

JACKSONS ON GEORGE

Adaptive Reuse Study

for Lend Lease Development

October 2015

131498

Taylor Thomson Whitting (NSW) Pty Ltd Consulting Engineers ACN 113 578 377
48 Chandos Street St Leonards NSW 2065 PO Box 738 Crows Nest 1585
T 61 2 9439 7288 F 61 2 9439 3146 ttwsyd@ttw.com.au www.ttw.com.au

This document is copyright and is the property of Taylor Thomson Whitting
(NSW/ACT/VIC) Pty Ltd and must not be used without authorisation. © 2015 Taylor
Thomson Whitting



TABLE OF CONTENTS

Section	Page
1.0 INTRODUCTION	3
2.0 LEND LEASE CIRCULAR QUAY DEVELOPMENT.....	3
2.1 LAND TO WHICH THE LLCQ PROPOSAL RELATES	3
2.2 THE PROPOSED LLCQ SCHEME:	5
3.0 JACKSONS ON GEORGE BUILDING	6
3.1 LOCATION	6
3.2 SITE AREA AND FRONTAGES.....	6
3.3 GENERAL DESCRIPTION.....	6
3.4 DESCRIPTION OF BUILDING STRUCTURE	7
3.5 BACKGROUND	7
3.6 SUBDIVISION.....	8
4.0 JACKSONS ON GEORGE ADAPTIVE REUSE STUDY	11
4.1 HASSELL SCHEME.....	11
4.2 TTW SCOPE OF WORK	11
4.3 TTW ASSESSMENT AND RECOMMENDATION	12
4.4 CONCLUSION:.....	13

1.0 INTRODUCTION

TTW have been engaged by Lend Lease Development P/L (LLD) to undertake an adaptive reuse assessment of Jacksons on George. The adaptive reuse assessment is to form part of LLD's proposed Lend Lease Circular Quay (LLCQ) development.

The purpose of this assessment is to determine if the existing Jacksons on George structure, façade and general configuration are of an arrangement that is generally suitable to permit their modification to realise the amended arrangements and scheme as contemplated in LLD's Planning Proposal.

LLD have engaged Hassell to prepare a concept architectural scheme that is indicative of the aspirational design, materiality and general configuration of adapted building. TTW has assessed the indicative Hassell scheme for the purpose of this report.

Key elements of the adaptation are discussed in section 4 and include:

- The articulation and architectural improvement of the existing west, southern and eastern facades to be achieved through:
 - introduction of new façade openings on the ground and first floors
 - creation of new balcony zones
 - introduction of façade materials including sandstone, glass and metal
 - reconfiguration of the upper most level to create a roof terrace
- An adaptation that retains the current operating hotel landuse and facilitates the continual trading of the premises throughout the adaptation

2.0 LEND LEASE CIRCULAR QUAY DEVELOPMENT

The LLCQ site is located at 174- 182 George Street and 33-35 Pitt streets.

2.1 Land to which the LLCQ Proposal Relates

Land parcels covered by the Planning Proposal (Also refer attached diagram)

Informal title	Address	Lot and DP	Ownership
The Pitt Street property	33-35 Pitt Street	Lot 7 DP 629694	Lend Lease (Circular Quay) P/L.
The George Street Property	182 George Street	Lot 182 DP 606865	Lend Lease (Circular Quay) P/L
Jacksons on George	174-176A George Street	Lot 181 DP 606865	Lend Lease Development P/L

Mirvac Triangle	Part of 200 George Street development site	Lot 1 in DP 69466 and Lot 4 in DP 57434 The part of the above Lots to which the PP relates is referred to as Lot 2 in the draft plan of subdivision Nov 13, 2012 (Issue 7) contained in the executed VPA between the City of Sydney and Mirvac	Mirvac owns the land. Mirvac will transfer the new Lot 2 to the City of Sydney who will then transfer to LL in return for an equivalent area of completed public realm
Crane Lane including walkway (aerial bridge)	Crane Lane extending east from George St, then north to Rugby Place	Lot 1 and 2 in DP 880891. Lot 1 is in stratum above Lot 2.	City of Sydney

