the Community Building Specification.

1.3. The Owner will carry out the Community Building Works in a proper and workmanlike manner and in accordance with the Community Building Specification and confirms that it will be liable for any latent defects arising from breach of this obligation for a period of 12 years from the date hereof.

1.4. Subject to the provisions of paragraphs 1.1 and 1.2 above, the Owner shall use its reasonable commercial endeavours to Practically Complete the Community Building Works before the Community Building Target Date in accordance with the Community Building Specification

1.5. Within 20 Working Days after entering into a building contract in respect of the Community Building Works and/or any relevant appointment of a member of the Professional Team the Owner shall obtain Collateral Warranties from the Contractor and each of the Professional Team and shall hand these over to the Council

1.6. The Council acknowledges the Owner's right to make such minor modifications or variations to the Community Building Specification from time to time as may be, in

the Owner's reasonable opinion, expedient or necessary. PROVIDED THAT such variations do not materially affect the market value, quality or amenity of the Community Building and PROVIDED FURTHER THAT the Owner shall consult with the Council where practical and shall notify the Council of any such modifications or variations made pursuant to this paragraph 1.5 as soon as reasonably practicable.

- 1.7. In the event that any modifications or variations to the Community Building Specification proposed by the Owner materially affect the market value quality or amenity of the Community Building then the Owner shall only be entitled to make such modifications or variations with the Council's prior written consent (not to be unreasonably withheld or delayed).

2. IEA

- 2.1. The Owner shall fund the appointment of an IEA on a fixed fee basis who shall be appointed by the Council (such appointment to be approved in writing by the Owner acting reasonably) and shall be an independent person to be agreed upon between the parties or in default of agreement to be appointed pursuant to the provisions of clause 10.

- 2.2. The appointment of the IEA in accordance with paragraph 2.1 of this Schedule 3 shall instruct the IEA to monitor the construction of the Community Building and act in accordance with the following provisions:

- 2.2.1. The IEA shall be given permission at all reasonable times during the period of the Community Building Works by prior arrangement with the IEA and the Contractor to enter the Community Building Site in order to inspect and view the state and progress of the Community Building Works and ensure that the Community Building Works are being carried in accordance with the Community Building Specification.

- 2.2.2. The IEA in exercising the rights contained in paragraph 2.2.1 shall comply with all relevant safety requirements at the Property and may not impede or obstruct the progress of the construction works nor issue any instructions to any Contractor any workmen employed on the site or the Professional Team but shall address any requirement comment or complaint only to the Owner.

- 2.2.3. The Owner shall give to the IEA reasonable prior notice of site and other formal meetings of the Professional Team and the Contractor or any of them in connection with the Community Building Works and the IEA shall be invited to attend and participate in such meetings and the IEA shall in any event be required to attend design meetings organised by the Owner on a monthly basis

- 2.2.4. The Owner may from time to time submit detailed design information consisting of floorplans, elevations, M&E layouts and specification to the IEA and the IEA shall be required to comment in each case within 5 Working Days.

- 2.2.5. The Owner shall pay due regard to any comments or requirements of the IEA which are consistent with the terms of this Agreement but subject to paragraph 2.2.6 the Owner shall have the right to reject any such comments if it is reasonable to do so

- 2.2.6. The Council shall through the IEA have authority to request changes to the Community Building Specification and the Owner shall be under no obligation to accept any such changes which may result if either (a) the cost allowed for such works as set out in the costs plan annexed to this agreement at Annexure 1 is exceeded; or (b) extensions to the

construction period for either the Community Building or any other part of the wider development construction save where agreement has been reached with the Council providing for the additional costs and/or costs associated with the extension of the building programme being paid for by the Council which additional costs shall be paid to the Owner within 20 Working Days of demand

3. Practical Completion

- 3.1. The Owner shall notify the Council and the IEA with at least 5 Working Days' notice in writing of the date upon which the Owner intends to allow inspection of the Community Building Works with a view to issuing a certificate of Practical Completion and the Council shall procure that the IEA shall inspect the Works within 5 Working Days of the date specified by the Owner in such notice as the date upon which it shall allow inspection.
- 3.2. The Council shall procure that the IEA acting reasonably if satisfied that it be the case shall certify that the Community Building Works have to all intents and purposes reached practical completion and the Council shall further procure that the IEA shall issue a notice in writing to that effect to both the Council and the Owner forthwith upon such certification and this procedure shall be repeated as often as necessary relating to the Community Building Works.
- 3.3. If on such inspection as referred to in paragraph 3.1 the IEA does not consider that the Community Building Works are Practically Complete the IEA shall, within 5 Working Days of such inspection serve a defects notice ("the Defects Notice") to that effect on the Owner. On receipt of such Defects Notice the Owner shall, without delay, procure the remedy and/or rectification of any work specified in the Defects Notice by the IEA or serve a notice within 5 Working Days of receipt of such Defects Notice requiring the question of whether or not the Works are Practically Complete to be resolved in accordance with Clause 10.
- 3.4. Any dispute as to whether or not the Community Building Works or any part of them have reached practical completion may be referred by either party to an Expert in accordance with clause 10 of this Agreement
- 3.5. For the avoidance of doubt Practical Completion shall not be delayed due to the existence of minor defects and minor items of outstanding works which the Owner is satisfied (acting reasonably) can be carried out after Practical Completion and within 3 months following Practical Completion the Owner and the Council shall procure that the IEA produces a snagging list of any minor defects or items of outstanding works to be remedied and/or carried out by the Owner as soon as practicable
- 3.6. The Owner and the Council shall procure that the IEA produces a list within 1 month of the expiry of the Defects Liability Period identifying any defects, shrinkages or faults that have appeared in the Community Building Works during the Defects Liability Period and the Owner shall procure that any such defects, shrinkages or faults are made good as soon as reasonably practicable.
- 3.7. When any defects or other faults which the IEA may have required the Owner to make good pursuant to paragraphs 3.5 and 3.6 of this Schedule 3 shall have been made good, the Owner shall notify the IEA and the IEA shall issue a notice to that effect (such notice not to be unreasonably withheld or delayed).
- 3.8. The Council shall allow the Owner the facilities reasonably necessary and full access to the Community Building to enable any defects to be repaired pursuant to the provisions of this Schedule 3.

Annexure 1
Community Building Specification

FORMER TWICKENHAM SORTING OFFICE

COMMUNITY BUILDING

OUTLINE BUILDING SPECIFICATION

27th February 2014

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1. COMMUNITY BUILDING – GENERAL

1.1. Proposed Uses

The specification for the Community Building has been prepared to accommodate the proposed range of uses identified by London Borough of Richmond upon Thames (LBRuT) which include:

Flexible Auditorium Space

- Live performance including theatre, dance, music and film screenings;
- Appropriate 'back of stage' areas including dressing rooms, WCs and storage;
- Seating for 300 – 350 people; and
- Non-performance including conferencing; exhibitions, craft fairs, workshops/classes and corporate/civil events; and
- Auditorium to be fitted with flat semi-sprung timber floor, adequate technical installations for lighting, sound and communications.

Circulation Spaces

- Appropriate foyer facilities to be provided for audience/event attendees; and
- Facilities to include WCs, café/bar, box office / merchandise counter.

Flexible Multi-purpose Rooms

- Available for meetings, classes, workshops and exhibitions;
- Dedicated dance / aerobic / yoga space; and
- Dedicated 'wet room' areas.

Ancillary Areas

- Café/bar facility for daily and event use;
- Conservatory room for exhibitions/functions; and
- Back of house catering area.

1.2 Planning Drawings

The specification takes into account the planning drawings which are as follows:

- Lower Ground & Ground Floor Plans Ref: 12.035-DP-10.F
- First, Second & Third Floor Plans Ref: 12.035-DP-11.E
- Fourth Floor & Roof Plans Ref: 12.035-DP-12.D
- Proposed Community Building Elevations Ref: 12.035-DP-20.E
- Proposed Community Building Section A – A Ref: 12.035-DP-30.F

1.3 Building Layout

The Community Building will be delivered in accordance with the planning drawings and will provide the following:

Basement/Lower Ground Floor Area

2 x dressing rooms; male and female WC and showers; plant and technical rooms; 2 x storage spaces; accessible WC and shower; refuse store; catering area; access to stage via staircase and platform lift; underground link to access main building lift and stair core (see Planning Drawing Ref: 12.035-DP-10.F).

Ground Floor

Entrance with canopy, foyer with staircase to first floor and reception desk; lobby area providing access to performance hall, male and female toilets and changing places facility; access to lift and stair core (see Planning Drawing Ref: 12.035-DP-10.F).

Auditorium

Multi-purpose performance hall with space for a 6m deep stage area; back stage lobbied crossover; retractable seating with dedicated storage area, fixed first floor and side gallery seating and space loose seating; 2 x general storage areas (see Planning Drawing Refs: 12.035-DP-10.F, 12.035-DP-11.E and 12.035-DP-30.F).

First Floor

Lobby area with balcony to overlook ground floor foyer; access to lift and stair core; 2 additional lobby areas to access the first floor fixed gallery seating via 2 sets of doors; merchandise/box office area; café/bar facility with space for seating/table area and associated external balcony (see Planning Drawing Ref: 12.035-DP-11.E).

Control Room Level

Stair and lift access directly into Control room providing visual link to Auditorium (see Drawing ref: 12.035-DP-11.E)

Second Floor

2 x multi-purpose rooms (including optional catering space); central lobby area providing male, female and accessible toilets; 'back of house' kitchen/bar; access to lift and stair core; conservatory room providing access to second floor external terrace area (see Planning Drawing: 12.035-DP-11.E).

Third Floor

2 x multi-purpose rooms; office/admin room; cleaners room; central lobby area providing male and female toilets; access to lift and stair core (see Planning Drawing: 12.035-DP-11.E).

Fourth Floor

2 x multi-purpose rooms; central lobby providing access to male, female and accessible toilet; access to lift and stair core (see Planning Drawing: 12.035-DP-11.D).

2. TECHNICAL STANDARDS

2.1 Building Regulations

The following Building Regulations will be applicable to the design of the Community Building:

Part A Structure

Part B2 Fire

Part C Site Preparation

Part D Toxic Substances

Part E Acoustics

Part F Ventilation

Part G Sanitation

Part H Drainage

Part J Combustion Appliances

Part K Collision and Falling

Part L2A Conservation of Fuel and Power

Part M Accessibility
(to be referred to in conjunction with BS: 8300).

Part N Glazing

2.2 LBRuT Technical Specifications

LBRuT has advised that its Standard Electrical Specification and Standard Mechanical Specification documents are to be considered in the detailed design of the Community Building. These documents provide the relevant standards for all new public buildings within the Borough. St James and LBRuT will agree the extent to which these documents will be applicable to this project.

3. SPECIFIC DESIGN CRITERIA

3.1 Public Health Systems

Rainwater Pipework

Above ground rainwater pipework design will be based on BS EN 12056-3. Rainfall intensity will be based on the nature and use of the building and appropriate category of risk that can be accepted. Rainwater pipework will run from the roof level rainwater outlets to ground floor level or basement floor level, connecting to the below ground system.

Foul Drainage - Above Ground

Above ground foul drainage design will be based on System III as defined in BS EN 12056-2 and using the tabulated discharge units identified in Table 2. Large diameter sanitary discharge pipework will be installed in uPVC or similar, from the highest outlets to ground floor level or basement floor level, connecting to the below ground system. Small diameter sanitary discharge pipework will be installed in muPVC. Where small diameter pipework is exposed it will be coloured white. The system will include ventilating pipes to atmosphere and air admittance valves where required.

Cold Water

It is proposed that a new incoming water main will be installed to serve the Community Building. As a BREEAM requirement, the supply will be metered at the connection to the utilities main and at the entry point to the building. The mains water supply will be distributed to all potable water outlets to all floor levels.

A small packaged break tank and booster pump set will be installed to provide sufficient pressure for water distribution to the sanitary appliances on the top floor of the building. This will be designed for pressure boosting only and not to provide back-up water supply during an interruption to mains supply. As well as serving all sanitary appliances, this boosted water supply will feed the hot water system.

Pipework will be installed in copper or crimped plastic. The entire domestic water system installation will be designed and installed in accordance with the relevant parts of BS EN 806 and the requirements of the local water Authority.

Hot Water

Hot water is generated using a variable refrigerant flow (VRF) heat pump boiler. The technology extracts heat from outside air and concentrates this energy to heat the hot water system. The system can also achieve further efficiencies, by recovering heat from areas of the building that require comfort cooling and using this energy to heat the hot water.

The system will use two VRF heat pump boilers connected to a buffer vessel. Pipework will be run from the buffer vessel to serve all sinks, wash hand basins and showers within the community building.

Hot water outlets serving disabled toilets and public areas will be provided with thermostatic mixing valves to restrict outlet temperatures. Pipework will be designed in accordance with BS EN 806 and Water Regulations. Pipework will be installed in copper and will be insulated and vapour sealed.

3.2 Mechanical Systems

Natural Gas

There are no proposals to utilise natural gas.

Low Temperature Hot Water Heating

A small LTHW space heating system will be installed for the toilets. The LTHW will be generated using a VRF heat pump boiler and use a distribution pipe network run out to radiators in each toilet area.

Comfort Cooling and Space Heating

It is proposed that the multi-purpose rooms and the café/bar area will have variable refrigerant flow (VRF) fan coil units to provide cooling and heating. The VRF system will use a set of external condensers.

The fan coil units in each room will generally be ceiling cassette units, with a ducted supply from the fresh air ventilation system and adjustable vanes.

Fresh Air Treatment

It is proposed that VRF heat pumps will be used to treat the incoming fresh air. This system will heat the air in winter and cool the air in summer. External condensers will be installed.

General Supply and Extract Ventilation (Auditorium – Displacement Ventilation)

In the auditorium (theatre), it is proposed to use displacement ventilation. This type of system introduces fresh air at low level, at very low velocity. The vitiated air is extracted at high level. As a result, occupants have the opportunity to inhale the fresh air and the heating and comfort cooling of the room can be provided by the ventilation system.

The auditorium air handling unit will be located in the basement mechanical plant room and will draw fresh air in through a louver in the façade. The air handling unit will then provide filtration, heat-recovery and temperature control. The treated fresh air would pass through the supply ductwork, buried in a trench, from the basement plant room, to the riser behind the theatre. At this location the air would pass in to the theatre space, using a purpose designed set of displacement diffusers.

The proposed design is based on the room occupancies of 300.

Other Areas

It is proposed to install a central air handling unit to serve the other occupied areas of the Community Building (multi-purpose rooms, café/bar, reception and lobby areas etc):

For maximum proposed design occupancy refer to **Appendix 6** Occupancy Schedule.

It is currently assumed that the ground floor will only have a transient occupancy and can be naturally ventilated.

Toilet Extract

Toilet extract ventilation will be provided by a central extract unit, located on the roof of the 4th floor.

Kitchen Ventilation

A kitchen extract ventilation system will be installed. This system will remove heat and small levels of odour but it will not deal with grease or high levels of odour.

Central Control VRF (Comfort Cooling) Controllers

A central VRF control system will be installed with associated room controllers located in each room. Generally, the room controllers will be fixed, wall mounted type.

3.3 Electrical Services

Incoming Supply

A 400A 260kVA supply from the substation in the adjacent residential building will be provided. This shall terminate to a meter position within the Lower Ground Floor plant room.

Distribution Equipment

A MCCB panel board will be located within the lower ground floor switch room. Dedicated power and lighting boards will be provided for the auditorium, the café/bar and the kitchen. Dedicated submains will also be provided to the lift, the mechanical control panel and large mechanical plant.

Lighting and Emergency Lighting

The internal lighting will be designed to provide the following maintained luminance in accordance with CIBSE recommendations:

- Lobbies 100 lux
- Main entrances 150 lux
- Staircases and Corridors 100 lux
- Plant areas 150 lux
- Stores 100 lux
- Auditorium 400 lux
- Multi-purpose rooms 400 lux

Lighting control to toilets, corridors, stairs, multi-purpose rooms and stores will be achieved by PIR control. Manual switching will be provided within the kitchen and café/bar.

Emergency Lighting will be designed to comply with BS5266 designed to maintain minimum levels as detailed below for a 3 hour minimum duration:

- Escape routes 1.0 lux non maintained
- Plant areas 1.0 lux non-maintained
- Auditorium 0.2 lux maintained

External lighting will be provided by means of luminaires to light building entrances and exits. They will be controlled by combined photocell/time switch control.

General Power

Switched socket outlets will be provided throughout the building for general purpose and cleaners use.

Power supplies will be provided for fixed equipment.

Power supplies will be provided for kitchen equipment and also sockets for general purpose use.

Auditorium Specialist Requirement

Power supplies and cable containment will be provided for stage lighting, audio and projection systems.

Fire Detection and Alarm

The fire detection and alarm system will be designed to meet the requirements of BS5839. It is proposed to install fire detection and alarm system to L1 standard.

Telecoms and Data Infrastructure

The incoming telecom cable will terminate to a Distribution point (DP) within the electrical switch room. From this it is proposed to run a cable to a data cabinet in the reception area of the ground floor. Data outlets will be provided in the reception area, office/admin room and café/bar.

Incoming telecom cables will also be provided to serve essential lines (Lift and fire/security).

TV System

Containment for future TV/Sky to the café/bar area and the auditorium will be provided.

Security/Access Control/CCTV Requirements

CCTV cameras at the main entrance, in the bar, main foyer area, conservatory and balcony will be provided. Viewing and recording facilities will be at the main reception desk.

An intruder alarm system will be provided to ground and first floor areas, the keypad control will be in the reception.

Lightning Protection

The Lightning Protection Strategy for the main development will govern the degree of lightning protection required for the Community Building. A risk assessment will be conducted to establish this.

3.4. Acoustic Performance

The acoustic design criteria for the Community Building fall into the following categories:

- Indoor Ambient Noise Levels (from external noise intrusion & building services);
- Internal sound insulation (airborne and impact);
- Rain noise;
- Reverberation; and
- Building Services noise.

Plant noise emissions will be designed to 10dBA below background recorded levels in accordance with the Local Planning Authority requirements, in order to protect the interests of local residents and other potentially noise sensitive areas.

Acoustic Design Criteria - Indoor Ambient Noise Levels

Indoor ambient noise levels are to include contributions from external sources outside the premises (including but not limited to, noise from road, rail and air traffic, industrial and commercial premises) as well as internal building services sources.

The following table presents the upper limit of indoor ambient noise levels in various internal spaces during normal ventilation conditions. For guidance, the equivalent NR levels are presented for rooms served by mechanical ventilation.

TWICKENHAM SORTING OFFICE
COMMUNITY BUILDING - OUTLINE SPECIFICATION

Room Type	Upper Limit Indoor Ambient Noise Level, $L_{Aeq,30min}$ (Equivalent NR)
Auditorium	35dB (NR30)
Dance Classroom	40dB (NR35)
Foyer, Circulation Space, Changing Rooms, Corridors, Stairwells	45dB (NR40)
Kitchens*, Toilets*	50dB (NR45)
Office, Admin	40dB (NR35)
Café/Bar	45dB (NR40)
Multi-Purpose 'Flexible' Space*	40dB (NR35)
Conservatory (corporate, exhibitions, private hire)	40dB (NR35)

*If a dry flexible space is identified as to be used for music practice, this area would be designed to have an upper limit indoor ambient noise level of 35db (NR30).

During rapid ventilation conditions, the above values can be increased by 5dB.

Acoustic Design Criteria - Internal Sound Insulation

The performance standard shall be defined by the activity noise in the 'source' room and the noise sensitivity in the 'receiving' room in accordance with the following two Tables.

Type of Room	Activity Noise (Source Room)	Noise Tolerance (Receiving Room)
Auditorium	High	Very Low
Dance Classroom	Very high	Low
Foyer, Circulation Space, Changing Rooms, Corridors, Stairwells	Average	Medium
Kitchens*, Toilets*	Average/High	High
Office, Admin	Average	Medium
Café/Bar	High	High
Multi-Purpose 'Flexible' Space	Average	Low
Conservatory (corporate, exhibitions, private hire)	Average	Low

	$D_{nt}(T_{nt,max}),W$ Activity Noise in Source Room				
		Low	Average	High	Very High
Noise Tolerance Receiving Room	High	30	35	45	55
	Medium	35	40	50	55
	Low	40	45	55	55
	Very Low	45	50	55	60

Acoustic Design Criteria - Reverberation Times

The following performance standards for reverberation times within different spaces are recommended and will need to be agreed with Building Control.

Room Type	Mid Frequency Reverberation Times T_{mf} (seconds)
Auditorium	<1.0
Dance Classroom	<1.2
Atrium, Circulation Space, Changing Rooms, Corridors*, Stairwells*	<1.5
Kitchens*, Toilets*	<1.0
Office, Admin	<1.0
Café/Bar	<1.0
Multi-Purpose 'Flexible' Space	<0.8
Conservatory (corporate, exhibitions, private hire)	<0.8

Acoustic Design Criteria - Building Services Noise (Atmospheric)

The Planning Authority's criteria for the proposed development are as follows:

Prior to the commencement of development, a scheme shall be submitted to and approved in writing by the local planning authority which demonstrates that the following noise criteria can be complied with and shall thereafter be retained as approved.

1. *The cumulative measured or calculated rating of noise emitted from the proposed plant to which the application refers, shall be 5dB(A) below the existing background noise level or 10dB(A) below if there is a particular tonal or discrete component to the noise, at all times that the mechanical system etc. operates. The measured or calculated noise levels shall be determined at the boundary of the nearest ground floor noise sensitive premises or 1 metre from the façade of the nearest first floor (or higher) noise sensitive premises, and in accordance to the latest British Standard 4142; An alternative position for assessment/measurement may be used to allow ease of access, this must be shown on a map and noise propagation calculations detailed to show how the design criteria is achieved.*
2. *The noise from the proposed plant must achieve the good to reasonable standard for internal noise levels detailed in Table 5 of BS 8233 'Sound Insulation and Noise Reduction for Buildings C of P'.*
3. *The plant shall be supported on adequate proprietary anti-vibration mounts as necessary to prevent the structural transmission of vibration and regenerated noise within adjacent or adjoining premises, and these shall be so maintained thereafter. Reason: To protect the amenities of nearby occupants.*

Based on the above requirements, it is recommended that the following plant noise emission criteria should be achieved at 1 metre outside the nearest residential property.

Position	Plant Noise Emission Criteria (dB re 2x10 ⁻⁵ Pa)	
	Daytime (07:00 – 23:00 hours)	Night-time (23:00 – 07:00 hours)
1	42	30
2	32	30
3	38	28

Any plant with a tonal or intermittent characteristic should be designed to a noise levels 5dB lower.

3.5 Auditorium Specification (to be read in conjunction with Theatre Plan Master Plan)

General Lighting

Single system using LED lighting to achieve uniform minimum 400 lux across the auditorium. Fittings will be individually addressable and dimmable and will provide 'House Lighting' and 'Working Light' scenarios.

Stage Lighting

Stage lighting will be controlled from a plug-in lighting desk. Provision will be made to hang spotlights and floods within the auditorium but principally around the stage area. Set up likely to include:

- 2 x 24 way dimmer racks, total 48 circuits;
- 1 x 12 way 'Independent' non-dim contactor rack;
- 1 x 48 way part manual, part computerised lighting desk;
- 1 x 10 way DMX control signal splitter;
- 6 x internally wired bars running across the stage and auditorium at high level on which stage luminaires and rigged;
- Various production lighting socket outlet boxes; and
- Basic supply of stage luminaires and accessories.