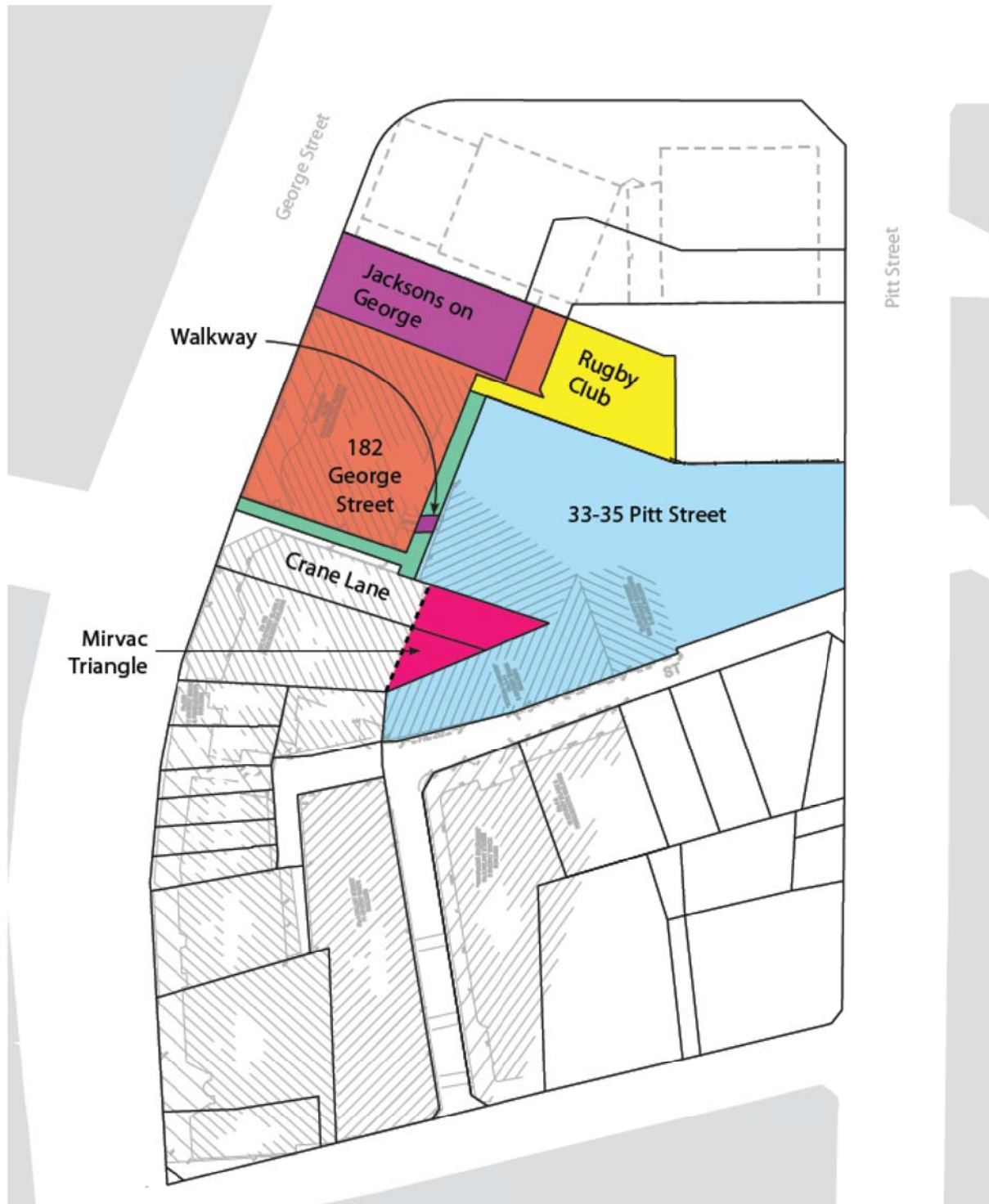


Figure 1: Lend Lease Circular Quay Proposed Development

2.2 The proposed LLCQ Scheme:

The LLCQ scheme encompasses:

- Demolition of existing commercial office buildings at both 182 George Street and 33-35 Pitt Street (and possibly Rugby Club), including the removal and disposal of hazardous materials (where relevant).
- The retention, modification and adaptive reuse of Jacksons on George,

- Site preparatory works including (where relevant):
 - the erection of hoardings and overhead protection structures;
 - remediation of contamination;
 - undertaking of archaeological investigation and protection works; and
 - augmentation and diversion of existing infrastructure services.
- The erection of a commercial office tower up to 248m in height and up to 70,000m² of gross floor area, and approximately three basement levels.
- Delivery of new public realm consisting of a public plaza on George Street and new interconnecting laneway extensions between Underwood Street and Rugby Place.
- The construction of shared laneway and plaza retail for the purpose of activating the new public realm.
- Internal traffic amendments to Rugby Place.

3.0 JACKSONS ON GEORGE BUILDING

Apart from the “Description of building structure”, the remainder of Section 3 is drawn from a Pre-Purchase Planning Report prepared by BBC Consulting Planners in September 2013.

3.1 Location

The Jacksons on George Site is known as 174-176A George Street, Sydney NSW and is shown on the map at **Figure 1**.

The Jacksons on George Site has frontage to George Street along its western frontage, and Blue Anchor Lane (privately owned) to the south.

The Site is located within the Circular Quay precinct in the northern part of the Sydney CBD.

3.2 Site Area and Frontages

The Jacksons on George Site area is 485.9 sqm

- George St frontage 13.7m
- Eastern frontage 13.7m
- Northern frontage 35.3m
- Southern frontage 35.3m

3.3 General Description

On the JoG Site is situated a building over four levels constructed generally to the site boundaries. The building presents as three storeys to George Street, and due to the fall in finished ground level from west to east, the lowest or basement level is increasingly exposed such that the eastern section of the building is four storeys above ground level.

An internal loading dock is accessed from Blue Anchor Lane via a roller shutter on the lower

southern facade. At present, the loading dock is used as storage. There is no on-site parking.

The former colonnade at the front of the building (within the Site boundary) has been enclosed with stackable glass panels. Additional outdoor seating, demarcated by planter boxes, is provided on the George Street footpath (ie the public road).

Primary pedestrian access is from George Street. Blue Anchor Lane provides secondary access to the lower (basement) level. Vehicular traffic accesses the loading dock off George Street via Blue Anchor Lane. The ability to access the Site via Blue Anchor Lane is secured by way of rights of footway and rights of carriageway which benefit the Site, burdening Lot 182 (which includes Blue Anchor Lane).

We understand that the JoG hotel business has operated for a number of decades. Floor plans provided by LLD indicate that the business is operated over four levels. In addition to a number of bars, the vendor indicates that the business includes a bistro serviced by a commercial kitchen, alfresco (footpath) dining and gaming room.

3.4 Description of building structure

LLD has provided to TTW historical architectural and structural plans which have been reviewed for the purpose of this assessment.