Main 'House' Audio system

A basic 'House' audio system providing local control of installed speakers, microphones, laptop, etc. all routed back to an equipment rack in the technical room in the basement. System can be expanded to allow to plugging in of additional equipment and taking control with a portable mixing desk, for more complex shows. Set up likely to include:

- Equipment rack, with amplifiers, EQ digital signal processor, microphone and loudspeaker patch-bays;
- Portable source rack, with CD/DVD, flashcard, MP3/4 devices;
- Portable audio mixer, analogue, say 16 into 2 channels;
- Installed 'House' speaker system, central cluster and side columns;
- Facility panels and plug-in points; and
- Local 'House' control.

Technical Communication, Paging and Show Relay

Set up likely to include:

- Show relay microphone, amplifier, signal router, front of house and backstage speakers, and simple Stage Manager's microphone box;
- Ring intercom amplifier, belt packs and headsets; and
- Audio Loop for Hard of hearing and amplifier.

Projection

Digital projector hanging under ceiling in front of 'stage' area, projecting onto 6 metre 16:9 ratio electric roll-down high brightness front projection screen approximately 5m width. Laptop plug-in catered for under Audio section. Set up likely to include:

- Digital projector and zoom lens, 5,500 ANSI lumens; and
- Electric FP screen with handheld remote operation.

Rigging

The ability to hang scenery, masking drapes, curtain tracks, stage lights etc across the auditorium and particularly the stage area. It is envisaged that all steel bars provided will be 'fixed' and not capable of being winched or hoisted up and down. Access equipment will be required to get to the fixed bars safely. Set up likely to include:

- Fixed bars (approx. 15 no.) across the auditorium and stage, perhaps a couple following the outer wall line;
- Curtain (tab) tracks x 2, with central overlap, suspended from fixed bars;

- Draperies, which will include a full set of black wool serge masking curtains, legs and borders; and
- Access equipment, including a 3 part ladder and a mini Zarges castored zip-up tower.

Seating

Telescopic Seating system for the main bank of tiered seating in mobile units. A front row of loose matching chairs with mobile storage dollies. Fixed gallery seats will be provided to match (including wheelchair provision). Seating to include:

- Telescopic mobile units including palette trucks with motorised deployment;
- Fixed matching gallery seats; and
- Loose chairs and storage.

3.6 Café/Bar and Catering Facilities

General

A detailed fit out specification will be agreed with LBRuT following further clarification on end user requirements and the general catering strategy for the building.

3.7 General Communications

Public Address and Intercom Systems

A public address system will be installed throughout the building. An intercom system will be provided for backstage areas to main foyer/reception; dressing rooms café/bar.

4. BUILDING CONSTRUCTION

4.1 Substructures

The following provides a summary of the proposed substructure design:

Foundations

The foundations to the building will comprise piled foundations. A retaining wall will be provided to form the outer wall of the lower ground floor local to the Network Rail ramp.

Lower Ground Floor

The lower ground floor will comprise of a reinforced concrete construction.

Ground Floor

The ground floor will be formed as a suspended reinforced concrete slab, supported by columns and walls over the lower ground floor area, and on piles and pile caps in the 5-storey area.

Floor Duct

An under floor duct will be provided below the performance hall to transfer services from the Lower Ground Floor/Basement plant room.

4.2 Superstructure

The following provides a summary of the proposed superstructure design:

Frame

The auditorium will be constructed using structured steel columns and beams to provide a column-free auditorium. The roof of the auditorium will comprise a concrete metal deck slab.

The walls of the theatre will be formed in cavity masonry.

The 5-storey area of the building will comprise of a reinforced concrete frame with slabs spanning between columns. The lift shaft and staircase walls will be constructed in reinforced concrete.

Loading Criteria

The following imposed live loads will be accounted for in the design of the structure, in accordance with BS6399: Part 1: 1996.

Basement/Lower Ground Floor:

Plant and storage areas	5.0 kN/m ²
Dressing rooms	2.0 kN/m ²
Corridors	3.0 kN/m ²

Ground Floor:

Auditorium including stage area	5.0 kN/m ²
Entrance foyer, corridors, stairs	4.0 kN/m ²
Toilet/changing facilities	2.0 kN/m ²

First Floor:

Fixed and flexible seating to auditorium	4.0 kN/m ²
Café/Bar, lobby, stairs	4.0 kN/m ²
Balcony to Café/Bar area	4.0 kN/m ²

Horizontal load to balcony balustrading	1.5 kN/m run and/or 1.5 kN/m ²
<i>Second Floor:</i>	
Terrace/roof to auditorium/conservatory	4.0 kN/m ²
Roof of auditorium/allowance for rigging, etc	1.5 kN/m ²
Multi-purpose rooms, corridors, stairs	4.0 kN/m ²
Kitchens and toilets	2.0 kN/m ²
<i>Third Floor:</i>	
Roof of conservatory	3.0 kN/m ²
Multi-purpose rooms, corridors, stairs	4.0 kN/m ²
Toilets	2.0 kN/m ²
<i>Fourth Floor:</i>	
Multi-purpose rooms, corridors, stairs, balconies	4.0 kN/m ²
Toilets	2.0 kN/m ²
<i>Roof:</i>	
Maintenance only	0.75 kN/m ²

4.3 External Walls

The following provides a summary of the proposed external wall design/materials.

Facing Bricks

Main facing brickwork to comply with the requirements of the relevant planning condition and:

- Be manufactured from natural clay in accordance with BS3921
- Moisture absorption and durability appropriate for site exposure

Concrete Blocks

Blockwork to inner leaf of building to be medium density with crushing strength and thickness as required by Structural Engineer. Internal leaf to receive board finish.

Cavity Wall Insulation

Cavity wall insulation to achieve a minimum U value to meet Building Regulation requirements.

Render

Rendered finishes to be acrylic coloured onto blockwork outer leaf wall.

4.4 Windows and External Doors

Windows, external screens and external doors to be composite or aluminium framed. Windows and doors will achieve a minimum U value to meet Building Regulation requirements.

Curtain Walling

Curtain walling design and finish to Planning Authority requirements. Glazing to incorporate safety glass as required by current Building Regulations

Windows

Composite or Aluminium frames, design and finish to Planning Authority requirements.
Glazing to incorporate safety glass as required by current Building Regulations

Opening windows and doors to be fitted with trickle ventilation if required to meet current Building Regulations.

The degree to which windows may be opened will be determined by the natural ventilation requirements of each room with the overriding requirement for safety and prevention of persons falling from windows. It may be advisable to have fixed glazing due to the acoustic requirements and the ventilation strategy.

External Doors

All external doors are to be aluminium framed.

4.5 Roofs

Terrace

This area is to be provided with concrete paving.

Conservatory and Main Roof

Applied water proofing system with 20 year warranty.

Access rooflight to be provided within corridor below main roof area.

Rainwater Goods

Rainwater gutters and down pipes to be uPVC.

4.6 Internal Construction

Internal Walls

Exposed internal blockwork walls within Basement/Lower Ground Floor areas to be painted.

Partitions to remaining internal walls to be constructed from metal studwork with plasterboard finish.

Skirtings

Skirtings are to be painted mdf with additional site painted finish, 150 mm high x 19 mm thick, pencil radius top profile. OR 150mm high tiled skirting where floor tiles are present.

Window Boards

Window boards are to be 19mm thick painted mdf, with additional site painted finish, pencil radius top profile

Ceilings – Entrance & Foyer

Plasterboard suspended ceiling on MF system to the entrance and 1st floor foyer areas.

Ceilings – Auditorium

Plasterboard suspended ceiling on MF system.

Ceilings – Other Areas

Ceiling tiles on MF system

4.7 Internal Doors, Hatches and Ironmongery

Internal Doors

Locks to be provided to both internal and external doors suited to clients requirements.

All doors to be solid core, painted finish, with vision panels to all doors except, Hall Stores, general stores, service rooms and WC's except as required by Regulations. All doors are to be lockable.

4.8 Floor Finishes

Entrance and Foyer

To be ceramic tiles with matwell, metal staircase to 1st floor level to have timber treads

Toilets, Café/Bar, Kitchen and Stores

To be slip resistant vinyl sheet, complete with sit-in PVC skirting welded to vinyl sheet flooring.

Conservatory, Multi-purpose Spaces and Dressing/Changing Rooms

To be slip resistant vinyl sheet to approval with mdf skirting.

Auditorium

To be semi-sprung timber flooring. – Harlequin or equal approved.

Main Staircase

Main Staircase durable non-slip vinyl finishes with contrasting nosings

4.9 Sanitary Fittings

Toilets

To be provided with required WCs, urinals and basins.

Changing Rooms

To be provided with required WCs, basins, and shower units.

Multi-purpose Rooms

To be provided with required basins (2 no. rooms).

4.10 Other Fittings

Dressing Rooms

To be fitted with vanity tops and mirrors.

Toilets and Changing Rooms

To be fitted with mirrors.

Café/Bar and Bar/Kitchen

To be fitted out in accordance with specification agreed between St James and LBRuT.

Reception and Sales Desks

To be fitted out in accordance with specification agreed between St James and LBRuT.

E: Richmond Council comments dated 19.07.13 incorporated
23.07.13

St James

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FORMER TWICKENHAM SORTING OFFICE

PROPOSED COMMUNITY BUILDING ELEVATIONS

scale: **1:100 @ A1**

date **May '13**

chkd

app'd for issue

drawing number

12.035-DP-20.E



+25.350

900

3750

L. Grd FFL

+6.15 AOD

F: Richmond Council comments dated 19.07.13 incorporated
23.07.13

St James

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Buller Welsh
Chartered Architects

42-48 Great Portland Street, London W1W 7NB
Tel: 020 7636 7953 www.bullerwelsh.com

**FORMER TWICKENHAM
SORTING OFFICE**

**PROPOSED COMMUNITY
BUILDING - ELEVATIONS &
SECTION A - A**

scale **1:100 @ A1**

date **May '13**

chkd

app'd. for issue

drawing number

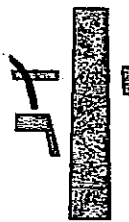
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E: Richmond Council comments dated 19.07.13 incorporated
23.07.13

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Buller Welsh
Chartered Architects

42-48 Great Portland Street, London W1W 7NB
Tel: 020 7636 7953 www.bullerwelsh.com

**FORMER TWICKENHAM
SORTING OFFICE**

**PROPOSED COMMUNITY
BUILDING**

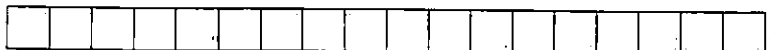
**FIRST, SECOND & THIRD
FLOOR PLANS**

scale: **1:100 @ A1** date **May '13**

chkd _____ app'd for issue _____

drawing number

12.035-DP-11.E



D: Richmond Council comments dated 19.07.13 incorporated
23.07.13

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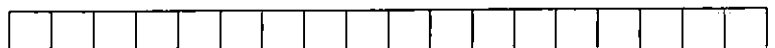
FORMER TWICKENHAM SORTING OFFICE

PROPOSED COMMUNITY BUILDING FOURTH FLOOR & ROOF PLANS

scale	1:100 @ A1	date	May '13
chkd.		app'd for issue	

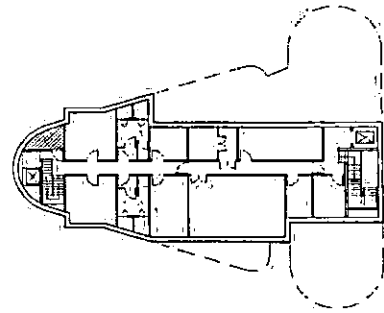
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APPENDIX 2

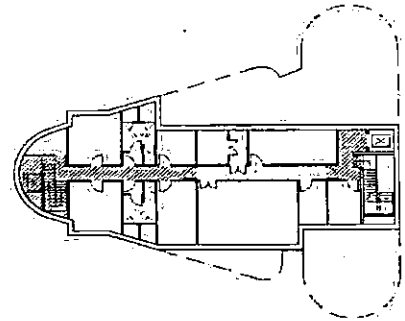
Combined General & M&E Room Data Sheets



Community Building
Former Twickenham Sorting Office
Lower Ground Floor

KEY PLAN

Room Name	Accessible WC	Approx. Area / Ceiling Height : 5.2m ² / 2.4m	Room No. LG.01.
MECHANICAL			
Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space.
Air Changes/ Hour	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW/ CWS & Waste for WC & Basin		
Environmental Control System	LST Radiator Heating from VRF Heat Pump		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	Handrier / disabled alarm		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements.		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	disabled call alarm		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 45	
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting. Floor gully to be provided.		
Walls	Fully tiled		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware	White Sanitaryware Standard Doc M installation and accessible shower pack. Leaderflush bi-fold 'pivette' door or similar		
Date: 26.02.14 Revision B			



Community Building
Former Twickenham Sorting Office
Lower Ground Floor

KEY PLAN

Room Name	Lobby x (2)	Approx. Area / Ceiling Height : 39m ² / 2.4m	Room No. LG.02
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MECHANICAL

Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient space
Air Changes/ Hour	None		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	VRF Fan Coil Cassette heating		

ELECTRICAL

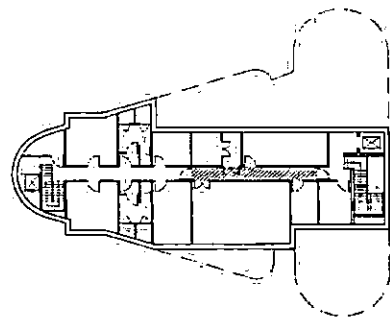
Lighting	Downlights
Illumination Levels	100 lux
Emergency Lighting	To meet BS 5266-1
Data/Telephone	No
Small Power	1 No TSSO
Equipment	No
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements
PA System	No
Special Supplies	No
TV/ Radio Outlets	No
Audio/ Visual Systems	No
Audio Systems	No
Access Control	No
CCTV	No
Intruder Alarm	No
Specialist Systems	No

ACOUSTIC PERFORMANCE

Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 40
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FINISHES

Floor	Slip resistant vinyl sheet with 150mm x 19mm painted mdf skirting
Walls	Painted Fairfaced blockwork
Ceiling	Suspended M/F system, painted plasterboard
Fitings / Sanitaryware	Platform Lift



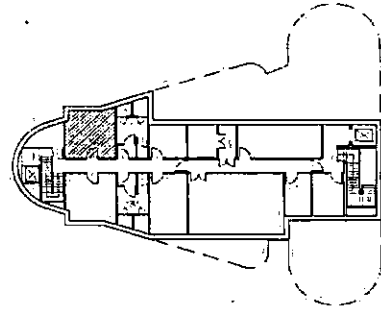
Community Building
Former Twickenham Sorting Office
Lower Ground Floor

KEY PLAN

Room Name	Corridor	Approx. Area / Ceiling Height : 12m ² / 2.4m	Room No. LG.03
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient space
Air Changes/ Hour	None		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	VRF Fan Coil Cassette heating		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	1 No TSSO		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR			NR 40
FINISHES			
Floor	Slip resistant vinyl sheet with 150mm x 19mm painted mdf skirting		
Walls	Painted Fairfaced blockwork		
Ceiling	Suspended M/F system, painted plasterboard		
Fitings / Sanitaryware	No		
			Date : 26.02.14
			Revision B

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Community Building
Former Twickenham Sorting Office
Lower Ground Floor

KEY PLAN

Room Name	Dressing Room 1	Approx. Area / Ceiling Height : 18m ² / 2.4m	Room No. LG.04
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MECHANICAL

Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	24 +/- 2
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	10
Air Changes/ Hour.	10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW/ CWS & Waste for WC & Basins		
Environmental Control System	VRF Fan Coil Cassette heating and cooling		

ELECTRICAL

Lighting	Downlights
Illumination Levels	100 lux
Emergency Lighting	To meet BS 5266:1
Data/Telephone	2 x RJ45 (Cat 5e) - provided for use a data, telephone or internal intercom
Small Power	3 No TSSO
Equipment	No
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements
PA System	No
Special Supplies	No
TV/ Radio Outlets	No
Audio/ Visual Systems	No
Audio Systems	No
Access Control	No
CCTV	No
Intruder Alarm	No
Specialist Systems	No

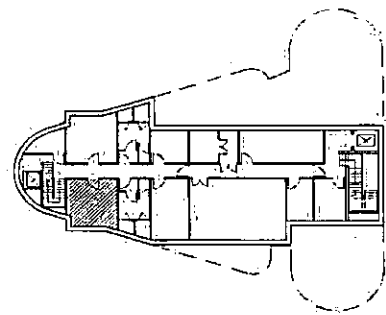
ACOUSTIC PERFORMANCE

Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 40.
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FINISHES

Floor	Slip resistant vinyl sheet with 150mm x 19mm painted mdf skirting
Walls	Painted Fairfaced blockwork / rc
Ceiling	Suspended M/F system, painted plasterboard
Fittings / Sanitaryware	1 whb with mirror over. Make-up tops. Lockers.

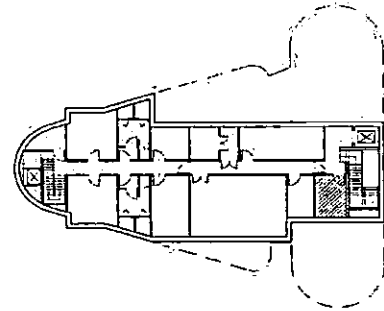
Date : 26.02.14
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Community Building
Former Twickenham Sorting Office
Lower Ground Floor

KEY PLAN

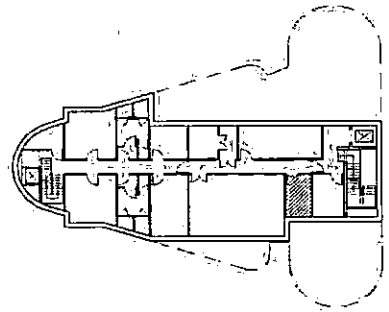
Room Name	Dressing Room 2	Approx. Area/ Ceiling Height	18m ² / 2.4m	Room No. LG.05
MECHANICAL				
Winter Temp (*C ± *C)	21 +/- 2	Summer Temp (*C ± *C)	24 +/- 2	
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	10	
Air Changes/ Hour	10 AC/HR			
DHW/ CWS/ Waste/ Vending	DHW/ CWS & Waste for WC & Basins			
Environmental Control System	VRF Fan Coil Cassette heating and cooling.			
ELECTRICAL				
Lighting	Downlights			
Illumination Levels	100 lux			
Emergency Lighting	To meet BS 5266-1			
Data/Telephone	2 x RJ45 (Cat 5e) - provided for use a data, telephone or internal intercom			
Small Power	3 No TSSO			
Equipment	No			
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements			
PA System	No			
Special Supplies	No			
TV/ Radio Outlets	No			
Audio/ Visual Systems	No			
Audio Systems	No			
Access Control	No			
CCTV	No			
Intruder Alarm	No			
Specialist Systems	No			
ACOUSTIC PERFORMANCE				
Upper Limit Indoor Ambient Noise Level - Equivalent NR			NR 40	
FINISHES				
Floor	Slip resistant vinyl sheet with 150mm x 19mm painted mdf skirting			
Walls	Painted Fairfaced blockwork / rc			
Ceiling	Suspended M/F system, painted plasterboard			
Fittings/ Sanitaryware	1 whb with mirror over. Make-up tops. Lockers.			
Date : 26.02.14				
Revision B				



Community Building
Former Twickenham Sorting Office
Lower Ground Floor

KEY PLAN

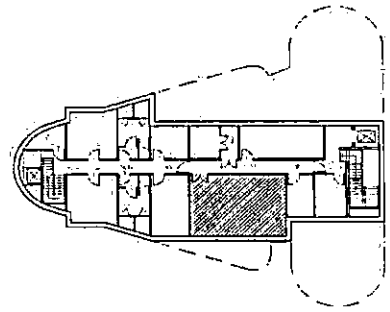
Room Name:	Tech Room	Approx. Area / Ceiling Height : 10m ² / 3.3m	Room No. LG.06.
MECHANICAL			
Winter Temp (°C ± °C)	25 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	1
Air Changes/ Hour	5 AC/HR extract only		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	VRF Wall Mounted Fan Coil cooling		
ELECTRICAL			
Lighting	Linear, flourescent		
Illumination Levels	150 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	4 x RJ45 (tbc) (Cat 5e) - provided for use a data, telephone or internal intercom		
Small Power	5 No TSSO		
Equipment	TBC		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	TBC		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 35	
FINISHES			
Floor	Slip resistant vinyl sheet with 150mm x 19mm painted mdf skirting		
Walls	Painted Fairfaced blockwork / rc		
Ceiling	Painted conc. soffit		
Fitings/ Sanitaryware	No		
Date : 26.02.14 Revision B			



Community Building
Former Twickenham Sorting Office
Lower Ground Floor

KEY PLAN

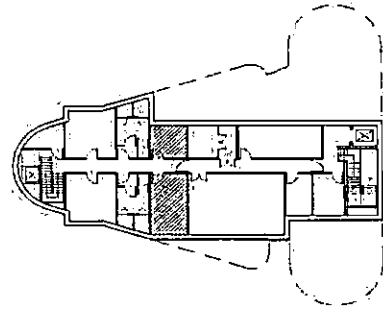
Room Name	Electrical Plant	Approx. Area / Ceiling Height : 8m ² / 3.3m	Room No. LG.07
MECHANICAL			
Winter Temp (°C ± °C)	Uncontrolled	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Unoccupied
Air Changes/ Hour	None		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	None		
ELECTRICAL			
Lighting	Linear fluorescent		
Illumination Levels	150 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	1 No TSSO		
Equipment	As required		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		TBC	
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted Fairfaced blockwork / rc		
Ceiling	Painted conc. soffit		
Fitings / Sanitaryware	No		
Date : 26.02.14 Revision B			



Community Building
Former Twickenham Sorting Office
Lower Ground Floor

KEY PLAN

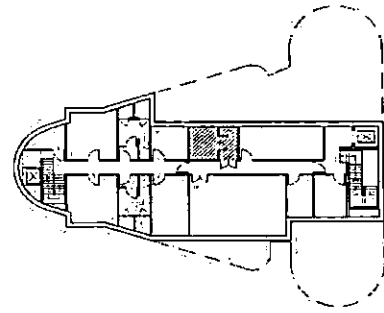
Room Name	Mechanical Plant	Approx. Area / Ceiling Height : 44m ² / 3.3m	Room No. LG.08
MECHANICAL			
Winter Temp (°C ± °C)	Uncontrolled	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Unoccupied
Air Changes/ Hour	None		
DHW/ CWS/ Waste/ Vending	CWS & Waste for plant		
Environmental Control System	None		
ELECTRICAL			
Lighting	Linear fluorescent		
Illumination Levels	150 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	4 x RJ45 (Cat 5e) - provided for use a data, telephone or internal intercom		
Small Power	1 No TSSO		
Equipment	As required		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		TBC	
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted Fairfaced blockwork / rc		
Ceiling	Painted conc. soffit		
Fittings / Sanitaryware	No		
Date : 26.02.14 Revision C			



Community Building
Former Twickenham Sorting Office
Lower Ground Floor

KEY PLAN

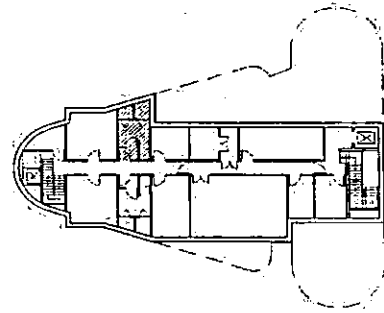
Room Name	Stores x 2	Approx. Area / Ceiling Height : 26m ² / 3.3m	Room No. LG.09
MECHANICAL			
Winter Temp (*C ± *C)	Uncontrolled	Summer Temp (*C ± *C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Unoccupied
Air Changes/ Hour.	None		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	None		
ELECTRICAL			
Lighting	Linear fluorescent		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	1 No TSSO		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR	NA		
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted Fairfaced blockwork / rc		
Ceiling	Painted conc. soffit		
Fittings / Sanitaryware	Services connections only for catering equipment		
Date : 26.02.14			
Revision B:			



Community Building
Former Twickenham Sorting Office
Lower Ground Floor

KEY PLAN

Room Name	Refuse	Approx. Area / Ceiling Height : 12m ² / 3.3m	Room No. LG.10
MECHANICAL			
Winter Temp (°C ± °C)	Uncontrolled	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Unoccupied
Air Changes/ Hour	6 AC/HR		
DHW/ CWS/ Waste	Floor drain		
Environmental Control System	None		
ELECTRICAL			
Lighting	Linear. flourescent		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements.		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR			NA
FINISHES			
Floor	Screed finish / applied sealant		
Walls	Painted Fairfaced blockwork / rc		
Ceiling	Painted conc. soffit		
Fitings / Sanitaryware	No		
			Date : 26.02.14
			Revision C



Community Building
Former Twickenham Sorting Office
Lower Ground Floor

KEY PLAN

Room Name	Female Toilet & Sh's	Approx. Area / Ceiling Height	13m ² / 2.4m	Room No.	LG12
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MECHANICAL

Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW, CWS & Waste for WC, Basin & Showers		
Environmental Control System	Radiator, Heating from VRF Heat Pump		

ELECTRICAL

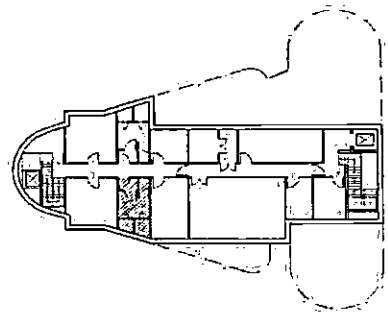
Lighting	Downlights
Illumination Levels	100 lux
Emergency Lighting	To meet BS 5266-1
Data/Telephone	No
Small Power	No
Equipment	Handrier
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements
PA System	No
Special Supplies	No
TV/ Radio Outlets	No
Audio/ Visual Systems	No
Audio Systems	No
Access Control	No
CCTV	No
Intruder Alarm	No
Specialist Systems	No

ACOUSTIC PERFORMANCE

Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 45
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FINISHES

Floor	Slip resistant vinyl sheet with welded pvc skirting
Walls	Painted Fairfaced blockwork
Ceiling	Suspended M/F system, painted plasterboard
Fittings / Sanitaryware	White sanitaryware, 1 No wc cubicle, 1 whb & 1 No shower screen & tiled shower. Ceramic tiling / mirrors above whb's



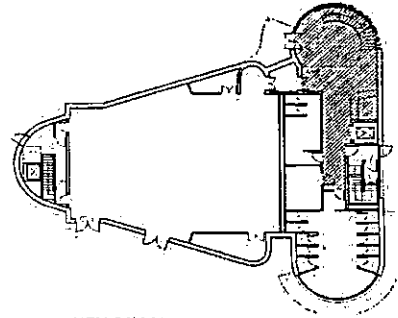
Community Building
Former Twickenham Sorting Office
Lower Ground Floor

KEY PLAN

Room Name	Male Toilet & Showers	Approx. Area / Ceiling Height : 13m ² / 2.4m	Room No. LG.13
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	6-10 AC/HR		
DHW/ CWS/ Waste/Vending	DHW, CWS & Waste for WC, Basin & Showers		
Environmental Control System	Radiator Heating from VRF Heat Pump		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	Handrier		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 45	
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted Fairfaced blockwork		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware	White sanitaryware, 1 No wc cubicle, 1 whb & 1 No shower screen & tiled shower. Ceramic tiling / mirrors above whb's		
Date : 26.02.14 Revision B			

St James

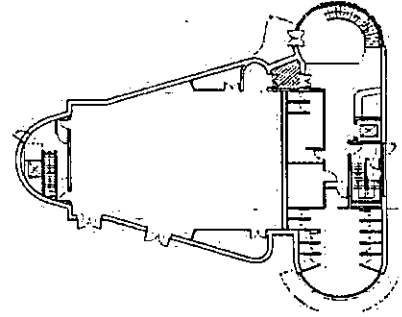
Designed for life.



Community Building
Former Twickenham Sorting Office
Ground Floor

KEY PLAN

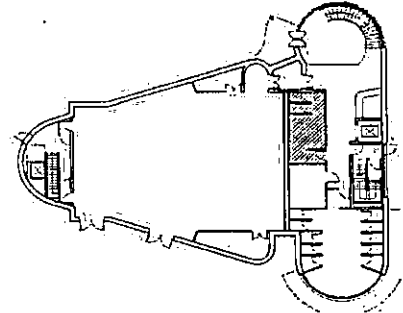
Room Name	Foyer	Approx. Area / Ceiling Height	: 73m ² / varies	Room No.	G.01
MECHANICAL					
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled		
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space		
Air Changes/ Hour	None				
DHW/ CWS/ Waste/ Vending	None				
Environmental Control System	VRF Fan Coil Cassette Heating				
ELECTRICAL					
Lighting	Downlights				
Illumination Levels	150 lux with control for low light levels during performances				
Emergency Lighting	To meet BS 5266-1				
Data/Telephone	2 x RJ45 to reception (Cat 5e) - provided for use a data, telephone or internal intercom				
Small Power	1 No TSSO				
Equipment	No				
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements				
PA System	Yes & Control point				
Special Supplies	No				
TV/ Radio Outlets	No				
Audio/ Visual Systems	TBC				
Audio Systems	No				
Access Control	No				
CCTV	Yes				
Intruder Alarm	PIR Sensors & Control panel				
Specialist Systems	No				
ACOUSTIC PERFORMANCE					
Upper Limit Indoor Ambient Noise Level, Equivalent NR			NR 40 or as required to comply with Building Regulations Approved Doc. E		
FINISHES					
Floor	Ceramic tiling with 150mm x 19mm painted mdf skirting				
Walls	Painted plasterboard on blockwork / metal stud				
Ceiling	Suspended M/F system, painted plasterboard with acoustic tiles				
Fixings / Sanitaryware	Matwell, metal staircase with timber treads. Reception desk to pc sum				
Date : 26.02.14					
Revision B					



Community Building
Former Twickenham Sorting Office
Ground Floor

KEY PLAN

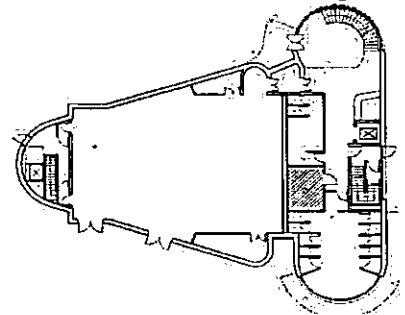
Room Name	Lobby	Approx. Area / Ceiling Height : 5m ² / 2.4m	Room No: G.02
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	None		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	VRF Fan Coil Cassette Heating		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	150 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	1 No TSSO		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 40	
FINISHES			
Floor	Ceramic tiling with 150mm x 19mm painted mdf skirting		
Walls	Painted plasterboard on blockwork		
Ceiling	Suspended M/F system, painted plasterboard		
Fitings / Sanitaryware	No		
Date : 26.02.14			
Revision B			



Community Building
Former Twickenham Sorting Office
Ground Floor

KEY PLAN

Room Name	Male Toilet	Approx. Area / Ceiling Height : 19m ² / 2.4m	Room No. G.03
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW, CWS & Waste for WC's & Basins		
Environmental Control System	Radiator Heating from VRF Heat Pump		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	Handriers.		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 45	
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted plasterboard on blockwork / metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware	White sanitaryware, 2 No wc cubicles, 3 whb's & 4 urinals. Ceramic tiling / mirrors above whb's		
Date : 26.02.14 Revision B			



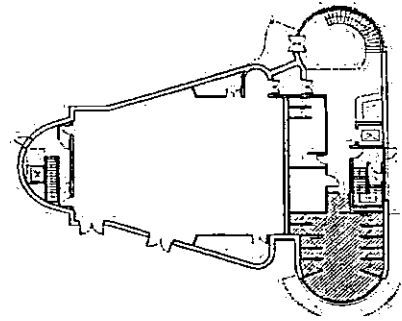
Community Building

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Ground Floor

KEY PLAN

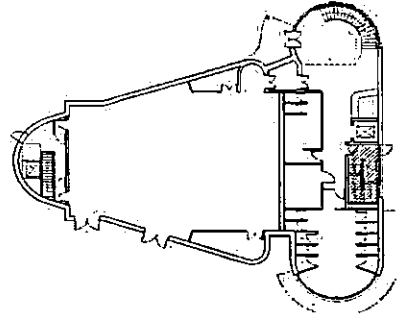
Room Name	Changing Pl. Facility	Approx. Area / Ceiling Height: 12m ² / 2.4m	Room No. G.04
MECHANICAL			
Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW, CWS & Waste for WC's & Basins		
Environmental Control System	Radiator Heating from VRF Heat Pump		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	Handrier / disabled alarm		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	disabled call alarm		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 45	
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted plasterboard on blockwork / metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings/ Sanitaryware	White sanitaryware, peninsular Doc M WC, height adjustable whb and Pressalit 1000 changing bench, hoist, curtain, shower floor drain, paper roll, waste bin, mirror above whb, Leaderflush bi-fold, pivette' door or similar.		
		Date: 26.02.14	
		Revision B	



Community Building
Former Twickenham Sorting Office
Ground Floor

KEY PLAN

Room Name	Female Toilet	Approx. Area / Ceiling Height : 54m ² / 2.4m	Room No. G.05
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW, CWS & Waste for WC's & Basins		
Environmental Control System	Radiator Heating from VRF Heat Pump		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	Handriers		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	PIR Sensors		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level : Equivalent NR		NR 45 ⁵	
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted plasterboard on blockwork / metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware	White sanitaryware; 10 No wc cubicles; 6 whb's; Ceramic tiling / mirrors above whb's		
Date : 26.02.14 Revision 8			

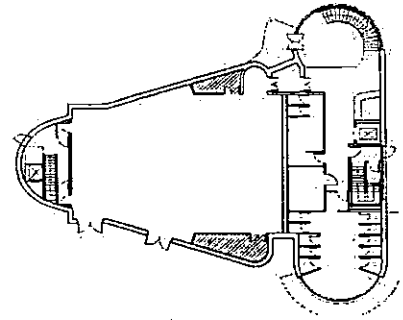


Community Building
Former Twickenham Sorting Office

All Levels

KEY PLAN

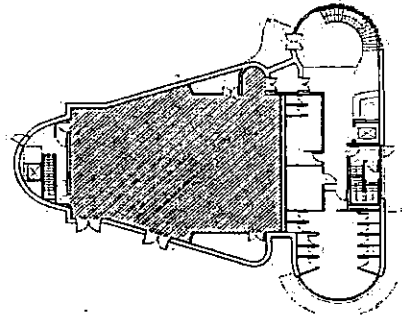
Room Name	Staircase	Approx. Area / Ceiling Height : 13m ² / NA	Room No. NA
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes / Hour	None		
DHW / CWS / Waste / Vending	None		
Environmental Control System	None		
ELECTRICAL			
Lighting	Surface		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data / Telephone	No		
Small Power	No		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	Yes		
Special Supplies	No		
TV / Radio Outlets	No		
Audio / Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	PIR Sensors		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 40	
FINISHES			
Floor	Carpet finish, contrasting nosings, with 150mm x 19mm painted mdf skirting		
Walls	Painted plasterboard on rc walls		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware	Conc. Staircase with metal balustrade, glass infill panels. Dry riser, & Class C pressurisation system		
Date : 26.02.14 Revision B			



Community Building
Former Twickenham Sorting Office
Ground Floor

KEY PLAN

Room Name:	Stores:	Approx. Area / Ceiling Height:	Room No. G.07
MECHANICAL			
Winter Temp (°C ± °C)	Uncontrolled	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Unoccupied
Air Changes/Hour	None		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	None		
ELECTRICAL			
Lighting	Linear fluorescent		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	1 No TSSO		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR	NA		
FINISHES			
Floor	Vinyl sheet to match Main Hall with welded pvc skirting		
Walls	Painted fairfaced blockwork		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware			
Date : 26.02.14			
Revision B			

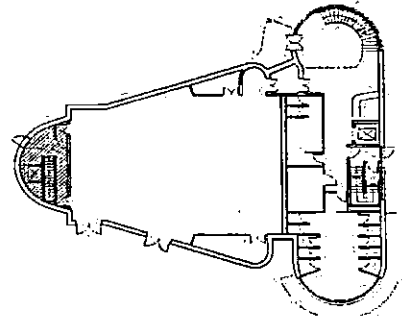


Community Building
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Ground Floor

KEY PLAN

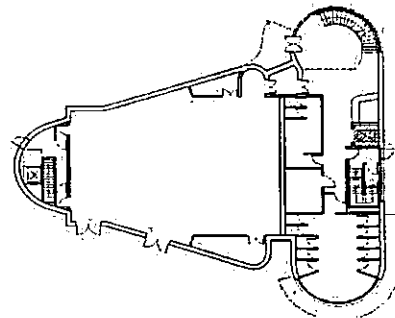
Room Name	Main Hall	Approx. Area / Ceiling Height : 215m ² / 6.6m	Room No. G.08
MECHANICAL			
Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	24 +/- 2
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	317
Air Changes/ Hour	10 l/s/person		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	Displacement Ventilation		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	To suit Theatre specialists requirements		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	10 No. TSSO		
Equipment	As required by specialist		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	Yes		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	As required by specialist		
Access Control	No		
CCTV	No		
Intruder Alarm	PIR Sensors		
Specialist Systems	Stage lighting		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 30	
FINISHES			
Floor	HW semi-sprung, black non slip vinyl throughout, 150mm x 19mm painted mdf skirting. Floor pit and panels with fold down chairs to match retractable seating.		
Walls	Painted plasterboard on blockwork. Acoustic doors to Theatreplan July '13 quotation		
Ceiling	painted conc. Soffit. Structure to be designed to accommodate suspended equipment		
Fittings/ Sanitaryware	Acoustic treatment to walls and ceiling to specialist advice. Rigging, and associated theatre equipment to Theatreplan July '13 quotation. Retractable seating - Type 'Gallery 2', Loose seating - Type 'HDS' all as supplied by 'Hussey Seatway Ltd'		
Date : 26.02.14 Revision B			



Community Building
Former Twickenham Sorting Office
Ground Floor

KEY PLAN

Room Name	LG access Stair	Approx. Area / Ceiling Height : 20m ² / 4.8m	Room No. G.09
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient space
Air Changes/ Hour	None		
DHW/ CWS/ Waste/Vending	None		
Environmental Control System	None		
ELECTRICAL			
Lighting	Surface		
Illumination Levels	To suit Theatre specialists requirements		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	10 No TSSO		
Equipment	As required by specialist		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	Yes		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	As required by specialist		
Access Control	No		
CCTV	No		
Intruder Alarm	PIR Sensors		
Specialist Systems	Stage lighting		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 30	
FINISHES			
Floor	Slip resistant vinyl sheet with 150mm x 19mm painted mdf skirting		
Walls	Painted fairfaced blockwork		
Ceiling	Suspended M/E system, painted plasterboard.		
Fittings / Sanitaryware	Platform lift		
Date : 26.02.14			
Revision B			



Community Building
Former Twickenham Sorting Office

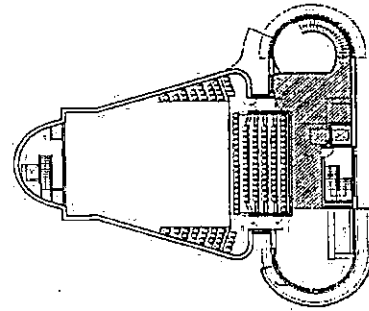
All Levels

KEY PLAN

Room Name	Lift	Approx. Area / Ceiling Height : NA /NA	Room No. NA
MECHANICAL			
Winter Temp ($^{\circ}\text{C} \pm ^{\circ}\text{C}$)	Uncontrolled	Summer Temp ($^{\circ}\text{C} \pm ^{\circ}\text{C}$)	Uncontrolled
Humidity Cont (\pm %RH)	Uncontrolled	Max Occupancy Level	Transient space
Air Changes/ Hour	None		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	None		
ELECTRICAL			
Lighting	By lift specialist		
Illumination Levels	By lift specialist		
Emergency Lighting	By lift specialist		
Data/Telephone	To suit requirements		
Small Power	To suit requirements		
Equipment	To suit requirements		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR			NA
FINISHES			
Floor	By lift specialist		
Walls	By lift specialist		
Ceiling	By lift specialist		
Fittings / Sanitaryware	Passenger lift to accommodate 8 people and be DDA compliant		
Date : 26.02.14			
Revision B			

St James

Designed for life



Community Building
Former Twickenham Sorting Office

First Floor

KEY PLAN

Room Name	Foyer / lobby	Approx. Area / Ceiling Height : 58m ² / 2.4/5.1m	Room No. 1.01
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MECHANICAL

Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	None		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	VRF Fan Coil Cassette Heating		

ELECTRICAL

Lighting	Downlights
Illumination Levels	100 lux
Emergency Lighting	To meet BS 5266-1
Data/Telephone	2 x RJ45 (Cat 6) - provided for use a data, telephone or internal intercom.
Small Power	2 No TSSO
Equipment	No
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements
PA System	Yes
Special Supplies	No
TV/ Radio Outlets	No
Audio/ Visual Systems	No
Audio Systems	No
Access Control	No
CCTV	Yes
Intruder Alarm	PIR Sensors
Specialist Systems	No

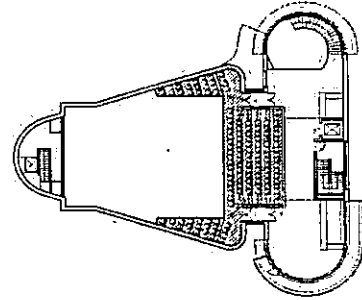
ACOUSTIC PERFORMANCE

Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 40 or as required to comply with Building Regulations Approved Doc. E
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FINISHES

Floor	Carpet
Walls	Painted plasterboard on blockwork / metal stud
Ceiling	Suspended M/F system, painted plasterboard with acoustic tiles
Fittings / Sanitaryware	Sales counter

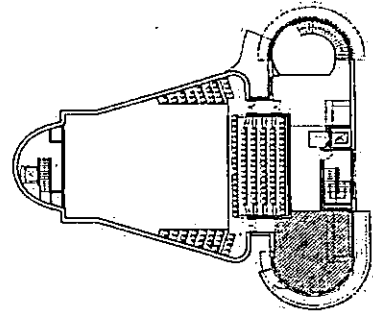
Date : 26.02.14
Revision B



Community Building
Former Twickenham Sorting Office
First Floor

KEY PLAN

Room Name	Balcony	Approx. Area / Ceiling Height : 85m ² / varies	Room No. 1.02
MECHANICAL			
Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	24 +/- 2
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Included in Main Hall
Air Changes / Hour	Included in Main Hall		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	Displacement ventilation		
ELECTRICAL			
Lighting	Wall mounted		
Illumination Levels	To suit theatre specialists requirements		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	Yes		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	Yes		
Intruder Alarm	PIR Sensors		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR			NR 30
FINISHES			
Floor	Black non slip vinyl . Contrasting nosings to gangway steps		
Walls	Painted plasterboard on blockwork. Acoustic doors to Theatreplan July '13 quotation		
Ceiling	Painted conc. soffit		
Fittings / Sanitaryware	Fixed seating - Type 'Gallery 2' as supplied by 'Hussey Seatway Ltd'		
Date : 26.02.14 Revision B			

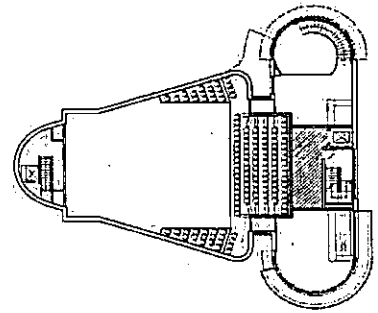


Community Building
Former Twickenham Sorting Office

First Floor

KEY PLAN

Room Name:	Bar	Approx. Area / Ceiling Height :	47m ² / 5.1m	Room No. 1.03
MECHANICAL				
Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	25 +/- 2	
Humidity Cont (± %RH)	Uncontrolled.	Max Occupancy Level:	50	
Air Changes/ Hour	10 l/s/person			
DHW/ CWS/ Waste/ Vending.	DHW, CWS & Waste for sink and drinks machines			
Environmental Control System	VRF Fan Coil Cassette Heating and Cooling			
ELECTRICAL				
Lighting	Downlights / pendants.			
Illumination Levels	100 lux			
Emergency Lighting	To meet BS 5266-1.			
Data/Telephone	2 x RJ45 (Cat 6) - provided for use a data, telephone or internal intercom			
Small Power	5 No TSSO			
Equipment	As required by bar fit out			
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements			
PA System	Yes			
Special Supplies	No			
TV/ Radio Outlets	Containment only			
Audio/ Visual Systems	TBC			
Audio Systems	No			
Access Control	No			
CCTV	Yes			
Intruder Alarm	PIR Sensors			
Specialist Systems	No			
ACOUSTIC PERFORMANCE				
Upper Limit Indoor Ambient Noise Level - Equivalent NR			NR 40 or as required to comply with Building Regulations Approved Doc. E	
FINISHES				
Floor	Carpet			
Walls	Painted plasterboard on blockwork / metal stud			
Ceiling	Suspended M/F system, painted plasterboard with acoustic tiles			
Fittings/ Sanitaryware	Bar serving area and back bar to be provided, min length 5m.			
Date : 26.02.14 Revision B				



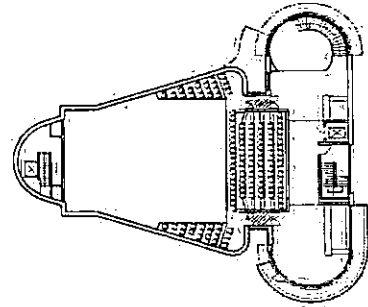
Community Building:

Former Twickenham Sorting Office:

First Floor - Upper Level

KEY PLAN

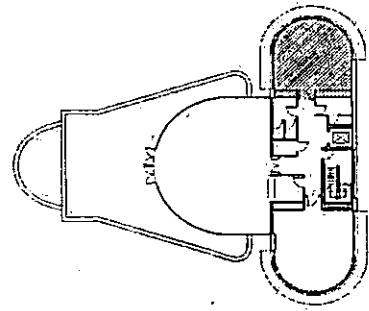
Room Name	Control Room	Approx. Area / Ceiling Height : 22m ² / 2.1m	Room No. 1.04
MECHANICAL			
Winter Temp (°C ± °C)	Tbc	Summer Temp (°C ± °C)	Tbc
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	2
Air Changes/ Hour	Tbc		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	VRF, Fan Coil Cassette Heating and Cooling		
ELECTRICAL			
Lighting	Wall mounted, Task lighting to control desks		
Illumination Levels	To suit theatre specialists requirements		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	Tbc		
Small Power	To suit theatre specialists requirements		
Equipment	Tbc		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	Yes		
Special Supplies	Tbc		
TV/ Radio Outlets	No		
Audio/ Visual Systems	Tbc		
Audio Systems	Tbc		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level = Equivalent NR		NR 30 or as required to comply with Building Regulations Approved Doc. E	
FINISHES			
Floor	Carpet		
Walls	Painted plasterboard on blockwork. Selectagaze sliding glazed screen facing auditorium with acoustic treatment 3.6m L x 0.9m h		
Ceiling	Painted conc. soffit		
Fittings / Sanitaryware	Control desk and equipment to Theatreplan July '13 quotation		
Date : 26.02.14			
Revision B			