- The Architectural Plans were prepared by Kan Finch and Partners (NSW_) P/L Architects and dated 1973.
- The structural Plans were prepared by Ove Arup and Partners P/L and dated 1973/74.

Generally, the building structure consists of conventional reinforced concrete frame with reinforced concrete flat slab supported by reinforced concrete columns and walls.

Existing basement floor level is constructed of reinforced concrete slab on grade. Roof slab is a one way reinforced concrete slab system with reinforced concrete beams spanning between columns.

All footings are founded on rock.

The existing southern basement wall and its footing were integrated with existing columns of 182 George St along Blue Anchor Lane. Above George St level, the existing columns of 182 George St were not connected to Jacksons on George building.

Existing façade on the north, south and east elevation mainly consist of full brick cavity wall or brick and insitu reinforced concrete cavity wall in some locations. Façade wall is tied into structural concrete edge beam at each floor level. On George St frontage, it appears that the full brick cavity wall is behind the external cladding panel.

Most brick walls are non load bearing, except some wall supporting fire stair landing.

3.5 Background

The JoG building was constructed in the early 1970's, as part of a consolidated redevelopment of a number of properties at 174-186 George Street and Blue Anchor Lane (DA 493/72), comprising:

- the demolition of buildings, including the Port Jackson Hotel which previously stood

at 178-180 George Street;

- the erection of a low rise building consisting of a basement, ground and two upper floors, for use as a licensed hotel (the Port Jackson Hotel); and
- the erection of a high rise building consisting of two basement levels and eighteen floors for predominant use as office space.

The DA was lodged on 12 July 1972 and approved on 18 December 1972. It is noted that the DA was one of a series of different and amended DAs relating to the whole or parts of the consolidated site and lodged between 1970 and 1972, but was the only one to actually be commenced.

3.6 Subdivision

Approval was granted to the subdivision of the consolidated development site into Lot 181 and Lot 182. According to the Council file ref 841/75 entitled '174/186 George St proposed subdivision: 25 Mar 1975 ~ 01 Aug 1978', an application was received in 1975 from a surveying firm for Council's approval to the subdivision of the consolidated site. A report dated 11 April 1975, prepared by the City Engineer for the meeting of the Works Committee, states that the "purpose of the subdivision is to create two lots for each of the essentially separate but integrated developments proceeding on the whole site".

3.7 File Review

A number of development and building applications have been lodged. The list is based on files inspected by BBC Consulting Planners on behalf of LLC, and only summarises available information on relevant files to which LLD were given access.

Category	App or File Ref	Description / Comment
Original Construction and Subdivision		
<i>Construction of building DA 1972</i>	<i>DA 493 /72</i>	<i>Construction of consolidated development including erection of building and use as hotel, and erection of separate office building, approved 18 Dec 72..</i>
<i>Construction of building BA 1973</i>	<i>BA 1090/73</i>	<i>BA approved Oct 73. Amended plans approved Nov 73. FSR of consolidated development site is 11:1. Windows on northern boundary are not protected i.e. they can be enclosed. In Oct 76, a Certificate of Compliance was issued to confirm that development was completed in accordance with BA 1090/73.</i>
<i>Subdivision 1975</i>	<i>Ref 841/75: 174/186 George St proposed subdivision: 25 Mar 1975 ~ 01 Aug 1978</i>	<i>Subdivision of consolidated development site into two lots, Lot 181 and Lot 182.</i>
Internal Alterations and Additions		

Category	App or File Ref	Description / Comment
<i>Internal alts and adds 1986</i>	<i>BA/45/86 DA 6897/86 BA 7809/86 DA 7395/86</i>	<p><i>Although described on Council's system as "Alterations to Levels 1, 2 and 3" of the hotel, the scope of the application was later reduced such that the DA was limited predominantly to Level 1 upgrades. (Believed to be Level 1 (Basement) level)</i></p> <p><i>BA 45/86/588 lodged March 1986 for alterations to the existing hotel, comprising aluminium and steel glazed partitioning in front of building (i.e. enclosure of colonnade); renovation of Level 1, new bar in existing bar area; other internal renovations to Levels 2 and 3; new stair in public footway from Blue Anchor Lane up to Level 1 (ground floor). Advice from Council Apr 1986 indicated that the work required a DA and that the enclosure of the colonnade was unlikely to be approved.</i></p> <p><i>DA 6897/86 for scaled down proposal of alts and adds to kitchen / bars was lodged. Approved 1 July 86.</i></p> <p><i>BA 45/86/588 was amended to reflect the approved DA approved 3 Jul 86..</i></p> <p><i>DA 7806/86 for mechanical ventilation systems lodged and approved Jan 87. DA 7395/86 for alts to existing kitchen exhaust ventilation system approved Sep 86. Revisions to the original BA 45/86/588 approved thereafter.</i></p>
<i>Internal alts and adds 1995</i>	<i>B95/1188</i>	<p><i>BA for an internal refurbishment of the "third floor" following a fire. Approved 14 Nov 95. The conditions to the BA specify that the BA does not relate to the use of the area but is merely to restore the fire damaged interiors. The approval related to two drawings, 861A and B. One of the drawings has been lost, and the remaining drawing is a reflected ceiling plan (RCP). It appears to us from the RCP that what is referred to as "third floor" is Level 3 (first floor).</i></p>
Colonnade		
<i>Facade renovation and colonnade enclosure 1986</i>	<i>DA 44/86/0675</i>	<p><i>DA lodged Feb 86 for extensive alterations and renovations of the George St façade including enclosing colonnade area. DA refused Sep 86.</i></p>
<i>Seating in colonnade 1988-93</i>	<i>File Z88/826 Z93/97</i>	<p><i>DA 88/826 to use colonnade for seating was refused in Jul 88. This was due to a desire to retain the colonnade unobstructed in case of redevelopment of Goldfields House.</i></p> <p><i>In 1991 and 1993, continued unauthorised use of the area for seating was noted.</i></p> <p><i>DA 93/97 to use the area was submitted and approved 18 Mar 93. By this time, Council's opinion on colonnades had changed. The consent was current for 5 years after which time the use was required to cease. This DA would have then lapsed.</i></p>