Community Building
Former Twickenham Sorting Office
First Floor

KEY PLAN

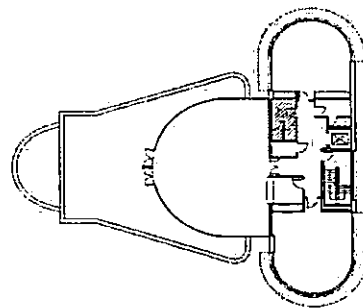
Room Name	Lobbies	Approx. Area / Ceiling Height : 5m ² / 2.4m	Room No. 1.05
MECHANICAL			
Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	24 +/- 2
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient space
Air Changes/ Hour			
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System			
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	To suit theatre specialists requirements		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	Yes		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 30		
FINISHES			
Floor	Carpet		
Walls	Painted plasterboard on blockwork. Acoustic doors to Theatreplan July '13 quotation		
Ceiling	Painted conc. soffit		
Fitings / Sanitaryware			
Date : 26.02.14			
Revision A			



Community Building
Former Twickenham Sorting Office
Second Floor

KEY PLAN

Room Name	Multi Purpose Rm 2.	Approx. Area / Ceiling Height : 47m ² / 2.4m	Room No. 2.01
MECHANICAL			
Winter Temp (°C ± °C).	21 +/- 2	Summer Temp (°C ± °C).	24 +/- 2
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	30
Air Changes/ Hour	10 l/s/person		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	VRF Fan Coil Cassette Heating and Cooling		
ELECTRICAL			
Lighting	Modular fluorescent luminaires		
Illumination Levels	350 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	4 x RJ45 (Cat 6) - provided for use a data, telephone or internal intercom		
Small Power	5 No TSSO		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	TBC		
Audio Systems	Induction loop system		
Access Control	No		
CCTV	No		
Intruder Alarm	PIR Sensors		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level ± Equivalent NR		NR 38 or as required to comply with Building Regulations Approved Doc. E	
FINISHES			
Floor	Lino / vinyl sheet with 150mm x 19mm painted mdf skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard with acoustic tiles		
Fittings / Sanitaryware	Built in mdf shelving and cupboards to alcoves. Fully fitted venetian blinds to windows.		
Date : 26.02.14 Revision B			



Community Building
Former Twickenham Sorting Office
Second Floor

KEY PLAN

Room Name	Female Toilet	Approx. Area / Ceiling Height : 9m ² / 2.4m	Room No. 2.02
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MECHANICAL

Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour,	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW, CWS & Waste for WC's & Basins		
Environmental Control System	Radiator Heating from VRF Heat Pump		

ELECTRICAL

Lighting	Downlights
Illumination Levels	100 lux
Emergency Lighting	To meet BS 5266-1
Data/Telephone	No
Small Power	No
Equipment	Handrier
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements
PA System	No
Special Supplies	No
TV/ Radio Outlets	No
Audio/ Visual Systems	No
Audio Systems	No
Access Control	No
CCTV	No
Intruder Alarm	No
Specialist Systems	No

ACOUSTIC PERFORMANCE

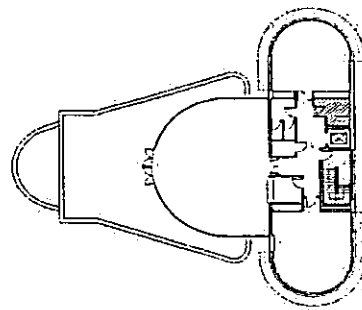
Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 45
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FINISHES

Floor	Slip resistant vinyl sheet with welded pvc skirting
Walls	Painted plasterboard on metal stud
Ceiling	Suspended M/F system, painted plasterboard
Fittings / Sanitaryware	White sanitaryware; 2 No wc cubicles, 2 whb's. Ceramic tiling / mirrors above whb's

Date : 26.02.14

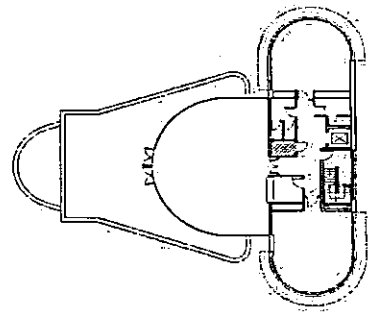
Revision B



Community Building
Former Twickenham Sorting Office
Second Floor

KEY PLAN

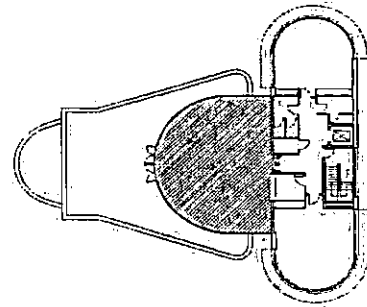
Room Name	Male Toilet	Approx. Area / Ceiling Height : 8m ² / 2.4m	Room No. 2.03
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW, CWS & Waste for WC's & Basins		
Environmental Control System	Radiator Heating from VRF Heat Pump		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	Handrier		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level Equivalent NR	NR 45		
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware	White sanitaryware, 1 No wc cubicles; 2 whb's; 2 urinals. Ceramic tiling / mirrors above whb's.		
Date : 26.02.14 Revision B			



Community Building
Former Twickenham Sorting Office
Second Floor

KEY PLAN

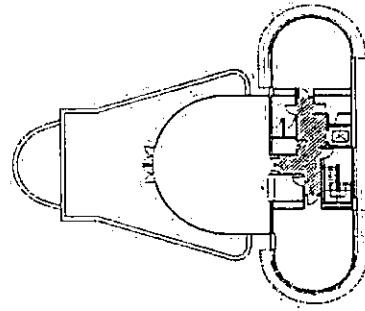
Room Name	Accessible WC	Approx. Area / Ceiling Height : 3m ² / 2.4m	Room No: 2.04
MECHANICAL			
Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes / Hour	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW/ CWS & Waste for WC & Basin		
Environmental Control System	LST Radiator Heating from VRF Heat Pump		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	Handrier / disabled alarm		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	disabled call alarm		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level: Equivalent NR		NR 45	
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fitings/ Sanitaryware	White Sanitaryware Standard Doc M installation. Leaderflush bi-fold 'pivette' door or similar		
Date : 26.02.14			
Revision B			



Community Building
Former Twickenham Sorting Office
Second Floor.

KEY PLAN

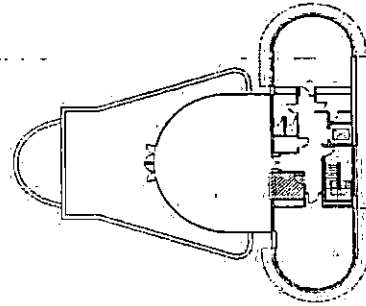
Room Name	Conservatory	Approx. Area / Ceiling Height : 120m ² / 2.4m	Room No. 2.06
MECHANICAL			
Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	24 +/- 2
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	60
Air Changes/ Hour	10 l/s/person		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	VRF Fan Coil Cassette Heating and Cooling		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	2 x RJ45 (Cat 6) - provided for use a data, telephone or internal intercom		
Small Power	5 No. TSSO		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839:1 (L1) and DDA requirements		
PA System	Yes		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	PIR Sensors		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 35 or as required to comply with Building Regulations Approved Doc. E	
FINISHES			
Floor	HW flooring with 150mm x 19mm painted mdf skirting		
Walls	Painted plasterboard on metal stud / curtain walling		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware			
Date : 26.02.14			
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Community Building
Former Twickenham Sorting Office
Second Floor

KEY PLAN

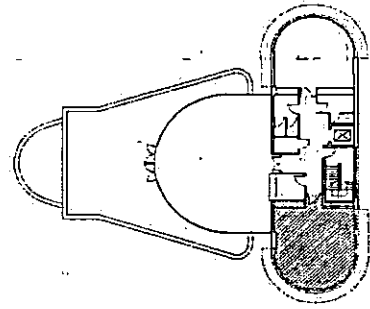
Room Name	Lobby	Approx. Area / Ceiling Height : 21m ² / 2.4m	Room No. 2.07
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	None		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	VRF Fan Coil Cassette Heating		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	150 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	1 No TSSO		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 40		
FINISHES			
Floor	Slip resistant vinyl sheet with 150mm x 19mm painted mdf skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware	No		
Date : 26.02.14 Revision B			



Community Building
Former Twickenham Sorting Office
Second Floor

KEY PLAN

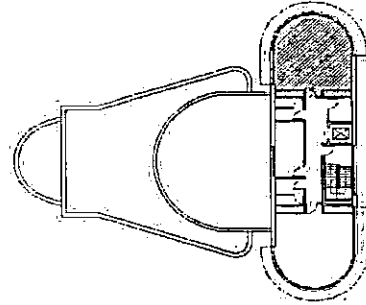
Room Name	Bar	Approx. Area / Ceiling Height : 8m ² / 2.4m	Room No. 2.09
MECHANICAL			
Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	24 +/- 2
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Included in Conservatory
Air Changes/ Hour	10 l/s/person		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	Included in Conservatory		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	1 x RJ45 (Cat 6) - provided for use a data, telephone or internal intercom		
Small Power	2 No TSSO		
Equipment	As required by bar fit out		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	Yes		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 40	
FINISHES			
Floor	Slip resistant vinyl sheet with 150mm x 19mm painted mdf skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware	Bar servery and shutter to be provided.		
			Date : 26.02.14
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Community Building
Former Twickenham Sorting Office
Second Floor

KEY PLAN

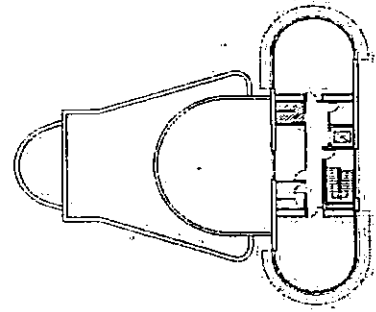
Room Name:	Multi Purpose Rm 1	Approx. Area / Ceiling Height : 54m ² / 2.4m	Room No. 2.10
MECHANICAL			
Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	24 +/- 2
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	30
Air Changes / Hour	10 l/s/person		
DHW / CWS / Waste / Vending	DHW, CWS & Waste for sink		
Environmental Control System	VRF Fan Coil Cassette Heating and Cooling		
ELECTRICAL			
Lighting	Modular fluorescent luminaires		
Illumination Levels	350 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	4 x RJ45 (Cat 6) - provided for use a data, telephone or internal intercom		
Small Power	5 No TSSO		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV / Radio Outlets	No		
Audio / Visual Systems	TBC		
Audio Systems	Induction loop system		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 38 or as required to comply with Building Regulations Approved Doc. E	
FINISHES			
Floor	Slip resistant vinyl sheet with 150mm x 19mm painted mdf skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard with acoustic tiles		
Fittings / Sanitaryware	Hot & cold water supply, sink, drainer and base unit within built-in mdf shelving and cupboards to alcoves. Fully fitted venetian blinds to windows.		
Date : 26.02.14 Revision B			



Community Building
Former Twickenham Sorting Office
Third Floor

KEY PLAN

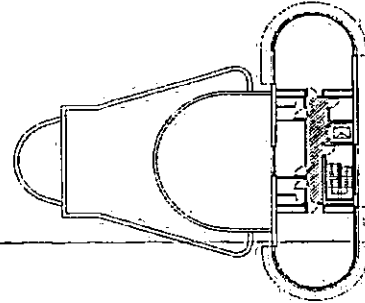
Room Name	Multi Purpose Rm 4	Approx. Area / Ceiling Height : 51m ² / 2.4m	Room No. 3.01
MECHANICAL			
Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	24 +/- 2
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	30
Air Changes/ Hour	10 l/s/person		
DHW/ CWS/ Waste/ Vending.	None		
Environmental Control System	VRF Fan Coil Cassette Heating and Cooling		
ELECTRICAL			
Lighting	Modular fluorescent luminaires		
Illumination Levels	350 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	4 x RJ45 (Cat 6) - provided for use a data, telephone or internal intercom		
Small Power	5 No TSSO		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	TBC		
Audio Systems	Induction loop system		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 38 or as required to comply with Building Regulations Approved Doc. E	
FINISHES			
Floor	Lino / vinyl sheet sprung floor, with 150mm x 19mm painted mdf skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard with acoustic tiles		
Fittings / Sanitaryware	Built in mdf shelving and cupboards to alcoves. Fully fitted venetian blinds to windows.		
Date : 26.02.14 Revision B			



Community Building
Former Twickenham Sorting Office
Third Floor

KEY PLAN

Room Name	Female Toilet	Approx. Area / Ceiling Height : 6m ² / 2.4m	Room No. 3.02
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW, CWS & Waste for WC's & Basins		
Environmental Control System	Radiator Heating from VRF Heat Pump		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	Handrier		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839:1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 45	
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware	White sanitaryware, 1 No wc cubicle, 1 whb's. Ceramic tiling / mirrors above whb		
Date : 26.02.14			
Revision 6			



Community Building

Former Twickenham Sorting Office

Third Floor

KEY PLAN

Room Name	Lobby	Approx. Area / Ceiling Height : 17m ² / 2.4m	Room No. 3.04
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MECHANICAL

Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	None		
DHW/CWS/Waste/ Vending	None		
Environmental Control System	VRF Fan Coil Cassette Heating		

ELECTRICAL

Lighting	Downlights
Illumination Levels	150 lux
Emergency Lighting	To meet BS 5266-1
Data/Telephone	No
Small Power	1 No TSSO
Equipment	No
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements
PA System	No
Special Supplies	No
TV/ Radio Outlets	No
Audio/ Visual Systems	No
Audio Systems	No
Access Control	No
CCTV	No
Intruder Alarm	No
Specialist Systems	No

ACOUSTIC PERFORMANCE

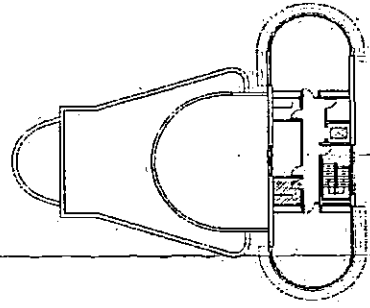
Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 40
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FINISHES

Floor	Slip resistant vinyl sheet with 150mm x 19mm painted mdf skirting
Walls	Painted plasterboard on metal stud
Ceiling	Suspended M/F system, painted plasterboard
Fittings / Sanitaryware	No

Date : 26.02.14

Revision B



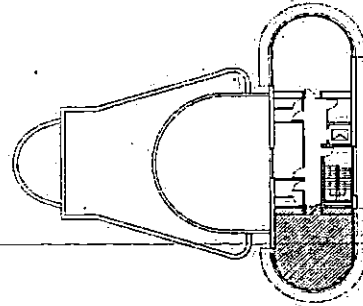
Community Building

Former Twickenham Sorting Office

Third Floor

KEY PLAN

Room Name	Male Toilet	Approx. Area / Ceiling Height: 7m ² / 2.4m	Room No. 3.06
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW, CWS & Waste for WC's & Basins		
Environmental Control System	Radiator Heating from VRF Heat Pump		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	Handrrier		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 45	
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings/ Sanitaryware	White sanitaryware, 1 No wc cubicle, 1 whb, 1 urinal. Ceramic tiling / mirrors above whb's		
Date : 26.02.14 Revision B			



Community Building
Former Twickenham Sorting Office

Third Floor

KEY PLAN

Room Name	Multi Purpose Rm 3	Approx. Area / Ceiling Height : 50m ² /2.4m	Room No. 3.07
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MECHANICAL

Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	24 +/- 2
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	30
Air Changes/ Hour	10 l/s/person		
DHW/ CWS/ Waste/ Vending	DHW, CWS & Waste for sink		
Environmental Control System	VRF Fan Coil Cassette Heating and Cooling		

ELECTRICAL

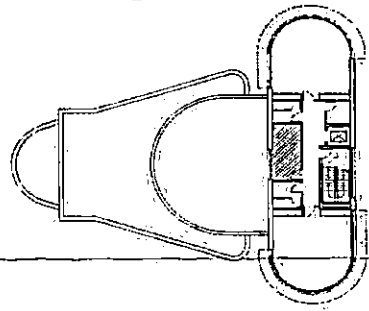
Lighting	Modular fluorescent luminaires
Illumination Levels	350 lux
Emergency Lighting	To meet BS 5266-1
Data/Telephone	4 x RJ45 (Cat 6) - provided for use a data; telephone or internal intercom
Small Power	5 No TSSO
Equipment	No
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements
PA System	No
Special Supplies	No
TV/ Radio Outlets	No
Audio/ Visual Systems	TBC
Audio Systems	Induction loop system
Access Control	No
CCTV	No
Intruder Alarm	No
Specialist Systems	No

ACOUSTIC PERFORMANCE

Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 38 or as required to comply with Building Regulations Approved Doc. E
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FINISHES

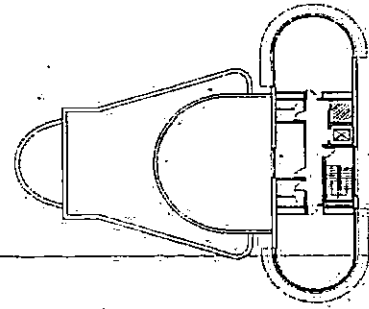
Floor	Lino / vinyl sheet with 150mm x 19mm painted mdf skirting
Walls	Painted plasterboard on metal stud
Ceiling	Suspended M/F system, painted plasterboard with acoustic tiles
Fittings / Sanitaryware	Hot & cold water supply, sink, drainer and base unit within built-in mdf shelving and cupboards to alcoves. Fully fitted venetian blinds to windows.



Community Building
Former Twickenham Sorting Office
Third Floor

KEY PLAN

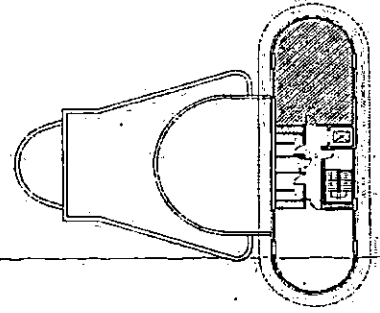
Room Name	Office	Approx. Area / Ceiling Height : 14m ² / 2.4m	Room No. 3.08
MECHANICAL			
Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	24 +/- 2
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	2
Air Changes/ Hour	10 l/s/person		
DHW/ CWS/Waste/Vending	None		
Environmental Control System	VRF Fan Coil Cassette Heating and Cooling		
ELECTRICAL			
Lighting	Modular fluorescent luminaires		
Illumination Levels	350 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	2 x RJ45 (Cat 6) - provided for use a data, telephone or internal intercom		
Small Power	2 No TSSO		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 35		
FINISHES			
Floor	Carpet		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fitings / Sanitaryware			
Date : 26.02.14 Revision B			



Community Building
Former Twickenham Sorting Office
Third Floor

KEY PLAN

Room Name	Cleaners Store	Approx. Area / Ceiling Height : 7m ² / 2.4m	Room No. 3.09
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW, CWS & Waste for Sink		
Environmental Control System	Radiator Heating from VRF Heat Pump		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 45		
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware	White cleaners sink		
Date : 26.02.14			
Revision B			



Community Building

Former Twickenham Sorting Office

Fourth Floor

KEY PLAN

Room Name	Multi Purpose Rm 6	Approx. Area / Ceiling Height : 69m ² / 2.4m	Room No. 4.01
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MECHANICAL

Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	24 +/- 2
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	30
Air Changes/ Hour	10 l/s/person		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	VRF Fan Coil Cassette Heating and Cooling		

ELECTRICAL

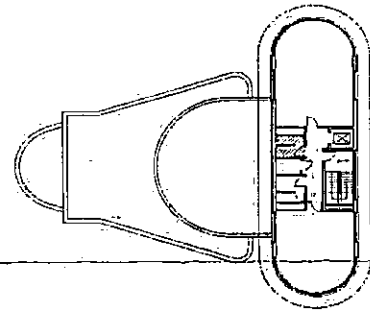
Lighting	Modular fluorescent luminaires
Illumination Levels	350 lux
Emergency Lighting	To meet BS 5266-1
Data/Telephone	4 x RJ45 (Cat 6) - provided for use a data, telephone or internal intercom
Small Power	5 No TSSO
Equipment	No
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements
PA System	No
Special Supplies	No
TV/ Radio Outlets	No
Audio/ Visual Systems	TBC
Audio Systems	Induction loop system
Access Control	No
CCTV	No
Intruder Alarm	No
Specialist Systems	No

ACOUSTIC PERFORMANCE

Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 38 or as required to comply with Building Regulations Approved Doc. E
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FINISHES

Floor	Lino/ vinyl sheet sprung floor, with 150mm x 19mm painted mdf skirting
Walls	Painted plasterboard on metal stud
Ceiling	Suspended M/F system, painted plasterboard with acoustic tiles
Fittings / Sanitaryware	Built in mdf shelving and cupboards to alcoves. Fully fitted venetian blinds to windows.



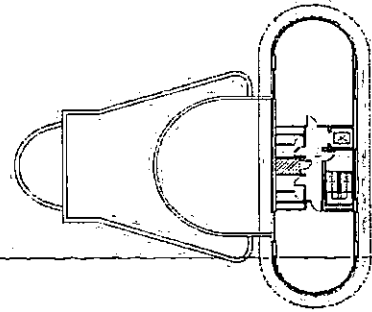
Community Building

Former Twickenham Sorting Office

Fourth Floor

KEY PLAN

Room Name	Female Toilet	Approx. Area / Ceiling Height : 6m ² / 2.4m	Room No. 4.02
MECHANICAL			
Winter Temp (*C ± *C)	19 +/- 2	Summer Temp (*C ± *C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW, CWS & Waste for WC's & Basins		
Environmental Control System	Radiator Heating from VRF Heat Pump		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266:1		
Data/Telephone	No		
Small Power	No		
Equipment	Handrier		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 45		
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware	White sanitaryware, 1 No wc cubicle, 1 whb's. Ceramic tiling / mirrors above whb		
Date : 26.02.14 Revision B			



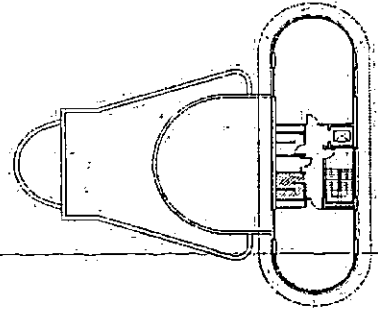
Community Building

Former Twickenham Sorting Office

Fourth Floor

KEY PLAN

Room Name	Accessible WC	Approx. Area / Ceiling Height : 3m ² / 2.4m	Room No. 4.04
MECHANICAL			
Winter Temp ('C ± °C)	21 +/- 2	Summer Temp ('C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW/ CWS & Waste for WC & Basin		
Environmental Control System	LST Radiator Heating from VRF Heat Pump		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels:	100 lux		
Emergency Lighting:	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	Handrier / disabled alarm		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets:	No		
Audio/Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	disabled call alarm		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 45	
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware	White Sanitaryware Standard Doc M installation. Leaderflush bi-fold 'pivette' door or similar		
Date : 26.02.14			
Revision B			



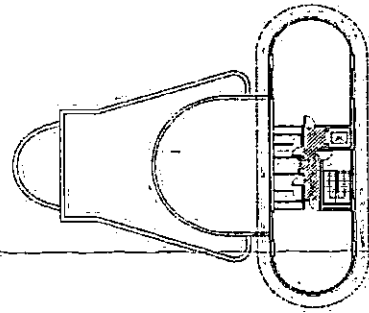
Community Building

Former Twickenham Sorting Office

Fourth Floor

KEY PLAN

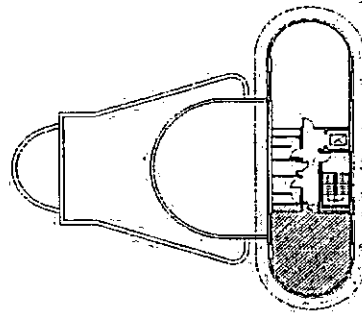
Room Name:	Male Toilet	Approx. Area / Ceiling Height: 7m ² / 2.4m	Room No. 4.06
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	6-10 AC/HR		
DHW/ CWS/ Waste/ Vending	DHW, CWS & Waste for WC's & Basins		
Environmental Control System	Radiator Heating from VRF Heat Pump		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	100 lux		
Emergency Lighting	To meet BS 5266-1		
Data/Telephone	No		
Small Power	No		
Equipment	Handrier		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/ Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 45		
FINISHES			
Floor	Slip resistant vinyl sheet with welded pvc skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fittings / Sanitaryware	White sanitaryware, 1 No wc cubicle, 1 whb, 1 urinal. Ceramic tiling / mirrors above whb's		
Date: 10.02.14 Revision A			



Community Building
Former Twickenham Sorting Office
Fourth Floor

KEY PLAN

Room Name	Lobby	Approx. Area / Ceiling Height : 12m ² / 2.4m	Room No. 4.07
MECHANICAL			
Winter Temp (°C ± °C)	19 +/- 2.	Summer Temp (°C ± °C)	Uncontrolled
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	Transient Space
Air Changes/ Hour	None		
DHW/CWS/ Waste/ Vending	None		
Environmental Control System	VRF Fan Coil Cassette Heating		
ELECTRICAL			
Lighting	Downlights		
Illumination Levels	150 lux		
Emergency Lighting	To meet BS 5266:1		
Data/Telephone	No		
Small Power	1 No. TSSO		
Equipment	No		
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements		
PA System	No		
Special Supplies	No		
TV/Radio Outlets	No		
Audio/ Visual Systems	No		
Audio Systems	No		
Access Control	No		
CCTV	No		
Intruder Alarm	No		
Specialist Systems	No		
ACOUSTIC PERFORMANCE			
Upper Limit Indoor Ambient Noise Level - Equivalent NR		NR 40	
FINISHES			
Floor	Slip resistant vinyl sheet with 150mm x 19mm painted mdf skirting		
Walls	Painted plasterboard on metal stud		
Ceiling	Suspended M/F system, painted plasterboard		
Fitings / Sanitaryware	No		
Date : 10.02.14 Revision A			



Community Building
Former Twickenham Sorting Office
Fourth Floor

KEY PLAN

Room Name	Multi Purpose Rm 5	Approx. Area / Ceiling Height : 53m ² / 2.4m	Room No. 4:08
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MECHANICAL

Winter Temp (°C ± °C)	21 +/- 2	Summer Temp (°C ± °C)	24 +/- 2
Humidity Cont (± %RH)	Uncontrolled	Max Occupancy Level	30
Air Changes/ Hour	10 l/s/person		
DHW/ CWS/ Waste/ Vending	None		
Environmental Control System	VRF Fan Coil Cassette Heating and Cooling		

ELECTRICAL

Lighting	Modular fluorescent luminaires
Illumination Levels	350 lux
Emergency Lighting	To meet BS 5266-1
Data/Telephone	4 x RJ45 (Cat 6) - provided for use a data, telephone or internal intercom
Small Power	5 No TSSO
Equipment	No
Fire Alarm	Fire Detection and Alarm installed to meet BS 5839-1 (L1) and DDA requirements
PA System	No
Special Supplies	No
TV/ Radio Outlets	No
Audio/ Visual Systems	TBC
Audio Systems	Induction loop system.
Access Control	No
CCTV	No
Intruder Alarm	PIR Sensors
Specialist Systems	No

ACOUSTIC PERFORMANCE

Upper Limit Indoor Ambient Noise Level - Equivalent NR	NR 38
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FINISHES

Floor	Lino / vinyl sheet with 150mm x 19mm painted mdf skirting
Walls	Painted plasterboard on metal stud
Ceiling	Suspended M/F system, painted plasterboard with acoustic tiles
Fittings/ Sanitaryware	Hot & cold water supply, sink, drainer and base unit within built-in mdf shelving and cupboards to alcoves. Fully fitted venetian blinds to windows.

Twickenham Community Building

Technical Master Plan

11 July 2013

SUMMARY

This issue of the Technical Master Plan has been prepared to advise the Design Team on those aspects of the design that need to be developed to allow the correct functioning of the proposed Community Building and to provide preliminary information on the equipment to be installed.

No design brief has been prepared by the Council. However the functions for which the theatre is anticipated to be used include drama, dance, music, rehearsals and showing of films. The performance space should offer an end-stage, as well as flat floor. It will be used with limited scenery and reasonable facilities should be included for this in terms of access and suspension of masking and curtains.

1 TECHNICAL SPACES

1.1 **CONTROL ROOM:** A combined lighting and sound control room is envisaged with space for both control desks with a double-glazed sliding window in front of the sound operator and suitable controllable task lighting over the desks which will not spill out of the windows. A clear view of the performance area is required. The room is required to be soundproof although opening windows are provided.

1.2 **SIDE PRODUCTION LIGHTING POSITIONS:** Vertical 48.3 mm OD pipes will be installed, two on each side of the auditorium to carry production lighting luminaires on standard boom arms clamps. These lights are important in providing the lower side lighting.

1.3 **SOUND MIXING POSITION:** A location is required in the auditorium for a sound mixing desk for musical performances. This might be either at the front of the first gallery, or on the lower floor area; the infrastructure might offer both options.

1.4 **DIMMER / AMPLIFIER ROOM:** A space of approximately 6m² needs to be allocated for theatre and house lighting dimmers.

2 RIGGING EQUIPMENT

2.1 **OVERSTAGE SUSPENSIONS:** An Aluminium mother grid will be suspended over the acting area, suspended on four chain hoists. These will be provided with alloy bars for scenery, legs and borders, curtain tracks and lighting bars. Distributed dimmers will be mounted on the truss, supplied by wiring on a cable management system from above. See marked up drawing for anticipated load on the structure.

2.1 **AUDITORIUM LIGHTING TRUSS:** An aluminium truss frame will be suspended on chain hoists above the seating area to provide front of house lighting. Distributed dimmers will be mounted on the truss, supplied by cable reeling drums from above.

2.3 **HOUSE CURTAIN:** A hand drawn house curtain and track will be suspended from the mother grid over the acting area.

2.4 **CURTAIN TRACKS:** 2 proprietary theatre curtain tracks on the mother grid for mid stage and rear stage draw curtains

2.5 **MASKING CURTAINS:** A set of masking curtains, legs and borders to provide wings and to mask overstage lighting in fireproof black wool serge and with suitable ties will be provided.

2.6 **ACCESS EQUIPMENT:** A hydraulic platform will be provided to allow safe access when focusing lights on the trusses at high level.

3 SEATING

3.1 **SEATING:** Refer to Architects report for details of proposed seating.

4 THEATRE LIGHTING

4.1 **STAGE AND HOUSE LIGHTING DIMMERS:** The majority of the stage lighting will be supplied by distributed dimmers. However circuits in the stage area and on the side walls of the auditorium will require dimmers installed in racks in the Dimmer Room. Dimming for both stage and house lighting will be able to be controlled by the installed lighting desk using industry standard DMX protocol. An installation of some 24x 10A (2 kW) stage lighting dimmers, and 6 non-dim in the dimmer room; plus 36 circuits of distributed dimmers. All circuits are to be protected by RCDs. House lighting needs to be very flexible and to be augmented by some high-intensity switched lighting for non performance uses of the auditorium.

4.2 **PRODUCTION LIGHTING OUTLET BOXES:** Industry standard 16A Ceeform outlets mounted in purpose made boxes (PLBs) for stage lighting circuits. These are to be located in specific positions around the stage, and in the auditorium.

4.3 **WORKING LIGHTING SYSTEM:** High efficiency lighting providing 500 lux over the whole floor area. Controls at floor level and in the control room to provide separate zones over the seating and performing areas. Low level blue LEDs around the stage area for use during a performance.

4.4 **PRODUCTION LIGHTING CONTROL SYSTEM:** Industry standard manual / memory production lighting control desk, sized and selected to provide good lighting facilities for community shows but configured in such a way that it can be extended or used with an additional desk for special productions. The Desk can control house lighting dimmers in addition if required.

4.5 **HOUSE LIGHTING:** Fully dimmable LED fittings to provide 200 lux over the seating area. Pre-set control system for auditorium lighting to be operated from the lighting control room or downstage corner. Also controllable by the production lighting desk

4.6 **REMOTE CONTROL INSTALLATION:** Wiring to allow for the use of remote colour changers, moving lights and similar equipment. This basic wiring also permits control of dimmers from alternative desk positions and control of any additional temporary dimmers used on stage. This is a facility which can be used for more advanced productions and it is not envisaged that any remote colour changers or moving lights be provided as part of the initial installation. These can be hired in on a show by show basis as required. The system will be wired in Cat 5E cable so that it can be used in the future for Ethernet control as it becomes available.

4.7 **PRODUCTION LIGHTING LUMINAIRES:** Much of the stage lighting equipment will be sub kilowatt high efficiency units. A range of luminaires, including profile spots, fresnels, and cyclorama floods, will be provided. This complement of equipment will be able to be extended by future purchases and the hire of specials and effects equipment, but will enable locally-produced shows to be lit satisfactorily.

4.8 **LIGHTING RIGGING AND ACCESSORIES:** In order to rig and use the luminaries, multicore and single circuit extension cables, splitters and similar will be provided. Some limited spares and a basic supply of colour will be included.

5 **SOUND AND COMMUNICATIONS**

5.1 **SYSTEM DESCRIPTION:** The overall sound and communications systems will include the cabling infrastructure, fixed and portable loudspeakers, sound mixing facilities, microphones, sound reproduction equipment, assisted listening system, performance control systems, paging and show relay. The equipment and systems will be provided by a specialist Sound Contractor who will also provide and connect all the cabling and facility panels forming the terminations of the wiring infrastructure. The containment and for the sound, audio-visual and communications wiring will be installed by the Project Electrical Contractor

5.2 **WIRING INFRASTRUCTURE:** This is the wiring between all sound, communications, video and similar equipment throughout the building. This terminates on outlets which appear on facility panels around the building and in equipment racks in the control room and amplifier room. Both permanent and temporary sound, communications and video equipment can be interconnected using this infrastructure, allowing microphones, loudspeakers, ring intercom units and similar to be set up easily as required for each presentation. Industry standard connectors are used to permit additional equipment and any that is brought in, to be easily plugged up to the systems. Considerable flexibility is to be provided so that the installation can be used into the future; this will include the installation of sockets for surround sound loudspeakers,

5.3 **PATCH PANEL:** A patch panel will be provided in the control room to allow the connection of additional equipment.

5.4 **LOUDSPEAKER INSTALLATION:** Suitable auditorium positions will be provided where loudspeakers can be mounted and connected. The loudspeaker installation will be a distributed system suitable for speech, music and sound effects reproduction. The addition of sub-bass speakers will increase the range of use.

5.5 **SOUND MIXING FACILITIES:** A 16-channel digital sound mixer with appropriate outboard gear will be supplied.

5.6 **MICROPHONES AND ACCESSORIES:** A small selection of microphones to enable basic speech or music reinforcement requirements to be met. Complete with cables, stands and accessories.

5.7 **SOUND REPRODUCTION EQUIPMENT:** Two combined CD / DVD playbacks will be supplied in order to playback material from visiting companies.

5.8 **PAGING AND SHOW RELAY SYSTEM:** A microphone in the hall and a monitor system will be provided to enable the sound in the auditorium to be reproduced in the dressing rooms and the control room so that the progress of the show can be monitored. This system will also provide the quality signal source for the show relay for assisted listening systems. The level of show relay can be adjusted locally in each dressing room. Paging to dressing rooms will be provided so that announcements can be made by a technician from the side of the Stage the Control Room. The paging calls override the show relay whilst in progress. Bells to warn the audience that the show is about to commence will be installed in foyer and audience toilets.

5.9 **ASSISTED LISTENING SYSTEMS:** An induction loop will be installed to allow the hearing impaired to listen to the presentation without the need for any additional equipment. The audio source for this will be taken from the show relay system

5.10 **PERFORMANCE COMMUNICATIONS:** A single channel industry standard ring intercom system (consisting of belt packs and single-sided headsets) for verbal show cues. Outlets for the ring intercom are

included in the facility panels described above.

5.11 OTHER FACILITIES: The sound and communications installations require a number of power supplies all derived from a single isolator on the main switchgear and not from "noisy" subsidiary circuits. In addition a low impedance technical earth will be required in the Control Room. The same earth and phase should be used for these services throughout the Centre.

5.12 VIDEO RELAY: As part of the infrastructure mentioned above, there will be provision to add a camera and video monitor(s) to facilitate the relay of the performance to front of house areas.

6.0 FILM PRESENTATION

6.1 PROJECTION EQUIPMENT: A digital projector will be provided, suspended from the auditorium truss. Sound will be reproduced on the installed sound system with the possible addition of extra loudspeakers when required for major presentations. Playback equipment for DVD and Blu-ray Discs will also be provided.

6.2 PROJECTION SCREEN: A roll-down film screen will be suspended on an electric hoist fitted to the mother truss. No dedicated screen masking will be included. Fixed top and side masking will utilise a black border and legs supplied as part of the general masking.

7.0 LECTURE USE

7.1 LECTURE PRESENTATIONS: The same projector and screen mentioned above, together with the installed infrastructure will allow for a laptop to be plugged in on stage or in the control room in order to use the venue for lectures or conferences.

ENDS

Twickenham Community Building

Theatre Equipment Cost Estimates July 2013

All figures based on July 2013 prices

Read in conjunction with Technical Master Plan

STAGE RIGGING EQUIPMENT

Aluminium truss mother grid over stage area Estimated cost £38,000

Auditorium lighting truss Estimated cost £12,000

Curtains and tracks, including house curtain and track, cross stage curtains tracks, masking curtains, legs and borders Estimated cost £12,000

Hydraulic work platform Estimated cost £8,500

Work by others – strong points for suspension, Electrical supply for hoists

SEATING

See Architects report. Cost estimate not included

THEATRE LIGHTING

Infrastructure: production lighting dimmers and non-dims, data and control equipment. Estimated cost £14,000

Working and house lighting fittings and control Estimated cost £30,000

Equipment - Lighting control desk, DMX control, spot lights and flood lights, Estimated cost £19,500

Work by others: mains and control wiring and containment, switchgear.

SOUND AND COMMUNICATIONS

Installed Wiring Infrastructure including - wiring infrastructure supply, termination, testing, racks, facilities panels. Estimated cost £17,500

Paging and Communication – Paging and show relay speakers in dressing rooms and selected back stage rooms. Bar bells in foyer and selected public spaces. Assisted Listening System in auditorium. Single channel ring intercom system. Estimated cost £9,250

Sound equipment – Mixing desk, loudspeakers, amplifiers, playback equipment, microphones and accessories. Estimated cost £48,000

Not included: containment for wiring, installation of back boxes, technical power supplies.

PROJECTION EQUIPMENT

Digital projector and roll up projection screen Estimated cost £9,000

CHECK LIST FOR COST CONSULTANT

The following are items (inter alia) which have NOT been costed above and for which provision must be made by the QS:

- Steelwork
- Any builder's work in connection with any technical installations
- Painting and finishes other than on equipment
- Sound proof doors
- Fixed acoustic treatments
- Stage smoke venting
- Air conditioning or ventilation
- Floor finish to stage, including specialist traps
- Control Room windows, work-top, chairs and furniture
- Power supplies, any mains wiring or containment (including production lighting and power to equipment)
- Distribution consoles for temporary power supplies
- Containment for sound and communications wiring
- House lighting fittings and wiring
- Working lighting fittings and wiring
- IT wiring and facilities; WIFI etc.
- Induction loop systems for ticket office, bars and other foyer areas
- Tracked side panels to retractable seating unit, if required
- Main contractor's discounts, profit or overhead
- Any preliminary costs
- Fees and VAT

**Twickenham Royal Mail
Sorting Office
Community Building**

**ACOUSTIC DESIGN CRITERIA REPORT
HT:18898/DC Rev B**

For :

St James
St James House
26 Bridge Street
Leatherhead
Surrey
KT22 8BZ

2 July 2013

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ACOUSTIC DESIGN CRITERIA REPORT
HT:18898/DC Rev B

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1.0 INTRODUCTION

This report proposes acoustic design criteria for the Community Building proposed as part of the Former Royal Mail Sorting Office development. The criteria and our advice fall into the following categories:

- Indoor Ambient Noise Levels (from external noise intrusion & building services);
- Internal sound insulation (airborne and impact);
- Rain noise;
- Reverberation;
- Building Services Noise.

2.0 ACOUSTIC TERMINOLOGY

Please see Appendix A attached for an explanation of the acoustic terminology used in this report.

3.0 STANDARDS AND GUIDELINES

3.1 Employer's Brief

Hann Tucker Associates has not received a specific brief from the Employer regarding acoustics.

3.2 Building Regulations

There are currently no mandatory design requirements for performance venues.

3.3 Local Authority Requirements

Plant noise emissions will be designed to 10dBA below recorded background levels in accordance with the Local Planning Authorities requirements in order to protect the interests of local residents and other potentially noise sensitive areas.

The following report presents preliminary advice based on good acoustic design practices.

4.0 ACOUSTIC DESIGN TARGETS

4.1 Indoor Ambient Noise Levels

Indoor ambient noise levels are to include contributions from external sources outside the premises (including but not limited to, noise from road, rail and air traffic, industrial and commercial premises) as well as internal building services sources.

The following table presents the upper limit of indoor ambient noise levels in various internal spaces during normal ventilation conditions. For guidance,

the equivalent NR levels are presented for rooms served by mechanical ventilation.

Room Type	Upper Limit Indoor Ambient Noise Level, $L_{Aeq,30min}$ (Equivalent NR)
Auditorium	35dB (NR30)
Dance Space	35dB (NR30)
Atrium, Circulation Space, Changing Rooms, Corridors, Stairwells	45dB (NR40)
Kitchens*, Toilets*	50dB (NR45)
Office, Admin	40dB (NR35)
Bar, Café	45dB (NR40)
Multi-Purpose 'Flexible' Space	40dB (NR35)
Conservatory (corporate, exhibitions, private hire)	35dB (NR30)

During rapid ventilation conditions, the above values can be increased by 5dB.

4.2 Internal Sound Insulation

The performance standard shall be defined by the activity noise in the 'source' room and the noise sensitivity in the 'receiving' room in accordance with the following two Tables.

Type of Room	Activity Noise (Source Room)	Noise Tolerance (Receiving Room)
Auditorium	High	Very Low
Dance Space	Very high	Low
Atrium, Circulation Space, Changing Rooms, Corridors, Stairwells	Average	Medium
Kitchens*, Toilets*	Average/High	High
Office, Admin	Average	Medium
Bar, Café	High	High
Multi-Purpose 'Flexible' Space	Average	Low
Conservatory (corporate, exhibitions, private hire)	Average	Low

	$D_{nt}(T_{nt,max}),W$ Activity Noise In Source Room				
		Low	Average	High	Very High
Noise Tolerance Receiving Room	High	30	35	45	55
	Medium	35	40	50	55
	Low	40	45	55	55
	Very Low	45	50	55	60

4.3 Reverberation Times

For preliminary advice, we recommend the following performance standards for reverberation times within different spaces and will need to be approved with Building Control.

Room Type	Mid Frequency Reverberation Times T_{mf} (seconds)
Auditorium	<1.0
Dance Space	<1.2
Atrium, Circulation Space, Changing Rooms, Corridors*, Stairwells*	<1.5
Kitchens*, Toilets*	<1.0
Office, Admin.	<1.0
Bar, Café	<1.0
Multi-Purpose 'Flexible' Space	<0.8
Conservatory (corporate, exhibitions, private hire)	<0.8

4.4 Building Services Noise (Atmospheric)

The site lies within the local administrative boundary of the London Borough of Richmond upon Thames. We understand the local authority's criteria for proposed development are as follows:

Prior to the commencement of development, a scheme shall be submitted to and approved in writing by the local planning authority which demonstrates that the following noise criteria can be complied with and shall thereafter be retained as approved.

1. The cumulative measured or calculated rating of noise emitted from the proposed plant to which the application refers, shall be 5dB(A) below the existing background noise level or 10dB(A) below if there is a particular tonal or discrete component to the noise, at all times that the mechanical system etc. operates. The measured or calculated noise levels shall be determined at the boundary of the nearest ground floor noise sensitive premises or 1 metre from the façade of the nearest first floor (or higher) noise sensitive premises, and in accordance to the latest British Standard 4142; An alternative position for assessment/measurement may be used to allow ease of access, this must be shown on a map and noise propagation calculations

detailed to show how the design criteria is achieved.

2. The noise from the proposed plant must achieve the good to reasonable standard for internal noise levels detailed in Table 5 of BS 8233 'Sound Insulation and Noise Reduction for Buildings: C of P'.

3. The plant shall be supported on adequate proprietary anti-vibration mounts as necessary to prevent the structural transmission of vibration and regenerated noise within adjacent or adjoining premises, and these shall be so maintained thereafter. Reason: To protect the amenities of nearby occupants.

Based on the above requirements, and the results of our environmental noise survey, we recommend that the following plant noise emission criteria should be achieved at 1 metre outside the nearest residential property.

Position	Plant Noise Emission Criteria (dB re 2×10^{-5} Pa)	
	Daytime (07:00 – 23:00 hours)	Night-time (23:00 – 07:00 hours)
1	42	30
2	32	30
3	38	28

Any plant with a tonal or intermittent characteristic should be designed to a noise levels 5dB lower.

5.0 CONCLUSIONS

A community building is proposed as part of the former Royal Mail Sorting Office Site.

No specific acoustic brief has been issued.

Hann Tucker Associates have recommended suitable criteria based on the requirements the Local Authority's requirements and good acoustic design practice.



Prepared by:
Gareth Evans
Senior Consultant
HANN TUCKER ASSOCIATES



Checked by:
John Gibbs
Director
HANN TUCKER ASSOCIATES

APPENDIX A

ACOUSTIC TERMINOLOGY

- dB** - Decibel - Used as a measurement of sound pressure level. It is the logarithmic ratio of the noise being assessed to a standard reference level.
- dB(A)** - The human ear is more susceptible to mid-frequency noise than the high and low frequencies. To take account of this when measuring noise, the 'A' weighting scale is used so that the measured noise corresponds roughly to the overall level of noise that is discerned by the average human. It is also possible to calculate the 'A' weighted noise level by applying certain corrections to an un-weighted spectrum. The measured or calculated 'A' weighted noise level is known as the dB(A) level.

Because of being a logarithmic scale noise levels in dB(A) do not have a linear relationship to each other. For similar noises, a change in noise level of 10dB(A) represents a doubling or halving of subjective loudness. A change of 3dB(A) is just perceptible.

- L_{A1}** - If a non-steady noise is to be described it is necessary to know both its level and the degree of fluctuation. The L_n indices are used for this purpose, and the term refers to the level exceeded for n% of the time, hence L_{A1} is the (A-weighted) level exceeded for 1% of the time and as such can be regarded as the 'maximum level'.