Category	App or File Ref	Description / Comment
Colonnade enclosure 1993	File Z93/277 File BA X93/00851	DA to enclose forecourt (colonnade) with glazed walls and awning approved 16 Jul 93. A file note indicates that the DA lapsed 16 Jul 95. Separate BA file. BA approved Aug 93. File not indicates that BA also lapsed.
Colonnade enclosure 1997 (and external façade upgrade)	File B1997/1263 DA D/97/688	DA 97/688 lodged for temporary enclosure of part of colonnade, including awning, for continued use as all-weather seats, using frameless glass panels that could be folded or stacked. Although not indicated in the DA description, this DA also sought consent to a façade upgrade, which was approved in part (Alpolic cladding approved, new fin protrusions approved, new sign to George Street approved in principle, folding glazing of colonnade to George Street and fixed glazing to Crane Lane approved; new awning refused; complete redesign of George Street façade refused). The DA was approved on 22 May 98. Associated BA lodged 10 Oct 97. Amended plans to 1997 BA lodged 6 May 98. BA approved 13 Aug 98. In Jun 98, a Deed of Agreement was drafted between Council and owner regarding the colonnade. (The copy of the deed on the file had not been executed, however file notes indicate that the deed was required prior to the release of the BA so we can assume it was executed prior to 13 Aug 98). This deed required that the owner to remove the enclosure and seating should Council require it, so that the colonnade could be brought back into use in the case of a future redevelopment of Goldfields House to the north. In 2002 investigations were undertaken regarding an outstanding Occupation Certificate. It can be assumed therefore that the DA and BA was commenced and that the existing enclosure was approved under this DA.
External Alterations		
External alterations 2005	DA 2005/192	DA lodged for removal of existing Level 1 (ie Level 3 (First Floor)) windows to George Street and their replacement with glass bi-fold doors and an accessible balcony, for smoking. Objections from Four Seasons and Police. Consent granted 24 May 05. A Plan of Management was required. Issues arose regarding the difficulty of satisfying the deferred commencement condition which required acoustic testing to be undertaken with doors open, however the doors could not be installed until the consent was activated. Repeated objections were made by the Four Seasons during this period. Consent finally activated 4 Aug 96. S96 modification application lodged 30 Aug 06. Add more works to the DA: Replacement of ground floor doors with frameless glass stacking door, entry lobby with new stairs. Approved 27 Sep 06. On 21 Aug 08, a S95A application was lodged to prevent the consent from lapsing, extended to 4 Aug 09.

Category	App or File Ref	Description / Comment
		<p><i>Council does not have any record of a Construction Certificate having been issued in relation to this DA. Our site visit indicates that the Level 1 works (ie Level 3 (First Floor)) have not been undertaken. We cannot confirm whether the ground floor (ie Level 2) glass stacking doors or staircase were installed pursuant to this consent.</i></p>

4.0 JACKSONS ON GEORGE ADAPTIVE REUSE STUDY

4.1 Hassell Scheme

LLD have engaged Hassell to prepare a concept architectural scheme that is indicative of the aspirational design, materiality and general configuration of adapted building. TTW has assessed the indicative Hassell scheme for the purpose of this report.

The Hassell scheme is contained in Appendix A of this report

TTW understands that LLD's brief to Hassell included:

- Review JoG historical architectural and structural plans and indicative CAD files prepared by Rygates on behalf of LLD
- Undertake a site inspection
- Develop an indicative architectural scheme that adapts Jacksons on George to achieve the plaza and laneway activation aspirations contemplated in the LLCQ Planning Proposal by proposing suitable/functional activation zones (windows, balconies and doors/pedestrian opening) to Southern, Western and Eastern facades
- Work up indicative functional elevations (3 levels above plaza only) for the new building façade architecture in sandstone and glass mix.
- Prepare indicative sections that show sufficient detail for an engineer to assess in context of existing structure frame and configuration.
- A fundamental requirement is that the premises remains trading throughout, so the existing facade is ideally retained, with the Hassell façade/openings/balconies etc built over the top. The current façade is then selectively removed/demolished from to coordinate with and realise the new Hassell façade openings.

4.2 TTW scope of work

TTW have been engaged by LLD to :

- Review Hassell proposed scheme
- Review JoG Historical Engineering and Architectural Drawings
- Assess and determine if the existing Jacksons on George structure, façade and general configuration are of an arrangement that is generally suitable to permit their modification to realise the amended arrangements and scheme as contemplated in LLD's Planning Proposal and provide structural/facade advice to assist Hassell with

the adaptive reuse study.

Noting that there is no change of use and the premises needs to remain trading throughout.

4.3 TTW Assessment and Recommendation

Following our review of existing drawings, Hassell's proposed scheme and schematic workshop at Hassell office on the 8th December 2013, our recommendations are as below:

Existing Structure and Façade General Conditions

TTW have undertaken a site inspection and have reviewed the historical plans provided by LLD. The existing reinforced concrete frame is generally in good condition with minimal signs of structural degradation. The façade is generally of masonry and concrete panel construction. More recent improvements to the western façade consist of metal faced panel over steel frame. The façade is considered in good condition.