- L_{Aeq}** - The concept of L_{Aeq} (equivalent continuous sound level) has up to recently been primarily used in assessing noise in industry but seems now to be finding use in defining many other types of noise, such as aircraft noise, environmental noise and construction noise.

L_{Aeq} is defined as the (A-weighted) notional steady sound level which, over a stated period of time, would contain the same amount of acoustical energy as the actual, fluctuating sound measured over that period (30 minutes).

- D_{nT,w}** - **Weighted Standardised Level Difference (dB)**

A single number quality characterising the on site airborne sound insulation performance of a construction, including transmission of sound via flanking paths (e.g. adjoining floors/walls).

The higher the D_{nT,w} of a construction, the better its airborne sound insulation performance; the higher the D_{nT,w} requirement, the more stringent the criteria.

R_w - Weighted Sound Reduction Index (dB)

A single number quantity characterising the laboratory based airborne sound insulation performance of a construction, independent of transmission of sound via flanking paths.

As with $D_{nT,w}$, the higher the R_w , the better the sound insulation performance; the higher the R_w requirement, the more stringent the criterion.

$L'_{nT,w}$ - Weighted Standardised Impact Sound Pressure Level (dB)

A single number quantity characterising the on site structure borne sound insulation performance of a construction.

As $L'_{nT,w}$ represents a sound pressure level in a "receive" room ("source" room generates the sound, "receive" room receives it), the lower the $L'_{nT,w}$ of a construction, the better its structureborne sound insulation performance. Accordingly, the lower the $L'_{nT,w}$ requirement, the more stringent the criterion.

Since the level of reverberation in a "receive" room affects the difference in sound level across a wall or floor on site, $D_{nT,w}$ and $L'_{nT,w}$ include a correction for the "receive" room reverberation time (allowing comparison of values measured in various conditions).


Due to the varying target reverberation times in the various room types airborne and impact sound insulation has been specified in terms of $D_{nT(T_{mf, max})w}$ and $L'_{nT(T_{mf, max})w}$, respectively, therefore taking into account the maximum mid-frequency reverberation time, T_{mf} (see below), in each "receive" room.

RT, RT_{60}, T or T_{60} - Reverberation Time (secs)

The time, in seconds, for a sound to decay by 60dB.

T_{mf} - Mid-Frequency Reverberation Time (secs)

The arithmetic average of the reverberation time in the 500Hz, 1kHz and 2kHz bands.

D389 – Twickenham Project Community Building General Specification Schedule (Planning Stage)	All Products / Suppliers noted below are or equal approved. Revision A 26 th February 2014	
<u>Floor Finishes</u> Entrance Area Theatre Back of House Toilets Multi Purpose Rooms Bar Area Conservatory Stairs	Floor tiling including skirting supplied by Nicholls & Clarke Group Travertine Range Vinyl flooring by Harlequin Cascade Vinyl flooring by Tarkett Safetred Dark Grey Vinyl flooring by Tarkett Safetred Dark Grey Vinyl flooring by Tarkett Safetred Dark Grey Vinyl flooring by Tarkett Safetred Dark Grey Engineered HW flooring by Havwoods Oak Natural Rustic Grade Carpets by Heckmondwike Entrance & Transitions Range	http://www.nichollsandclarke.com/ http://uk.harlequinfloors.com/en/products-services/floors-overview/vinyl-floors/harlequin-cascade/ http://professionals.tarkett.co.uk/products/safety-floors/safety-floors/safetred-dimension http://www.havwoods.co.uk/search/havwoods-construction/havwoods-construction-engineered-wood-flooring http://www.heckmondwike-fb.co.uk/products/entrance-transition-area-carpet-tiles/
<u>Wall Finishes</u> All wall areas painted or tiled	Paint by Dulux Tiles by Nicholls & Clarke Group Travertine Range	http://www.dulux.co.uk/ http://www.nichollsandclarke.com/
<u>Light Fittings (Generally)</u> Entrance Area Theatre (general lighting) Back of House Toilets Multi Purpose Rooms Bar / Conservatory Stairs	IBL Lighting – Model 6167 IBL Lighting – Model 6166 MK white ceiling rose pendant IBL Lighting – Model 49428 IBL Lighting – Model 49428 IBL Lighting – Model 6011 IBL Lighting – Model 49436	http://www.ibl.co.uk/Products/Retail/131/401 http://www.ibl.co.uk/Products/Retail/131/400 Link not available http://www.ibl.co.uk/Products/Emergency/30/335 http://www.ibl.co.uk/Products/Emergency/30/335 http://www.ibl.co.uk/Products/Retail/126/367 http://www.ibl.co.uk/Products/Emergency/31/336

<p><u>Joinery Items</u> Skirtings Architraves Doors Ironmongery</p>	<p>Painted MDF 150mm x 19mm Painted MDF 100mm x 19mm Flush painted 44mm thick fire doors Stainless steel finish</p>	
<p><u>Sanitary Fittings</u> WC & Basin Doc M Pack</p> <p>Brassware</p> <p>Urinals</p>	<p>Ideal Standard – Ref: S6966AC</p> <p>Ideal Standard – Attitude Range</p> <p>Ideal Standard – Contour HygenIQ</p>	<p>http://www.idealspec.co.uk/catalogue/bluebook/doc-m/doc-m-wc-rooms/doc-m-close-coupled-left-or-right-hand-packs_p1279.html</p> <p>http://www.idealspec.co.uk/catalogue/platinum-book/brassware/modern/attitude/attitude-basin-classic-outlet-mixer_p1535.html</p> <p>http://www.idealspec.co.uk/catalogue/platinum-book/urinals/contour-hygeniq-bowl-fully-concealed-urinal_p2173.html</p>
<p><u>Tiled Wall Finishes</u></p>	<p>Tiles by Nicholls & Clarke Group Travertine Range</p>	<p>http://www.nichollsandclarke.com/</p>
<p><u>Mechanical</u> Main Theatre Air Handling, Space heating & Comfort Cooling</p> <p>Flexible Spaces/Offices Air Handling</p> <p>Comfort Cooling & Space Heating</p>	<p>Trane – Range CCEB</p> <p>Mitsubishi – Range Lossnay</p> <p>Mitsubishi – Range City Multi PLFY</p>	<p>http://www.engineer.trane.com/content/dam/Trane/en/Products/airhandlingunits/CCEB/CCEB-SLB001-E4_1211.pdf</p> <p>http://www.mitsubishielectric.com/bu/air/products/lossnay.html</p> <p>http://www.mitsubishielectric.co.nz/product/group.aspx?cat=7859</p>

Back of house / toilets Space Heating	Stelrad – Range: Planar	http://www.stelrad.com/uk/radiators/10/planar
Electrical Accessories	MK	http://www.mkelectric.com/en-gb/Products/WD/logicplus/Pages/default.aspx
Public Health SVPs	Wavin Osma UPVC	http://co-uk.wavin.com/master/master.jsp?products=products&middleTemplateName=oc_middle_system_detail_III&FOLDER%3C%3Efolder_id=2534374305532312&c=products&p=/Assortments/006/006/External_006_Products/OSM/03/0301

APPENDIX 6

Occupancy Schedule

TWICKENHAM COMMUNITY BUILDING - COST PLAN 1b Updated RDS				Total			
NO VE OPTIONS							
New items or re-measures					Total Sq Footage	17,550	

Cor.	Description	Quantity	Unit	Rate	Total	£ / ft2	Notes
	Foundations						
	Loadbearing Piling						Note: Piling at LGF and GF levels now
	Piles 25m deep	77	nr	1,800.00	138,600.00	7.90	
	Pile spoil cart away	544	m3	30.00	16,330.55	0.93	
	Piling mat & removal 500mm	457	m2	30.00	13,698.00	0.78	
	Piling attendance	1	item	11,550.00	11,550.00	0.66	
	Cutting down piles	77	nr	25.00	1,925.00	0.11	
	Secant piled wall to LGF basement						
	Piles 12m deep 600mm	102	nr	864.00	88,506.00	5.04	600mm centres
	Piles 12m deep 450mm	102	nr	848.00	86,379.50	3.78	800mm centres
	Pile spoil cart away	543	m3	30.00	16,294.09	0.93	
	Piling mat & removal - inc above		item			0.00	
	Piling attendance	1	item	15,300.00	15,300.00	0.87	
	Cutting down piles	102	nr	25.00	2,560.94	0.15	
	Capping beam	81.98	m	125.00	10,247.50	0.58	
	Sheet piling - to main site entrance ramp	31.00	m	1,250.00	38,750.00	2.21	Ave 12m deep
	Basement Foundation						
	Groundbeams 600*450	81.98	m	200.00	16,396.00	0.93	
	Pile caps for 2 piles	10.00	nr	1,500.00	15,000.00	0.85	
	Pile caps for 3 piles	3.00	nr	2,000.00	6,000.00	0.34	
	Pile caps for 4 piles	8.00	nr	2,500.00	20,000.00	1.14	
	Core cap for group of 16 piles	55.65	m3	250.00	13,912.50	0.79	
	Type 1 fill under LGF slab 250mm	273.52	m2	7.00	1,914.64	0.11	
	Excavation	757.65	m3	3.00	2,272.95	0.13	
	Cart away cont non haz 30% + 30% bulking	295.48	m3	85.00	25,116.11	1.43	
	Cart away inert 70% + 30% bulking	689.46	m3	25.00	17,236.55	0.98	
	Basement LGF slab 250mm thick						
	In-situ concrete	88.38	m3	128.00	6,752.64	0.50	
	EO Callite to LGF slab	68.38	m3	88.00	6,017.44	0.34	
	Formwork to edges	81.95	m	12.00	983.40	0.06	
	Finish to concrete	273.52	m2	2.00	547.04	0.03	
	Reinforcement: 120kg/m3	8.21	tns	950.00	7,795.32	0.44	
	RC Frame						
	Retaining wall to LGF - in-situ concrete, 200mm to contig wall						
	Concrete wall 200mm - 3.75m high	81.46	m3	128.00	7,867.20	0.45	
	Formwork to one side of wall	245.65	m2	13.00	3,196.05	0.18	
	Kicker to walls	81.95	m	12.00	983.40	0.06	
	Reinforcement to walls: 85kg/m3	4.00	t	950.00	3,795.31	0.22	
	Finish to inside of contig wall		m2		40.00	0.00	
	E.o callite concrete to walls	81.46	m3	88.00	5,408.70	0.31	
	EO drain cavity to walls	81.95	m	70.00	5,736.50	0.33	
	Formwork to ends - 9 Nr	33.75	m	15.00	506.25	0.03	
	Construction joints / sundries 2%	2%	item	27,493.41	549.67	0.03	
	Drainage below ground	273.52	m2	25.00	6,838.00	0.39	
	Ground water removal	1.00	item	1,000.00	1,000.00	0.06	
	Removal of obstructions	1.00	item	1,000.00	1,000.00	0.06	
	Frame contractors preliminaries (excludes piling)	10%		178,825.87	17,882.59	1.02	
	Total Foundations				616,850.03	35.15	

	Shell & Core						
	Frame						
	GF, 1st, 2nd, 3rd, 4th and roof suspended slabs, 250-275mm						Control room slab and cantilevered balcony
	In-situ concrete	465.21	m3	128.00	59,547.14	3.39	
	EO Cantilever slabs		m2			0.00	See transfer beams
	Step/recess in GF slab	24.00	m	200.00	4,800.00	0.27	
	Formwork to soffits	1,424.78	m2	30.00	42,743.40	2.44	Less Ribdeck to Theatre and Cons roof
	Formwork to edges	414.10	m	12.00	4,969.20	0.28	
	Finish to concrete	1,807.30	m2	2.00	3,614.60	0.21	
	Reinforcement, 120kg/m3	55.83	tns	950.00	53,034.17	3.02	
	RC Transfer beam to 2nd floor						
	Concrete	38.22	m3	128.00	4,892.16	0.28	
	Formwork	89.18	m2	30.00	2,675.40	0.15	
	Rebar	4.59	tns	950.00	4,357.08	0.25	
	EQ for scaffold support towers to formwork	209.48	m3	50.00	10,473.75	0.60	
	Shear walls, 200mm (to lift/stair core)						
	In-situ concrete	92.04	m3	130.00	11,965.01	0.68	
	Wall kicker	123.79	m	12.00	1,485.48	0.08	
	Formwork to sides	460.19	m2	26.00	11,965.01	0.68	
	Formwork to ends - 6Nr per floor	135.90	m	20.00	2,718.00	0.15	
	Finish to concrete	460.19	m2	2.00	920.39	0.05	
	Reinforcement, 120kg/m3	11.04	tns	950.00	10,492.39	0.60	
	Columns, 200 x 500mm						
	In-situ concrete	20.88	m3	130.00	2,714.40	0.15	
	Formwork to sides	292.32	m2	23.00	6,723.36	0.38	
	Finish to concrete	292.32	m2	2.00	584.64	0.03	
	Reinforcement: 120kg/m3	2.51	tns	950.00	2,380.32	0.14	
	Shear links	88.00	nr	100.00	8,800.00	0.50	
	Columns circular, 400mm diameter						
	In-situ concrete	1.07	m3	135.00	145.07	0.01	

TWICKENHAM COMMUNITY BUILDING - COST PLAN 1b Updated RDS				Total			
NO VE OPTIONS							
New Items or re-measures				Total Sq Footage	17,550		

Cont	Description	Quantity	Unit	Rate	Total	£ / ft2	Notes
	Formwork to sides	10.75	m2	40.00	429.83	0.02	
	Finish to concrete	10.75	m2	10.00	107.48	0.01	
	Reinforcement, 120kg/m3	0.13	tns	950.00	122.50	0.01	
	Shear links	3.00	nr	100.00	300.00	0.02	
	Joint & Sundries	3%		252,960.73	7,588.82	0.43	
	Frame contractors preliminaries including mcd	10%		260,549.55	26,054.95	1.48	
							286,604.50
	Staircase						
	LGF to 1st Stage - one + half stair	2.00	levels	5,000.00	10,000.00	0.57	Stairmaster
	LGF core - one + half stair	1.00	levels	5,000.00	5,000.00	0.28	
	GF core - one + half stair	1.00	levels	5,000.00	5,000.00	0.28	
	1st core - one + half stair	1.00	levels	5,000.00	5,000.00	0.28	
	1st core control room - one + half stair	1.00	levels	5,000.00	5,000.00	0.28	
	2nd core - one + half stair	1.00	levels	5,000.00	5,000.00	0.28	
	3rd core - one + half stair	1.00	levels	5,000.00	5,000.00	0.28	
	4th core - one + half stair	1.00	levels	5,000.00	5,000.00	0.00	No stair
	Frame contractors preliminaries including mcd	10.0%		40,000.00	4,000.00	0.23	
							44,000.00
	Structural Steelwork						
	Auditorium structure 1st to 2nd floor inc roof						
	Bolt boxes cast into slab at 1st floor	19.00	Nr	500.00	9,500.00	0.54	
	Columns	10.59	ins	1,200.00	12,710.40	0.72	
	Intermediate bracing @ 10%	1.06	ins	1,300.00	1,376.98	0.08	Using flat sections in wall
	Beams	17.51	ins	1,200.00	21,013.03	1.20	
	Fittings @ 5%	1.46	ins	1,300.00	1,895.53	0.11	
	Fire protection	359.13	m2	25.00	8,978.29	0.51	
	Ribdeck 80 by Hare Decking to 2nd floor for concrete placement	266.90	m2	20.00	5,338.00	0.30	
	Conservatory structure 2nd floor inc roof						
	Columns	0.51	ins	1,200.00	612.13	0.03	
	Beams	6.14	ins	1,200.00	7,366.15	0.42	
	Fittings @ 5%	0.33	ins	1,300.00	432.16	0.02	
	Fire protection	92.90	m2	25.00	2,322.48	0.13	
	Tata Roofdek D35 for Hydrotech roof	115.82	m2	30.00	3,468.60	0.20	
							75,013.73
	Scaffolding						
	To Gross façade	1,713.70	m2	35.00	59,979.48	3.42	External access
	Crash deck scaffold to auditorium	1,253.30	m3	20.00	25,066.00	1.43	Internal birdcage
	Lift shaft birdcage	88.32	m3	15.00	1,324.82	0.08	Internal birdcage
	BOH stage birdcage	289.57	m3	15.00	4,344.98	0.25	Internal birdcage
							90,715.28
	Roof						
	Hydrotech, Insulation and ballast to 2nd terrace, 3rd cons, 4th roof	456.60	m2	125.00	57,075.00	3.25	Laid on concrete slab/D35 Roofdek
	Ballast stones to non-green roof area	229.30	m2	11.65	2,659.70	0.15	
	Green Roof to 50%	228.30	m2	45.00	10,273.50	0.59	
	Louvre Screen	39.40	m	100.00	3,940.00	0.22	
	Penetrations / sundries	1.00	item	5,000.00	5,000.00	0.28	
	Terraces						
	Paving slabs	156.60	m2	30.00	4,698.00	0.27	EO roof finish
	Penetrations / sundries	1.00	item	2,000.00	2,000.00	0.11	
	Entrance canopy roof						
	Lightweight metal/timber	15.06	m2	400.00	6,024.00	0.34	Inc finish and soffit
	Special feature around the front entrance door	-	item	1,500.00	-	0.00	Omitted
							91,670.20
	Architectural Metalwork						
	Triple railing to edge of 2nd floor terrace wall	-	m	350.00	-	-	None
	Single railing to edge of 2nd & 4th floor terrace wall	63.26	m	250.00	15,815.00	0.90	
	Brise Soleil	282.48	m	600.00	169,488.00	9.66	
	Metalwork spiral staircase and new entrance detail	1.00	item	36,000.00	36,000.00	2.05	Inc handrail, metal balustrade to stair only, galv ms, open treads; non-slip treads
	Signage						
	Soffit to ground floor entrance	-	m2	85.00	-	0.00	Inc in canopy
	Mansale to conservatory roof	28.60	m	60.00	2,288.00	0.13	
	Mansale to 4th floor roof	63.00	m	80.00	5,040.00	0.29	
	Steel columns to canopy	-	m	200.00	-	0.00	Inc in canopy
	Bolt on balcony decking - curved	22.45	m2	950.00	21,327.50	1.22	Timber decking, metal floor, metal balustrade
	Bolt on balcony balustrading - curved	-	m	-	-	-	Inc in balcony
	Feature Spike	-	item	5,000.00	-	0.00	Excluded
	Plant room louvres	2.00	nr	1,000.00	2,000.00	0.11	At ground level
	Brickwork						
	Cavity Wall External skin of Facing Brickwork - Straight						
	Forming Cavity	334.31	m2	1.50	501.47	0.03	
	1/2 B wall in facings (E325/1000)	334.31	m2	73.50	24,572.01	1.40	Internal skin in Drylining
	Cavity Wall External skin of Facing Brickwork - Curved						
	Forming Cavity	124.69	m2	1.50	187.03	0.01	
	1/2 B wall in facings (E325/1000)	124.69	m2	88.50	11,034.84	0.63	Internal skin in Drylining
	Cavity Wall External skin of Feature Facing Brickwork - Straight						
	Forming Cavity	211.46	m2	36.50	7,718.44	0.44	Inc acoustic insulation to NR 30

Code	Description	Quantity	Unit	Rate	Total	£ / m2	Notes
	1/2 B wall in facings (E350/1000)	211.46	m2	85.00	17,974.44	1.02	Internal skin in Drylining
						0.00	Staffordshire Blue Brindle
	Cavity Wall External skin of Metal Cladding - Curved		m2				
	Forming Cavity		m2	1.50		0.00	None
	100mm blockwork		m2	35.00		0.00	None
	Rainscreen cladding		m2	600.00		0.00	None
	Cavity Wall External skin of Render on blockwork		m2				
	Forming Cavity	249.62	m2	1.50	374.43	0.02	
	140mm blockwork	249.62	m2	70.00	17,473.61	1.00	Additional thickness of block
	Through coloured render	249.62	m2	120.00	29,954.76	1.71	
	Cavity Wall External skin of blockwork for sign		m2				Wall left temporary cover for sign
	Forming Cavity	66.87	m2	1.50	100.31	0.01	
	140mm blockwork	66.87	m2	70.00	4,680.90	0.27	Additional thickness of block
	Temporary cover	66.87	m2	15.00	1,003.05	0.06	
	Parapet copings	88.11	m	85.00	7,489.35	0.43	
	Brick/stone band at 1st floor level	88.11	m	100.00	8,811.00	0.50	
	Stone Window head		m	50.00		0.00	None
	Glazing Straight / faceted						All glazing to be straight or faceted
	Composite windows	214.59	m2	350.00	75,107.31	4.28	
	Curtain walling - Schuco or similar	409.04	m2	500.00	204,518.90	11.65	
	Cavity Wall External skin of Metal Cladding		m2			0.00	
	Forming Cavity	91.63	m2	1.50	137.45	0.01	Internal skin in Drylining
	Rainscreen cladding	91.63	m2	300.00	27,489.54	1.57	Trespa or PPC panel
	External doors						
	Fire Escape doors	2.00	Pairs	3,700.00	7,400.00	0.42	Acoustic
	Fire Escape doors	1.00	Single	2,700.00	2,700.00	0.15	Acoustic
	Staircase door to roof	1.00	Single	1,300.00	1,300.00	0.07	Acoustic
	Main entrance door in framed glass	1.00	Pair	10,250.00	10,250.00	0.58	Acoustic
	Door to bar balcony	1.00	Single	2,000.00	2,000.00	0.11	
	Doors to conservatory	2.00	Pairs	3,500.00	7,000.00	0.40	
	Lift						
	Main Lift						
	Shaft walling					0.00	
	Lift over-run	1.00	nr	2,500.00	2,500.00	0.14	12 person inc in frame
	Lift steels / sundries	1.00	nr	1,500.00	1,500.00	0.09	
	Goods / passenger lift to all floors	7.00	floors	5,000.00	35,000.00	1.99	Reduced spec to standard car finishes
	Pit					0.00	inc in frame
	Lighting / power		item	2,000.00		0.00	inc in Electrical
	Stage Lift						
	Shaft walling	38.40	m2	300.00	11,520.00	0.66	
	Lift over-run	1.00	nr			0.00	
	Lift steels / sundries	1.00	nr	1,500.00	1,500.00	0.09	
	Flat form lift to LGF, GF & 1st	1.00	floors	8,500.00	8,500.00	0.48	As Theatreplan
	Lighting / power		item	1,500.00		0.00	inc in Electrical
	Total Foundations				1,372,781.04	78.22	

	Fit Out						
	Internal Walls						
	100mm blockwork walls		m2	30.00		0.00	None
	Acoustic tiles to rooms 2.10, 3.07, 4.01, 4.08 and 3.01	277.00	m2	40.00	11,080.00	0.63	To achieve NR 38
	Internal skin to external wall	1,078.59	m2	19.00	20,493.20	1.17	
	Metsec to external wall	1,078.59	m2	65.00	70,108.30	3.99	
	Internal lining to basement wall	307.31	m2	19.00	5,838.94	0.33	
	Room partitions - metal struct, 2 layers pb both sides, skimmed	1,369.71	m2	30.00	41,091.29	2.34	
	Cubicle partitions	21.00	nr	250.00	5,250.00	0.30	
	Screens & Insulation Basement and GF	730.12	m2	22.00	16,062.64	0.92	
	Latex and isorubber 1st to 4th floor	900.90	m2	16.00	14,414.40	0.82	
	Plasterboard Ceiling GF to 4th Only	374.20	m2	23.00	31,606.60	1.80	AS RDS
	E.c Acoustics for NR ratings	1.00	item	20,000.00	20,000.00	1.14	
	Doorsets						
	LGF - BOH						
	Single Doors	18.00	Nr	500.00	9,000.00	0.51	
	Double Doors	4.00	Pr	1,000.00	4,000.00	0.23	
	GF - 4th - FOH						
	Single Doors	27.00	Nr	500.00	13,500.00	0.77	
	Double Doors	16.00	Pr	1,000.00	16,000.00	0.91	
	Toilet cubicle doors		Nr	150.00		0.00	inc in cubicles above
	Roof - BOH						
	Single Doors	1.00	Nr	500.00	500.00	0.03	
	EO for Disabled bi-fold door kit	4.00	Nr	500.00	2,000.00	0.11	New item
	Joinery and Fittings						
	Skirtings	709.74	m	5.50	3,903.57	0.22	To internal and extl walls

TWICKENHAM COMMUNITY BUILDING - COST PLAN 15 Updated RDS				Total			
NO VE OPTIONS							
New items or re-measures					Total Sq Footage	17,550	

Corr	Description	Quantity	Unit	Rate	Total	£ / ft2	Notes
	Ballet bar to one wall	1.00	nr	400.00	400.00	-0.02	
	Store shelving / sundries - small room	7.00	nr	750.00	5,250.00	-0.30	
	Store shelving / sundries - large room	1.00	nr	1,000.00	1,000.00	0.08	
	Reception / desk	1.00	Nr	9,000.00	9,000.00	-0.51	
	Dressing room make up counters	17.91	m'	200.00	3,582.00	0.20	
	Dressing room wardrobes	16.48	m	500.00	8,240.00	-0.47	New item RDS
	Sales area / desk	1.00	nr	5,000.00	5,000.00	0.28	
	Digital projector and zoom lens 5,500 ANSI lumens	1.00	item	4,000.00	4,000.00	0.23	Theatretech
	Electric EP screen with handheld remote operation	1.00	item	2,500.00	2,500.00	0.14	Theatretech
	Seating / Furniture other		item			0.00	None
	Signage	1.00	item	2,500.00	2,500.00	0.14	
	Fire extinguishers	1,631.02	m2	0.35	570.66	0.03	
	Blinds to flexible rooms	191.84	m2	30.00	5,755.07	-0.33	
	Sliding screens to bar - shutters	2.00	nr	2,500.00	5,000.00	-0.28	Bar measured below
	Fit out for Wet rooms to flexible spaces as Art Studios	2.00	item	1,500.00	3,000.00	-0.17	
	Telescopic mobile seating, including palette trucks, motorised deployment for 152 seats	1.00	item	65,000.00	65,000.00	3.70	Theatretech
	Fixed matching gallery seats 131 in total	1.00	item	17,685.00	17,685.00	1.01	Theatretech
	Loose chairs and storage, 34 chairs	1.00	item	2,720.00	2,720.00	0.15	Theatretech
	Stage		item			0.00	Excluded
	Window blinds	134.40	m2	75.00	10,080.00	-0.57	New item to 4.01, MP room 1,2,3,4,5,6
	Sliding glazed screen facing auditorium 3.6m x 0.9m	1.00	item	2,500.00	2,500.00	-0.14	New item to 4.01, MP room 1,2,3,4,5,6 202,686.49
	Mechanical & Public Health						
	Public Health & HW/CW distribution						
	Sanitaryware - WC	21.00	nr	362.00	7,602.00	0.43	Ideal Standard
	Sanitaryware - Disabled WC	4.00	nr	400.00	1,600.00	0.09	Ideal Standard
	Sanitaryware - Basins	28.00	nr	367.00	10,276.00	0.59	Ideal Standard
	Sanitaryware - Cleaners sink	1.00	nr	1,975.00	1,975.00	0.06	Ideal Standard
	Sanitaryware - Urinal	8.00	nr	400.00	3,200.00	0.18	Ideal Standard
	Sanitaryware - Shower	5.00	nr	1,871.00	4,355.00	0.25	Ideal Standard
	Fittings for disabled toilets	3.00	nr	1,500.00	1,500.00	0.09	Ideal Standard
	Hand dryers to toilets	23.00	nr	100.00	2,300.00	0.13	Ideal Standard
	Toilet roll holders	25.00	nr	20.00	500.00	0.03	Ideal Standard
	Rainwater goods	1,631.02	m2	8.00	13,048.16	0.74	Wavin Osma UPVC
	Soil stacks	1,631.02	m2	5.00	8,155.10	0.46	Wavin Osma UPVC
	CW - Boosted cold water, break tank and distribution	1,631.02	m2	15.00	24,465.30	1.39	
	HW - 2nr VRF heat pump boilers (12.5Kw ea), 400l buffer vessel - NIBE	2.00	nr	9,000.00	18,000.00	1.03	Sirata
	HW - 2 pipe distribution and thermo mixing valves	1,631.02	m2	10.00	16,310.20	0.93	
	Mechanical Systems						
	Heating and cooling - Air-Conditioning - Central AHU mounted on conservatory roof, ductwork through ventilation riser, fan coil units, ceiling vents	1,631.02	m2	75.00	122,326.50	6.97	As Vector Design advice. Mitsubishi
	Supply and Extract by displacement ventilation for Theatre, 4th floor roof mounted extract unit for toilets, kitchen and bars	1,631.02	m2	60.00	97,861.20	5.58	As Vector Design advice. Mitsubishi
	PV mounted on roof	1,631.02	m2	23.97	39,100.44	2.23	
	Dry riser	1,631.02	m2	5.00	8,155.10	0.46	
	Fire protection / Sprinkler system	1,631.02	m2	12.00	19,572.24	1.12	
	Auto Opening Vent at roof level	1,631.02	m2	5.00	8,155.10	0.46	
						0.00	
	Electrical Systems						
	Incoming supply 400A 260KV/a				nil		Excluded
	Power distribution from MCCB panel via sub mains to split metered boards on each floor with dedicated boards for lift, bar, kitchen, theatre	1,631.02	m2	20.00	32,620.40	1.86	
	Small power, boxes, equipment	1,631.02	m2	25.00	40,775.50	2.32	More reqd on upper auditorium
	General Lighting throughout the building: PIR's and controls, extl	1,631.02	m2	40.00	65,240.80	3.72	Excludes specialist Theatre lighting below
	Distribution of fibre data and telecomms cable from incoming distribution point	1,631.02	m2	2.00	3,262.04	0.19	Satellite dish to roof not required.
	CCTV to be recorded not monitored	1,631.02	m2	5.00	8,155.10	0.46	
	Fire detection and Alarms	1,631.02	m2	7.50	12,232.65	0.70	
	I pod speaker system to Dance Studio		item	1.00		0.00	Inc in Theatre Tech
	BMS/Data Cabling	1,631.02	m2	22.00	35,882.44	2.04	As Vector Design advice Cat6 wiring
	Test & Commission	1,631.02	m2	5.00	8,155.10	0.46	As Vector Design advice
	O&M Manual	1,631.02	m2	1.00	1,631.02	0.09	As Vector Design advice
	Lightning protection system				nil		Not read as covered by adjacent building
	Theatre Lighting						
	General Lighting to the hall	1.00	item	30,000.00	30,000.00	-1.71	Theatretech
	2x24 dimmer racks, 48 circuits	1.00	item	6,000.00	6,000.00	0.34	Theatretech
	1x12 independent non dim contractor rack	1.00	item	2,000.00	2,000.00	0.11	Theatretech
	1x48 way part manual, part computerised lighting desk	1.00	item	2,500.00	2,500.00	0.14	Theatretech
	1x10 way DMX control signal splitter	1.00	item	1,500.00	1,500.00	0.09	Theatretech
	6x internally wired bars running across the auditorium	1.00	item	4,500.00	4,500.00	0.26	Theatretech
	Various production lighting socket outlet boxes	1.00	item	2,000.00	2,000.00	0.11	Theatretech
	Basic supply of stage luminaires and accessories	1.00	item	15,000.00	15,000.00	0.85	Theatretech
	Stage Lighting containment and cabling	1.00	item	15,000.00	15,000.00	0.85	Theatretech
	Lighting gantry / framework					0.00	inc
	AV						
	Control room facilities	1.00	item	10,000.00	10,000.00	-0.57	Theatretech
	Specialist Audio containment and cabling	1.00	item	15,000.00	15,000.00	0.85	Theatretech
	Equipment rack with amplifiers, EQ digital signal processor, and loud speak patch bays	1.00	item	8,000.00	8,000.00	0.46	Theatretech
	Portable source rack, with CD/DVD; flashcard, MP3/4 devices	1.00	item	3,500.00	3,500.00	0.20	Theatretech
	Portable audio mixer, analogue, say 16 into 2 channels	1.00	item	3,500.00	3,500.00	0.20	Theatretech
	Installed House Speaker System, central cluster and side columns	1.00	item	2,000.00	2,000.00	0.11	Theatretech
	Facility Panels and plug in points	1.00	item	3,000.00	3,000.00	-0.17	Theatretech
	Local House Control	1.00	item	2,000.00	2,000.00	0.11	Theatretech
	Public Address system throughout the entire building		item			0.00	inc
	Intercom		item			0.00	inc

TWICKENHAM COMMUNITY BUILDING - COST PLAN 1b Updated RDS		Total			
NO VE OPTIONS					
New items or re-measures			Total Sq Footage	17,550	

Cont	Description	Quantity	Unit	Rate	Total	£ / ft2	Notes
	Technical Communication					0.00	
	Show relay microphone, amplifier, signal router, front of house and					0.00	
	Backstage speakers and simple stage managers microphone box	1.00	item	4,500.00	4,500.00	0.26	Theatretech
	Ring intercom amplifier, beltpack and head sets	1.00	item	1,500.00	1,500.00	0.09	Theatretech
	Audio Loop for hard of hearing, amplifier etc.	1.00	item	2,500.00	2,500.00	0.14	Theatretech
	Rigging						
	Aluminium truss mother grid	1.00	item	40,000.00	40,000.00	2.28	Theatretech
	Strong points for technical suspensions	1.00	item	5,000.00	5,000.00	0.28	New item
	Fixed bars, 15 number, across the auditorium and stage	1.00	item	6,000.00	6,000.00	0.34	Theatretech
	Curtain tab tracks x 2, suspended from fixed bars	1.00	item	3,000.00	3,000.00	0.17	Theatretech
	Draperies including a full set of wool serge masking curtains, legs	1.00	item	6,500.00	6,500.00	0.37	Theatretech
	Access equipment, including a 3 part ladder and a mini Zarges castored zip up tower.	1.00	item	2,500.00	2,500.00	0.14	Theatretech
	Metalwork						
	Balustrading to Seated areas	17.35	m	250.00	4,337.50	0.25	MS galv
	Removeable Balustrading	2.00	nr	900.00	1,800.00	0.10	MS galv
	Void Balustrading	6.01	m	450.00	2,704.50	0.15	MS galv
	Staircase Handrailing LGF to 4th floor (stairs not landings)	36.19	m	50.00	1,809.50	0.10	MS galv
	Staircase Balustrading LGF to 4th floor	39.51	m	350.00	13,828.50	0.79	MS galv, glass infill panels
	Staircase Handrailing, stage staircase LGF to 1st floor (dc)	2.47	m	50.00	123.50	0.01	MS galv
	Staircase Balustrading, stage staircase LGF to 1st floor	29.19	m	200.00	5,838.00	0.33	MS galv
	Ladder to roof from 4th floor	1.00	No	500.00	500.00	0.03	
	Vanity Units and integrated panelling						
	Vanity tops and units to female toilets - curved	8.10	m	350.00	2,835.00	0.16	
	Boxing out toilets for integrated panelling	56.31	m2	150.00	8,445.78	0.48	
	Boxing out showers for integrated panelling		m2	150.00		0.00	
	Mirrors and Dance Wall						
	Mirrors to toilets	22.10	m2	175.00	3,867.50	0.22	1.0m high
	Mirrors to dressing rooms and built in lighting	17.91	m2	200.00	3,582.00	0.20	1.0m high
	Mirrored Wall to Dance Studio	10.00	m2	175.00	1,750.00	0.10	
	Painting and Decorating						
	Walls	3,070.24	m2	6.00	18,421.42	1.05	As RDS, Dulux paints
	Ceilings	1,204.60	m2	5.00	6,023.00	0.34	As RDS, Dulux paints
	Joinery - doorsets single	46.00	nr	30.00	1,380.00	0.08	Dulux paints
	Joinery - doorsets double	20.00	nr	50.00	1,000.00	0.06	Dulux paints
	Joinery - skirtings	709.74	m	1.50	1,064.61	0.06	Dulux paints
	Floor Finishes						
	Screeds generally	20.40	m2	75.00	1,530.00	0.09	To LG10 and 11
	Ceramics						
	Various	78.00	m2	45.00	3,510.00	0.20	Standard range
	EO mdfl sklg for tile sklg	43.00	m	5.00	215.00	0.01	G01,G02
	Bar/Reception/lobby		m2	100.00		0.00	inc
	Wall tiling	21.89	m2	45.00	985.05	0.06	from RDS; Nicholls & Clarke
	Safelead Vinyl						
	Various	1,145.20	m2	30.00	34,356.00	1.96	Standard vinyl, Marley
	PVC Skirting	252.54	m2	20.00	5,050.80	0.29	Standard vinyl, Marley
	Wood flooring						
	Community Hall	215.00	m2	75.00	16,125.00	0.92	
	HW Flooring to Conservatory	120.00	m2	120.00	14,400.00	0.82	Hawwoods
	Carpet						
	Various	141.00	m2	40.00	5,640.00	0.32	Heckmondwicke
	Hall landings	40.00	m2	35.00	1,400.00	0.08	8 flights + 8 landings
	Treads and risers	136.00	m2	60.00	8,160.00	0.46	9 flights + 8 landings
	Matwells	2.00	nr	2,500.00	5,000.00	0.28	
	Non-recoverable VAT						
		0%		90,131.80		0.00	Cost omitted
	Mastic						
	Mastic	17,549.78	ft2	0.30	5,264.93	0.30	
	Kitchen / Bar						
	Bar to 1st floor	1.00	Nr	6,000.00	6,000.00	0.34	min length of 5m, add data and telephone
	Bar to Conservatory	1.00	Nr	7,500.00	7,500.00	0.43	
	Kitchen - small combined with bar	1.00	Nr	10,000.00	10,000.00	0.57	Food re-heat only
	Kitchen / Bar - white goods						
	Bar to 1st floor		Nr	2,500.00		0.00	Excluded
	Bar to Conservatory		Nr	2,500.00		0.00	Excluded
	Kitchen - small combined with bar		Nr	3,500.00		0.00	Excluded
	Cleaner						
	Cleaner	17,549.78	ft2	0.30	5,264.93	0.30	

TWICKENHAM COMMUNITY BUILDING - COST PLAN 1b Updated RDS		Total			
NO VE OPTIONS					
New items or re-measures		Total Sq Footage		17,550	

Cont	Description	Quantity	Unit	Rate	Total	£ / m2	Notes
	Total Fit Out				1,460,756.78	83.24	

	Sub-Total Measured Works			3,450,367.84			
	Other Costs						
	Fees						
	Working Drawings	1.00	item	173,518.39	173,518.39	9.89	
	Specialist Design	1.00	item	50,000.00	50,000.00	2.85	
	Prelims						
	Main Contractors preliminaries	1.00	item	520,555.18	520,555.18	29.66	
	Abnormals						
	Apportionment from whole site abnormals (Excludes basement for flats)	1.00	item	62,900.00	62,900.00	3.58	
	Externals						
	Apportionment from whole site externals (Excludes plot fencing, sheds)	1.00	item	177,835.75	177,835.75	10.13	
	Roads & Sewers						
	Apportionment from whole site roads and sewers Excludes boosted water main for houses	1.00	item	46,338.00	46,338.00	2.64	From Exit Works
	Sub-Total Measured Works			4,481,515.17			
	Contingency				20,000.00	1.14	
	Total Other Costs				1,051,147.32	59.90	

	Total Community Centre				4,501,515.17	256.50	4,501,581.17
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Foundation Cost
Shell Cost
Fit out Cost

Documents used:
Drawings
DP.10.F;
DP.11.E;
DP.12.D;
DP.30.F and marked up elevations
DP.20.E and marked up elevations
Structural drawings Level2;
Structural drawing Option3 Conservatory roof
Structural drawings LG, GF, 1; 2; 3, 4, Roof
Documents
Theatre Plan July 2013
Vector Design June 2013 Report,
Gillieron Scott Acoustic report July 2013
Gillieron Scott Acoustic performance report July 2013

Item	Qty	Unit	Rate	Total	1/5m Pt	1/1m Pt
PLANTING & RAILINGS						
Vehicle Gates & Posts	1	Nr	10,000.00	10,000.00	0.073	10.93
BOUNDARY FENCING & RAILINGS						
2m railing in front of Network rail fence	92	m	300.00	27,600.00	0.202	250.81
Railings to River Crane ramp 1200mm	52	m	500.00	26,000.00	0.191	236.30
Railings to River Crane ramp one 800mm	41	m	500.00	20,500.00	0.159	186.35
Low Level Railings	126	m	250.00	31,500.00	0.211	266.36
Gates and railings near bridge	50	m	300.00	15,000.00	0.181	227.27
E & P of gates	5	Nr	1,000.00	5,000.00	0.037	45.45
To access boundary	4	Nr	500.00	2,000.00	0.015	21.16
Access Fence	145	m	300.00	43,500.00	0.309	478.53
Close Board Fence	0	Nr	14,933.00	14,933.00	0.110	131.27
Washing table to same - Ecology (1 week)	1	Nr	7,740.00	7,740.00	0.057	70.53
Washing table to same - Network Rail	1	Nr	1,770.00	1,770.00	0.013	16.69
Railings and copings to retained ramp	1	Nr	10,000.00	10,000.00	0.073	90.81
SCREEN & RETAINING WALLS						
1500 High Screen Wall - with railings	31	lm	285.00	8,835.00	0.065	80.37
2000mm Brick Wall	80	lm	400.00	32,000.00	0.235	260.81
Low Level Wall	145	m	150.00	21,750.00	0.159	177.23
Returning Wall to Courtyard	1	Nr	75,909.00	75,909.00	0.576	660.08
FOOTPATHS & PAVED AREAS						
Gravel	397	sq	91.88	36,406.36	0.267	326.82
Poros Block paving	1,286	sq	91.88	118,262.77	0.878	1,054.83
DBM Paving course beneath	1,685	sq	15.00	24,975.00	0.187	227.05
Removal of kerb	1,685	sq	15.00	24,975.00	0.187	227.05
Farmacemag Paving	373	sq	101.67	37,924.91	0.277	328.63
E & Parmacemag road for footpath & Orange strip	373	sq	15.00	5,595.00	0.041	48.14
Paved area	35	sq	101.67	3,558.45	0.026	31.08
Orange strip paving	811	sq	91.88	74,709.38	0.547	666.63
Paved Area	1,459	sq	138.57	201,866.27	1.504	1,828.81
Timber paving	866	sq	90.00	77,940.00	0.569	687.27
Wooden paving / Decking	85	sq	125.00	10,625.00	0.078	96.99
Decking	30	sq	133.00	3,990.00	0.029	34.09
Timber paving	64	sq	30.00	1,920.00	0.014	16.00
Wagner Waparcemag / Deck to paved area	325	sq	100.00	32,500.00	0.238	285.47
Wagner Waparcemag / Deck to paved area	361	sq	100.00	36,100.00	0.265	326.16
SOFT LANDSCAPING						
Tree	798	sq	8.01	6,393.98	0.047	54.73
General Street Planting	1	Nr	15,000.00	15,000.00	0.110	136.36
POB - Feature Planting	363	m2	75.00	27,225.00	0.200	247.50
POB - Feature planting to podium central area / walk / Cardeck	213	m2	150.00	31,950.00	0.235	288.45
POB - Feature planting between parking bays	118	m2	60.00	7,080.00	0.052	61.23
POB - Feature planting to podium by river crane	1	Nr	25,000.00	25,000.00	0.181	227.27
POB - Hedges / shrubs	363	m2	30.00	10,890.00	0.080	96.00
Tree Planting	39	Nr	850.00	33,150.00	0.249	301.36
5.0m - 6.0m high	14	Nr	1,500.00	21,000.00	0.154	186.81
7.0m - 8.0m high	25	Nr	500.00	12,500.00	0.092	109.09
E.O. For Tree Coll	1	Nr	10,000.00	10,000.00	0.073	80.81
Wooded Planters	1	Nr	10,000.00	10,000.00	0.073	80.81
Vertical Green Wall	1	Nr	30,000.00	30,000.00	0.226	277.27
Green Wall existing uses	57	sq	100.00	5,700.00	0.042	51.82
Signage to River Crane	1	Nr	2,000.00	2,000.00	0.015	18.18
IRRIGATION SYSTEM						
Impulse to POB / Trees	1	Nr	10,000.00	10,000.00	0.073	80.81
Aggregate / SUDS system	50	m3	375.00	18,750.00	0.137	159.45
ENTRANCE / WATER FEATURES						
Water Feature	1	Nr	170,000.00	170,000.00	1.264	1,545.45
EXTERNAL LIGHTING						
External Lighting	25	Nr	1,500.00	37,500.00	0.275	340.90
Recessed Lighting	1	Nr	21,000.00	21,000.00	0.159	227.27
EXTERNAL STREET FURNITURE						
External Furniture	3	Nr	150.00	450.00	0.003	4.09
CCTV	14	Nr	5,000.00	70,000.00	0.512	616.36
EXTERNAL STRUCTURES / BUILDINGS						
Timber People	96	m2	110.00	10,560.00	0.077	96.00
EXTERNAL HOUR DRAINAGE						
General Provision Per Sq Ft	28	Nr	950.00	26,600.00	0.199	241.82
Flats	2	Nr	2,500.00	5,000.00	0.037	45.45
Community Centre	1	Nr	2,500.00	2,500.00	0.018	22.73
Community Centre	1	Nr	2,500.00	2,500.00	0.018	22.73
UTILITY COMPANY CHARGES						
Water Levy Charges	1	Nr	2,000.00	2,000.00	0.015	18.18
Water Tapping Charge	28	Nr	400.00	11,200.00	0.083	101.82
Apartment	1	Nr	10,000.00	10,000.00	0.073	80.81
Landfill	1	Nr	800.00	1,308.00	0.009	10.90
Commercial	1	Nr	800.00	1,800.00	0.013	16.36
Residential	28	Nr	500.00	14,000.00	0.103	123.73
SW Infrastructure	110	Nr	312.00	34,320.00	0.252	312.00
Commercial	3	Nr	312.00	936.00	0.007	8.53
RW Infrastructure	110	Nr	312.00	34,320.00	0.252	312.00
Commercial	3	Nr	312.00	936.00	0.007	8.53
Lowering	1	Nr	2,000.00	2,000.00	0.015	18.18
Electric Connection Charge	110	Nr	1,200.00	132,000.00	0.964	1,150.00
Residential and Substation	1	Nr	1,700.00	1,700.00	0.012	15.45
Landfill	3	Nr	1,700.00	5,100.00	0.037	45.45
Commercial	9	Nr	500.00	4,500.00	0.033	40.90
Street Lighting	12	Nr	500.00	6,000.00	0.044	54.55
Residential	1	Nr	500.00	500.00	0.004	4.55
Gas Connection Charge	28	Nr	350.00	9,800.00	0.072	89.09
Landfill	1	Nr	350.00	1,350.00	0.010	12.27
Commercial	1	Nr	350.00	1,050.00	0.008	9.55
Apartment	1	Nr	36,000.00	36,000.00	0.264	327.27
Connections	87	Nr	47.00	4,089.00	0.030	36.36
Flats	28	Nr	153.00	4,284.00	0.031	38.99
Commercial	1	Nr	15,000.00	15,000.00	0.110	136.36
Allowance for Council works in connection with	1	Nr	20,000.00	20,000.00	0.147	181.82
Fiber Optics	110	Nr	50.00	5,500.00	0.040	50.00
Service Trenching	82	Nr	250.00	20,500.00	0.150	181.82
Apartment	28	Nr	500.00	14,000.00	0.103	123.73
SUNDRY EXTERNAL WORKS						
City / Light Infrastructure	1	Nr	30,000.00	30,000.00	0.220	272.73
S278 Works	1	Nr	30,000.00	30,000.00	0.220	272.73
TOTAL EXTERNAL WORKS & UTILITIES						
				2,192,047.95	15.797	19,564.00