Where the structure and facade exhibit localised degradation, such impacts can be readily repaired using proven proprietary repair products.

The structure is of robust design and construction. The existing reinforced concrete structure is of a design and detail that is readily modifiable, penetrable and adaptable as generally proposed by the Hassell indicative scheme.

Façade materials can be readily modified, removed and or replaced (if required). Penetrations can be readily created in the existing façade systems.

Key constraints include the existing columns, edge beams, fire stairs, associated stair shafts and existing concrete shear walls.

South façade:

The new door/ balcony openings proposed by Hassell have been assessed by TTW and have been found to have been appropriately configured in consideration of, and coordination with the existing structural frame, concrete columns, edge beams and load bearing wall areas.

New balconies proposed by Hassell have been assessed and can be readily framed using cantilever steel beams fixed to the underside of existing edge beam and slab.

The new façade cladding systems and materials proposed by Hassell are familiar to TTW and can be fixed either directly onto existing concrete substrates, pinned to existing façade elements (subject to further detailed design and assessment) or supported by an introduced new lightweight steel frame substrate to suit. The final arrangements will be subject to further design development.

Existing concrete columns supporting the directly adjacent 182 George St, which appear attached to Jacksons on George, can be readily demolished from the proposed plaza level to above. Below the plaza level, the existing columns can be retained.

The Jacksons on George southern alignment foundations appear to be at a sufficient depth to facilitate the proposed plaza and bike hub arrangements as contemplated under the LLCQ scheme. Where not the case, underpinning can readily be undertaken.

Most works along this elevation can be carried out without major disruption to the internal trading of the hotel premises through the utilisation of internal temporary hoardings.

George St frontage:

The existing non load bearing external masonry wall above level 2 can be demolished as contemplated under the Hassell indicative concepts. However, structural concrete upstands at level 2 on George St and south elevation will need to remain.

Roof top

Removal of existing concrete roof is feasible. A demolition methodology that minimised stockpiling of demolition rubble on retained suspended structures will need to be developed to eliminate any need for temporary propping to the lower levels under construction loading. This is considered a feasible approach by TTW

Allowance for waterproofing and drainage to existing level 3 (now become an open deck) may increase the finish floor level. The proposed build up to the roof deck will be in light weight construction. Access to stairs will need to be considered in any future design development scheme.

The proposed roof top awning will be in light weight construction. This will have minimal impact to the existing concrete floor. Any transfer beam required could be accommodated within the new floor build up.

Fire stairs

Fire stairs will need to remain for the trading period and for the lateral stability of the existing structure. The Hassell scheme coordinates with the existing stairs and their retention in the proposed indicative adaptive scheme.

East and north façade:

No change

4.4 Conclusion:

TTW have been engaged by Lend Lease Development P/L (LLD) to undertake an adaptive reuse assessment of Jacksons on George. The adaptive reuse assessment is to form part of LLD's proposed Lend Lease Circular Quay (LLCQ) development.

The purpose of this assessment is to determine if the existing Jacksons on George structure, façade and general configuration are of an arrangement that is generally suitable to permit their modification to realise the amended arrangements and scheme as contemplated in LLD's Planning Proposal.

TTW have assessed the indicative adaptive architectural scheme prepared by hassell and have concluded:

- Existing structure and façade are of robust design and construction and in good condition. Minor defects can be readily repaired utilising proven and proprietary repair systems;
- The Hassell indicative design has generally been appropriately configured in consideration of, and coordination with the existing structural frame;
- Structure is suitable for adaptive reuse and can be readily modified to support the proposed façade amendments, materials and systems; and
- Façade is suitable for adaptive reuse and can be readily modified to create new

openings contemplated under the Hassell indicative scheme and support the proposed façade amendments, materials and systems.

Existing Hotel can remain operational throughout.

Prepared by:
**TAYLOR THOMSON WHITTING
(NSW) PTY LTD**

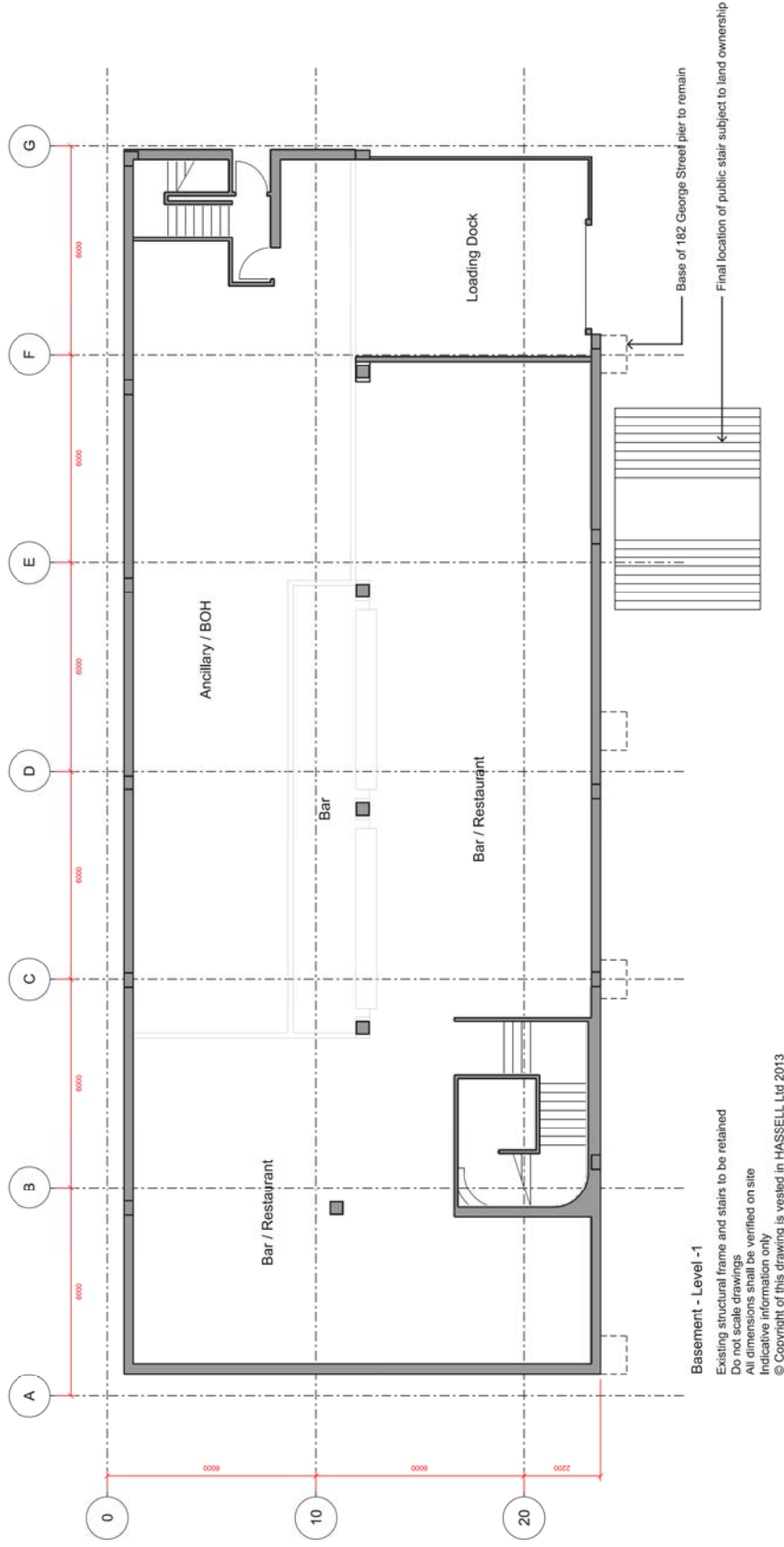


Hung Nguyen
Associate Director

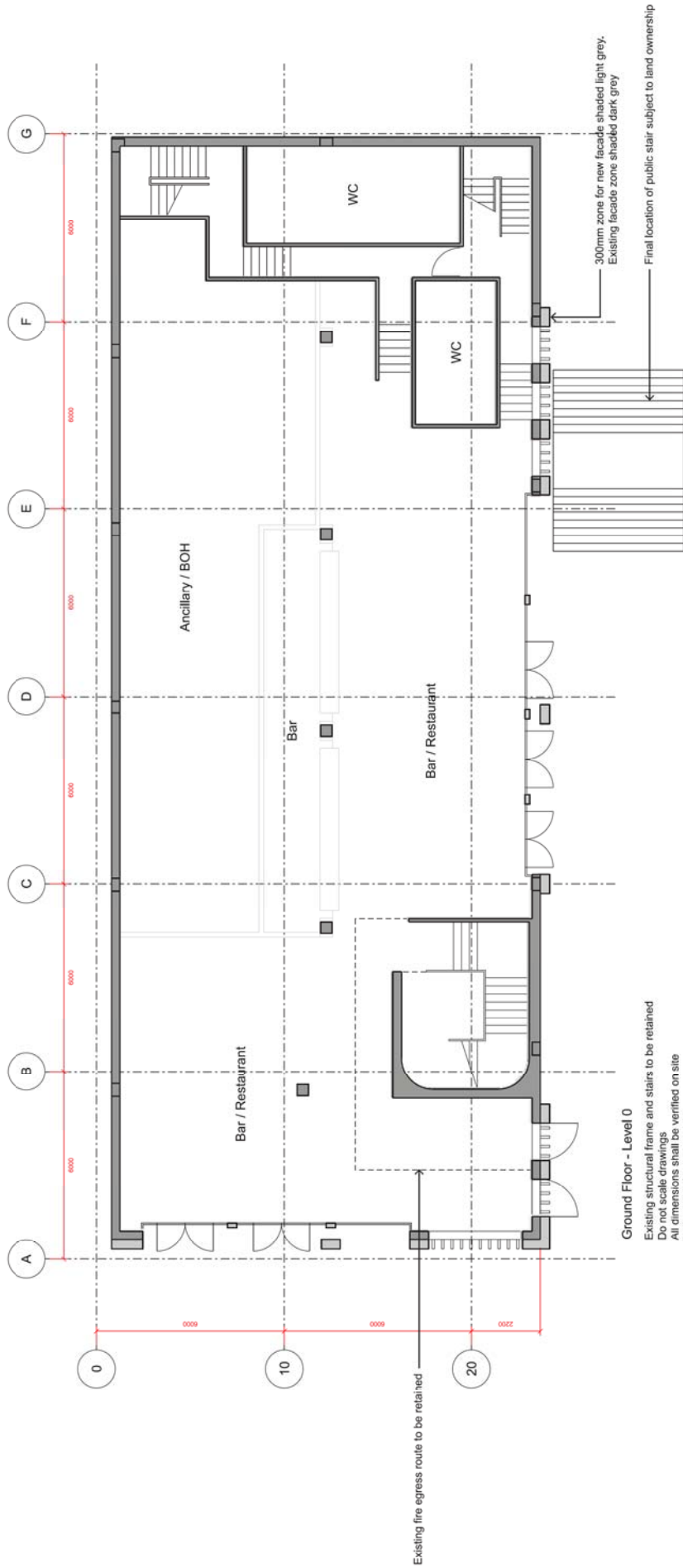
P:\2013\1314\131498\Reports\TTW\151012 Jackson on George - Adaptive reuse study.HN le.doc