Quantity	Unit	Rate	Total	1/5m Pt	1/1m Pt	
TOTAL PLOT FENCING & RAILINGS						
				10,000.00	0.073	90.93
TOTAL BOUNDARY FENCING & RAILINGS						
				274,225.00	1.604	2,029.93
TOTAL SCREEN & RETAINING WALLS						
				136,094.00	0.974	1,230.64
TOTAL FOOTPATHS & PAVED AREAS						
				631,676.81	4.594	5,643.27
TOTAL SOFT LANDSCAPING						
				341,849.00	2.574	3,200.43
TOTAL IRRIGATION SYSTEM						
				28,750.00	0.211	281.26
TOTAL ENTRANCE / WATER FEATURES						
				170,000.00	1.264	1,545.45
TOTAL EXTERNAL LIGHTING						
				61,500.00	0.456	568.18
TOTAL EXTERNAL STREET FURNITURE						
				70,450.00	0.516	640.43
TOTAL EXTERNAL STRUCTURES / BUILDINGS						
				16,560.00	0.077	96.00
TOTAL EXTERNAL HOUR DRAINAGE						
				38,600.00	0.280	312.27
TOTAL UTILITY COMPANY CHARGES						
				474,288.00	3.411	4,350.00
TOTAL SUNDRY EXTERNAL WORKS						
				60,000.00	0.436	545.45
TOTAL EXTERNAL WORKS & UTILITIES						
				2,192,047.95	15.797	19,564.00

Community Centre	Apartmentment	Base
		3,146 R2
		1,007 R2
		3,718 half of 625m2 (split 50/50)
		4,718 half of 625m2 (split 50/50)
		31,976 half of 625m2 (split 50/50)
		1,213 one third
		29,716 half of 625m2 (split 50/50)
		5,696 half of 90m2 (split 50/50)
		806 R2
		1,710 R2
		3,104 R2
		2,850 R2
		2,069 R2
		3,779 R2
		2,384 R2
		1,140 R2
		3,420 R2
		1,140 R2
		2,138 R2
		4,275 R2
		51 R2
		7,880 R2
		1,204 R2
		600 one third
		312 one third
		312 one third
		15,048 R2
		1,700 one third
		513 R2
		350 one third
		6,270 R2
		2,850 R2
		627 R2
		5,700 R2
		3,420 R2
		177,836

Item	Quantity	Unit	Rate	Total
DEMOLITION				
Asbestos survey	1	Item	0.00	0
Soft strip for noise	1	Item	0.00	0
Hard Demolition	1	Item	0.00	0
Cottages	1	Item	1,044.00	1,044
PSI	1	Item	254,763.82	254,764
Removal of oil tank	0	Item	0.00	0
Proper Oil	0	Item	0.00	0
Landscaple Cleare to ramp area	1	Item	5,000.00	5,000
Asbestos Removal	0	Item	0.00	0
Additional Asbestos	0	Item	0.00	0
Asbestos under basement slab	1	Item	0.00	0
Acer PSI	1	Item	1,044.00	1,044
Woodbridge	1	Item	254,763.82	254,764
inc in above	0	Item	0.00	0
inc in above	0	Item	0.00	0
Acer	1	Item	5,000.00	5,000
inc in above	0	Item	0.00	0
Demolition and site clearance	1	Item	0.00	0
			TOTAL DEMOLITION	266,308
SITE CLEARANCE				
Tree protection - 1200 Chestnut Fence On scaffold	200	m	20.00	4,000
Clear Linear Park	1	Item	30,000.00	30,000
MCL Remediation	1	Item	35,000.00	35,000
Lifting cranes	1	Item	5,000.00	5,000
			TOTAL SITE CLEARANCE	74,000
CONTAMINATION / REMEDIATION				
CA Secant Pile Surplus Arisings	1	Item	10,000.00	10,000
E.O. Contaminated Non Hazardous Inertive	0	m ³	27.80	0
E.O. Contaminated Non Hazardous Active	0	m ³	62.90	0
E.O. Contaminated Hazardous	0	m ³	82.80	0
CA CPA Pile Surplus Arisings	1	Item	27.80	27.80
E.O. Contaminated Non Hazardous Inertive	0	m ³	62.90	0
E.O. Contaminated Non Hazardous Active	0	m ³	82.80	0
E.O. Contaminated Hazardous	0	m ³	258.00	0
CA Basement Surplus Arisings	1	Item	27.80	27.80
Japanese knotweed spraying and removal	0	Item	0.00	0
E.O. Contaminated Non Hazardous Active	0	m ³	82.80	0
E.O. Contaminated Hazardous	0	m ³	258.00	0
			TOTAL CONTAMINATION / REMEDIATION	10,000
EARTHWORKS				
Spread & Level Basement Arisings On Site	0	m ³	0.00	0
			TOTAL EARTHWORKS	0
SEWER CONNECTIONS				
Off Site PW Sewer	0	Item	0.00	0
Off site combined sewer	0	Item	0.00	0
On site attenuation	0	Item	0.00	0
BV Sewer discharge points to River Crane	0	Item	0.00	0
			TOTAL SEWER CONNECTIONS	0
BASEMENT TEMPORARY WORKS				
Supply and lay 500mm crushed concrete pile mat at grade	1	Item	0.00	0
Temporary sheet piling to entrance	0.5	Item	125,800.00	62,900
Retaining Wall to Community Centre	0	Item	9,900.00	0
Podium slab to river crane	1	Item	151,113.00	151,113
Remove on completion E&S Working platform to build wall	1	Item	5,000.00	5,000
Cart away pile spoil				
Contaminated non inert				
Machine and dumper in attendance estimating 17 piles per drydays @ £550				
Cut down 600 dia pile heads				
				£0.00
Secant piled wall N/A	1	Item	0.00	0
600mm diameter piles at 450 centre at 10m male				
600mm diameter piles at 450 centre at 5m female				
Rig mobilisation Item				
Pile setting out				
Move rig to each position				
De-bonding				
Pile probing				
Working test piles 3 test per 100				
Sonic integrity testing				
Mac				£0.00
				£0.00
Guide wall N/A	1	Item	0.00	0
Design and construct guide wall				
Remove guide wall				
				£0.00
Capping Beam to secant wall N/A	1	Item	0.00	0
Price per m £				
Excavation Not applicable				
Disposal Not applicable				
Concrete				
Formwork to piles				
Reinforcement to beams				
				£0.00
Joints/sundries/Primer/names/MCD 8%	1	Item	0.00	0
MCD 2.5%				0.00
				0.00

1.86	32,754.36
0.04	644.10

1.91	33,398.46
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0.54	0.00
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0.07	1,288.20
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0.07	1,288.20
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0.00	0.00
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0.00	0.00
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0.46	8,102.80
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1.11	19,466.43
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0.04	644.10
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BASEMENT CONSTRUCTION		TOTAL BASEMENT TEMPORARY WORKS		218,813	1.61	28,213.34
Box Construction	67 Spaces	1	Item	8.00	0	
Retaining walls / shear walls	See enclosed basement breakdown item 1	1	Item	67,314.73	67,315	
Suspended basement slab	See enclosed basement breakdown item 2	1	Item	159,995.26	159,995	
Columns to basement	See enclosed basement breakdown item 3	1	Item	37,141.23	37,141	
Suspended podium slab 250mm/500mm	See enclosed basement breakdown item 4/5	1	Item	244,592.80	244,593	
Forming lift pits	See enclosed basement breakdown item 6	1	Item	0.00	0	
Below ground drainage	See enclosed basement breakdown item 7	1	Item	40,000.00	40,000	
Excavate basement	See enclosed basement breakdown item 8	1	Item	25,000.00	25,000	
Cart away contaminated non hazardous	See enclosed basement breakdown item 9	1	Item	8,325.06	8,325	
Cart away inert	See enclosed basement breakdown item 10	1	Item	0.00	0	
Ground water removal	See enclosed basement breakdown item 11	1	Item	235,875.00	235,875	
Removal of obstructions	See enclosed basement breakdown item 12	1	Item	10,000.00	10,000	
Earthwork support	See enclosed basement breakdown item 13	1	Item	10,000.00	10,000	
Ramp	See enclosed basement breakdown item 14	1	Item	30,000.00	30,000	
Steps in slab	See enclosed basement breakdown item 15/16	1	Item	9,922.50	9,923	
Beams in slab	See enclosed basement breakdown item 17	1	Item	9,668.22	9,668	
Main Contractors preliminaries 15% on above	See enclosed breakdown item 18	1	Item	119,218.83	119,219	
Main Contractors discount 2.5% on above		1	Item	-25,928.83	-25,929	
Finishes	Podium Waterproofing		m2		0	
M&E	Mechanical Fan Vent System		m3		0	
	Electric supply to same		Item		0	
	Irrigation plant room in basement		Item	10,000.00	10,000	
	For water feature		Item		0	
	Plantroom Ventilation - Natural		Item		0	
	Sprinklers to basement - Not required		Item		0	
	Cast iron undersink drainage		Item	30,000.00	30,000	
	Basement Electric & Lighting		Provisional Sum	2,065	8.00	16,520
	Automated Vehicular Gate - Powder Coat		Provisional Sum including pedestrian gate	1	15,000.00	15,000
	Electric Supply To Above		Provisional Sum	1	2,000.00	2,000
	Louvers to ramp walling		Item		0	
	Louvers to external walling		m2	400.00	0	
Blockwork	150mm 3.5N Blockwork		m3	389	90.00	35,010
	All plant rooms etc max height 3.80m		m3		0	
	Ramp wall		m3		0	
	Scaffolding to blockwork walls		m3	389	35.00	13,615
	Curved ramp wall		m3		0	
Pre-cast	PC Stair units GF to 1st		nr	3,500.00	10,500	
	200mm concrete wall		Item		0	
	Concrete		Item		0	
	Finish to face of wall		Item		0	
	Formwork to face of wall x 2 sides		Item		0	
	Wall form		Item		0	
	reinforcement to walls		Item		0	
	Joints/Junctions/Preliminaries/MCD 8%				0	
	MCD 2.5%				0	
				10.00		
Architectural Metalwork	Ventilation grille alongside basement 1700mm high		m2	55	400.00	22,000
	Ventilation grille to slab / footpath		m2	20	400.00	8,000
Joinery	Single Door - Timber		Doors			0
	Private stores		Doors	2	1,000.00	2,000
	Cycle stores		Doors			0
	Refuse stores		Doors			0
	Tank/plant room		Doors			0
	Cleaners		Doors			0
	Lobby / stairs		Doors	3	500.00	1,500
	Lobby / Car Parking		Doors	5	500.00	2,500
	Corridor / Corridor		Doors			0
	Bin store		Pair	3	1,000.00	3,000
	To Energy Centre		Pair	1	1,000.00	1,000
	To sub-station		Pair	2	1,000.00	2,000
	To Community space		Pair	0	1,000.00	0
	Basement to ground		nr	3	2,500.00	7,500
Finishes	Steel Handrails to stairs		m			0
	Slab Finish		m2	2,048	0.00	0
	Dust water (Cpark 1700m2 + rooms/stores 348m2)		m2			0
	Plamp basement floor spec upgrade		Item	1	59,000.00	59,000
	Private bays		Item	1	2,000.00	2,000
	Disabled bays including diagonal mentshows -included above		Bay			0
	Decoration to walls (both sides)		m2	779	6.00	4,674
	Decoration to walls retaining wall		m2	499	6.00	2,994
	Acoustic ceiling to plant rooms (energy 45m2 + tank 24m2 + sub 19m2 + patch 31m2)		m2	119	65.00	7,735
	Tarmac/curb to ramp		Not Required			0
	RC Walls & Blockwork Walls		Not Required			0
	Column protection		nr	34	250.00	8,500
Basement Lift Lobby Entrance	Residential Lift Lobby Entrance Upfit		nr	3	5,000.00	15,000
	Floor Finish		nr			0
	Dropped Plasterboard Ceiling		Included			0
	Downlights		Included			0
	Wall Lights		Included			0
	Decoration		Included			0
				TOTAL BASEMENT CONSTRUCTION	1,293,273	0.00
SUNDRIES						
Refuse bins	1100 Litre Galvanised Bins		nr	18	369.00	6,642
Refuse bins	240 Litre Galvanised Bins		nr	8	49.00	392
Cycle racks	Floor mounted, Sheffield E45 supplied		nr	80	100.00	8,000
Cycle racks	Floor mounted, Efficient E55 supplied		nr	0	118.00	0
	Bin puller		Not Required	1	2,500.00	2,500
Electric Car Charge Point	Networked system		Not Required	14	1,000.00	14,000
Allowance for landscaping upgrades to Heatham House			nr	1	10,000.00	10,000
Elevational treatment to Network Rail Sub-Station			nr	1	25,000.00	25,000
Elevational treatment to 4w cottages			nr		10,000.00	0
Converting triangle land to car parking			nr	1	125,000.00	125,000
					0.00	0
				TOTAL SUNDRIES	191,436	1.40
				TOTAL ABNORMALS	2,044,879	15.01
					62,900.00	0.47

Item	Quantity	Unit	Rate	Total	£ / Sq Ft	£ / Linn
ROADS						
Forming Bellmouth		Item	5,000.00			
Estate Road - DBM - 625mm Construction		m ²	74.75			
80mm Block Paved Roads		m ²	75.70			
E.O. For Conservation Kerb		lm	39.40			
Concrete Set Rumble Strip		m ²	115.35			
Raised Table Top - Teguilar		Nr	110.00			
Existing Roads re-surface		m ²	25.00			
New road to basements		m ²	75.00			
				TOTAL ROADS		
ROADSIDE FOOTPATH						
Estate Footpath - Tarmac - 180mm Construction		m ²	32.03			
E.O. For 150mm PCC Edging		lm	13.95			
E.O. For Vehicular Cross Over		m ²	65.90			
				TOTAL ROADSIDE FOOTPATH		
STORM WATER SEWERS						
SW Drainage	300	m	140.00	42,000.00		5,410.46
Pump	1	Nr	7,500.00	7,500.00		966.15
E.O. Road Gully	20	Nr	500.00	10,000.00		1,288.20
Drain Test & Commissioning	1	Item	1,000.00	1,000.00		128.82
Boosted water main for sprinkler and water to houses	1	Item	52,500.00	52,500.00		6,763.07
Underground distribution and tank burial	1	Item	42,500.00	42,500.00		5,474.87
Sewer Connection on site	1	Item	3,000.00	3,000.00		386.46
Outfalls to river	4	Nr	13,000.00	52,000.00		6,698.66
Storm Sewer CCTV Survey	1	Item	750.00	750.00		96.62
				TOTAL STORM WATER SEWERS	211,250.00	27,213.30
FOUL WATER SEWERS						
Drainage	1	Item	147,360.20	147,360.20		18,982.99
1200mm Dia PCC MH	1	m	150.00	150.00		19.32
Drain Test & Commissioning	1	Nr	450.00	450.00		57.97
Foul Sewer CCTV Survey	1	Item	10,000.00	10,000.00		
Sewer Connection In Highway	1	Item	7,500.00	7,500.00		
Pump	1	Item	2,500.00	2,500.00		
Adoptable Licence	1	Item	2,500.00	2,500.00		
				TOTAL FOUL WATER SEWERS	147,960.20	19,060.29
STREET FURNITURE						
Estate Road Sign	2	Nr	250.00	500.00		64.41
Supply & Erect Street Light Columns		Nr	1,341.00			
Supply & Erect CCTV Camera & Column		Nr	2,000.00			
				TOTAL STREET FURNITURE	500.00	64.41
				TOTAL ROADS & SEWERS	359,710.20	46,338.00

Comments

Surface water drainage all to outfalls although no indication of how to get to the outfalls shown, (ie around the sports grounds)
 Foul water drainage roughly measured with high end rates used - there should be savings here

21st August

Annexure 2
Deed of Release

DATED _____ **2014**

**(1) THE MAYOR AND BURGESSES OF THE LONDON BOROUGH
OF RICHMOND UPON THAMES:**

(2) ST JAMES GROUP LIMITED

DEED OF RELEASE OF RESTRICTIVE COVENANTS

relating to

LAND LYING TO THE NORTH WEST OF BREWERY LANE, TWICKENHAM.

**SJS
LAW**

**3 Crescent Stables
139 Upper Richmond Road
London SW15 2TN
Tel: +44 (0)20 8704 1643
Fax: +44 (0)20 8704 1641
Email: enquiries@sjslaw.co.uk**

This deed is dated

HM Land Registry

Dominant Owner's title number: MX150195

Administrative area: Richmond Upon Thames

Servient Owner's title number: MX262384

Administrative area: Richmond Upon Thames

PARTIES

- (1) **THE MAYOR AND BURGESSES OF THE LONDON BOROUGH OF RICHMOND UPON THAMES** of Civic Centre, 44 York Street, Twickenham TW1 3BZ ("the Dominant Owner")
- (2) **ST JAMES GROUP LIMITED** incorporated and registered in England and Wales with company number 3190056 whose registered office is at Berkeley House, 19 Portsmouth Road, Cobham, Surrey KT11 1JG ("the Servient Owner")

BACKGROUND

- (A) By a transfer dated 15 June 194 made between (1) The Mayor and Burgesses of the London Borough of Richmond upon Thames and (2) the Post Office, the Servient Land was transferred to the Post Office subject to the Covenants, which were taken for the benefit of the Dominant Land.
- (B) The Dominant Land is vested in the Dominant Owner and the benefit of the Covenants has not been assigned to any buyer of any part of the Dominant Land sold off.
- (C) The Servient Land is now vested in the Servient Owner.
- (D) In consideration of the Payment by the Servient Owner to the Dominant Owner, the Dominant Owner has agreed to release the Servient Land from the Covenants on the terms set out in this deed.

AGREED TERMS

1. Interpretation

- 1.1. The definitions in this clause apply in this deed.

Covenants: the covenants set out in the Schedule to this Deed.

Dominant Land: the freehold property at Heatham House, Whitton Road, Twickenham and registered at HM Land Registry under title number MX150195.

Payment: £10 (Ten pounds)

Servient Land: the freehold property at land lying to the north west of Brewery Lane, Twickenham and registered at HM Land Registry under title number MX262384

- 1.2. A **person** includes a natural person, corporate or unincorporated body (whether or not having separate legal personality).
- 1.3. The Schedule forms part of this agreement and shall have effect as if set out in full in the body of this agreement. Any reference to this agreement includes the Schedule.
- 1.4. Unless the context otherwise requires, words in the singular shall include the plural and in the plural shall include the singular.
- 1.5. A reference to a statute or statutory provision is a reference to it as amended, extended or re-enacted from time to time.
- 1.6. A reference to a statute or statutory provision shall include all subordinate legislation made from time to time under that statute or statutory provision.
- 1.7. Except where a contrary intention appears, a reference to a clause or Schedule is a reference to a clause of, or Schedule to, this deed and a reference in a Schedule to a paragraph is to a paragraph of that Schedule.
- 1.8. Clause, Schedule and paragraph headings do not affect the interpretation of this deed.

2. Release

In consideration of the Payment paid by the Servient Owner to the Dominant Owner (of which the Dominant Owner acknowledges receipt), the Dominant Owner releases the Servient Owner and its successors in title and the Servient Land and each and every part of it from the Covenants with the effect that from the date of this deed the Covenants are extinguished.

3. HM Land Registry

- 3.1. Promptly following the completion of this deed, the Servient Owner agrees to make a full and proper application to HM Land Registry:
 - 3.1.1. to cancel any notice of the Covenants from the title of the Servient Land; and
 - 3.1.2. to register this deed against the title to the Servient Land; and
 - 3.1.3. where appropriate, to cancel any entries which may have been registered against the title of the Dominant Land in respect of the benefit of the Covenants.
- 3.2. The Dominant Owner consents to the removal of any entries which have been registered against the title of the Dominant Land in respect of the benefit of the Covenants.
- 3.3. The Dominant Owner shall promptly and properly provide the Servient Owner with such reasonable assistance to enable the Servient Owner to answer any requisitions raised by HM Land Registry in connection with its application under clause 3.1.
- 3.4. Within one month of completion of the registration, the Servient Owner shall send to the Dominant Owner a copy of its amended Title Information Document, and the Dominant Owner shall, where appropriate, send to the Servient Owner a copy of its amended Title Information Document within one month of the cancellation of any entry in respect of the benefit of the Covenants.

4. Governing law

This deed and any dispute or claim arising out of or in connection with it or its subject matter or formation (including non-contractual disputes or claims) shall be governed by and construed in accordance with the law of England and Wales.

5. Contractual rights of third parties

No term of this deed shall be enforceable under the Contracts (Rights of Third Parties) Act 1999 by a third party.

This document has been executed as a deed and is delivered and takes effect on the date stated at the beginning of it.

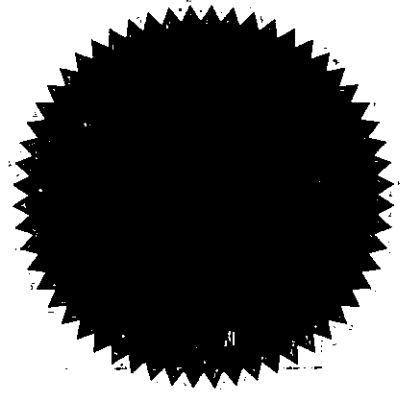
SCHEDULE

The following covenants imposed in the transfer dated 15 June 1984 and made between (1) The Mayor and Burgesses of the London Borough of Richmond Upon Thames and (2) the Post Office in respect of the freehold property known as land lying to the north west of Brewery Lane, Twickenham and referred to in Entry number 5 of the Charges Register of Title Number MX262384:

"For the benefit and protection of the land remaining in title number MX150195 and each and every part thereof and so as to bind the land hereby transferred into whosoever hands the same may come (but not as to render the Post Office personally liable in damages after it shall have parted with its interest in the land hereby transferred to it or that part thereof in respect whereof of any breach of this covenant shall occur) the Post Office hereby covenants with the Council and persons deriving title under them that it will (a) at all times hereafter use the said land edged red as a car park and for no other purpose whatsoever (and that car park shall not mean a multi storey car park) (b) not to erect any building or structure of any kind whatsoever either movable or immovable without first obtaining the Councils consent in writing and the grant of a planning permission shall not it be itself deemed to be an adequate consent for the purpose of this clause"

THE COMMON SEAL of the MAYOR
AND BURGESSES
OF THE LONDON BOROUGH OF
RICHMOND UPON THAMES was
hereunto affixed in the presence of:-

)
) *llm*
)
)
)



Authorized Officer
Seal Reg. No. 2889/03

EXECUTED AS A DEED BY
ST JAMES GROUP LIMITED
acting by

)
)

PETER KEMKERS
a director and

14893

PK
.....
Director

SEAN ELLIS
a director

SE
.....
Director