APPENDIX A

HASSELL SCHEME DRAWINGS

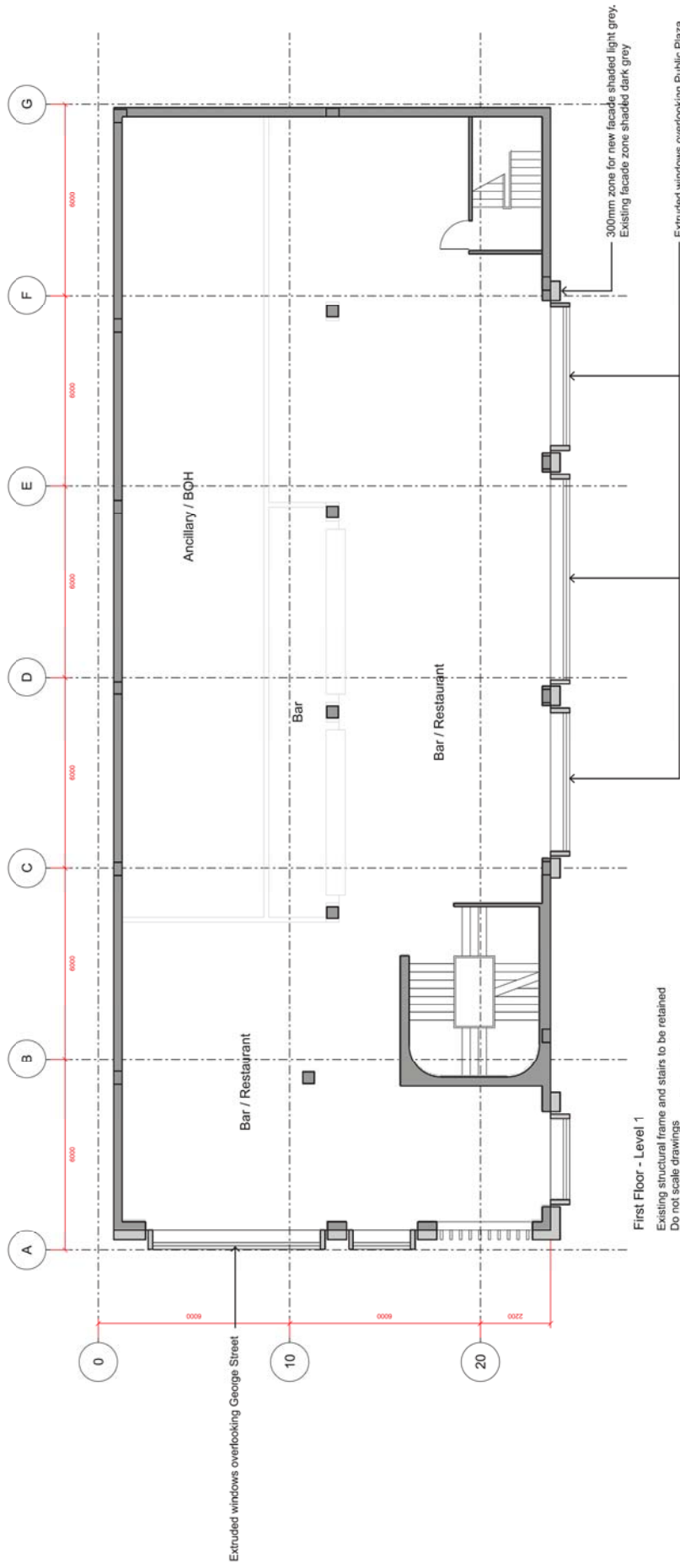


Basement - Level -1
 Existing structural frame and stairs to be retained
 Do not scale drawings
 All dimensions shall be verified on site
 Indicative information only
 © Copyright of this drawing is vested in HASSELL Ltd 2013



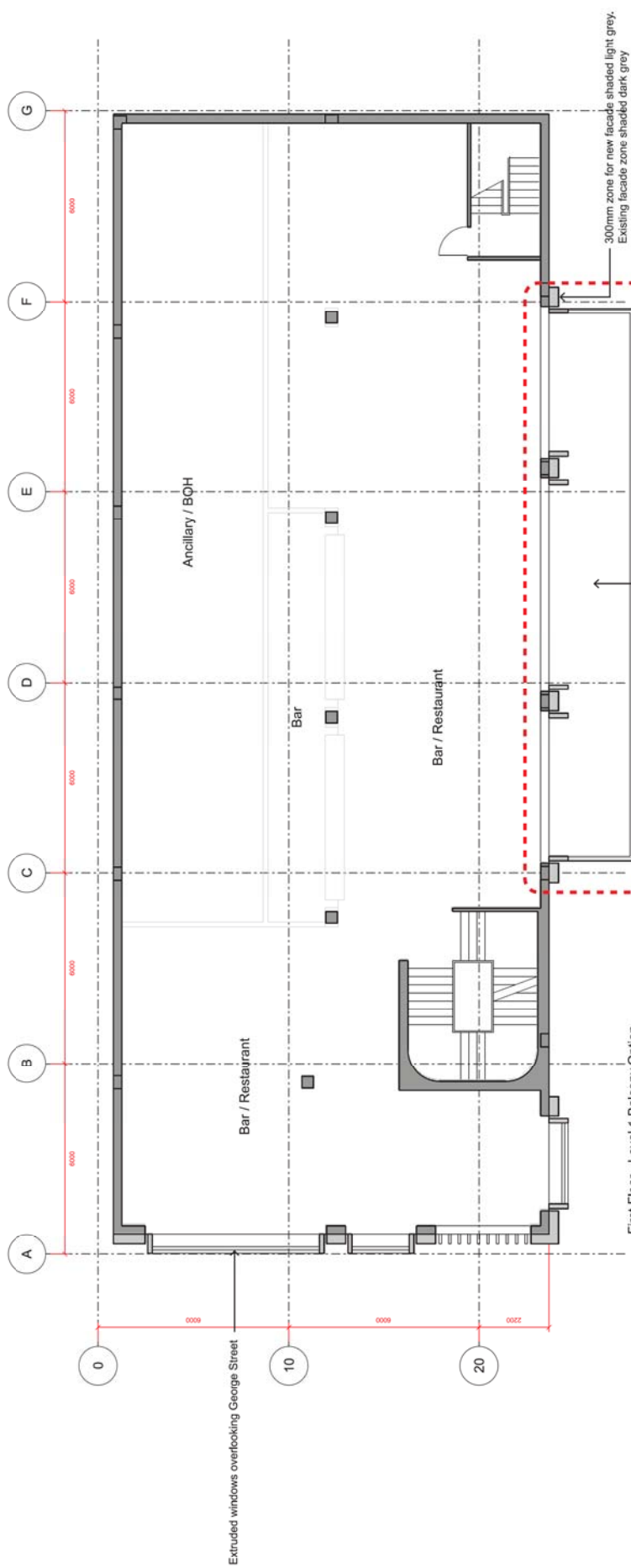
Ground Floor - Level 0
 Existing structural frame and stairs to be retained
 Do not scale drawings
 All dimensions shall be verified on site
 Indicative information only
 © Copyright of this drawing is vested in HASSELL Ltd 2013





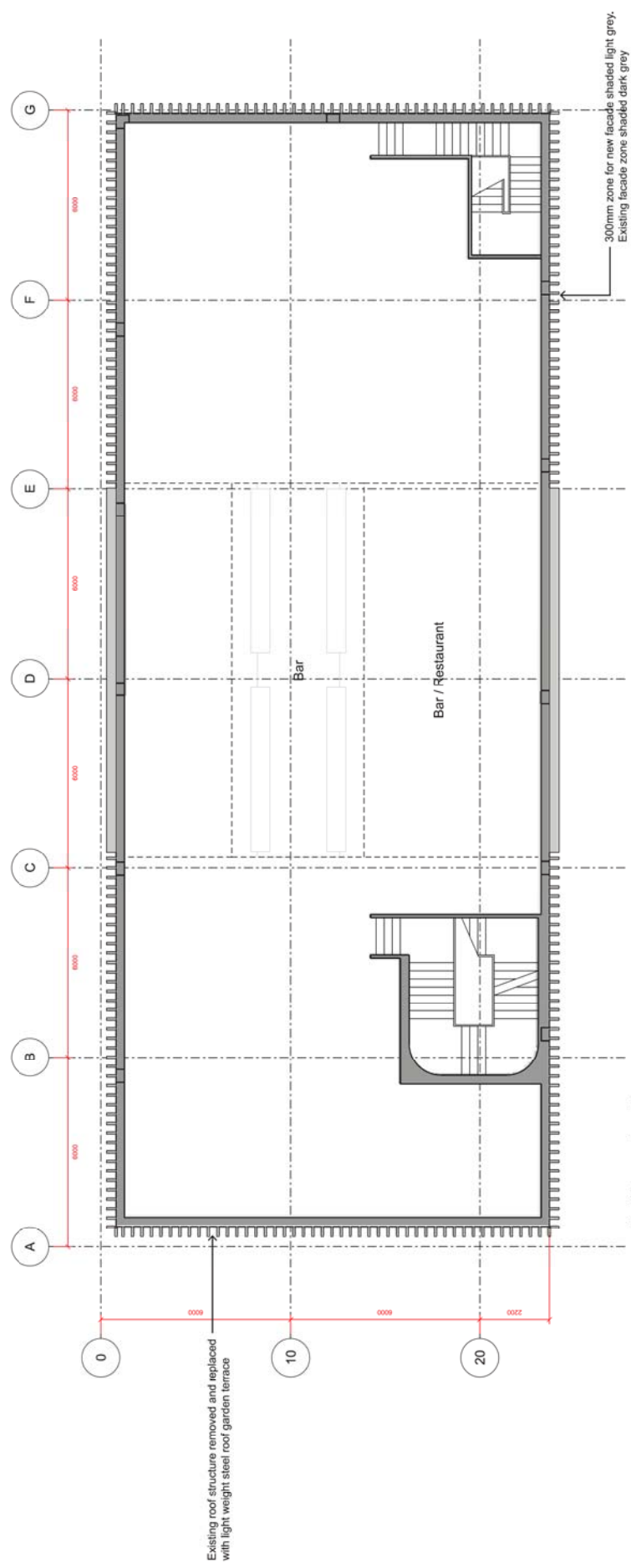
First Floor - Level 1

Existing structural frame and stairs to be retained
 Do not scale drawings
 All dimensions shall be verified on site
 Indicative information only
 © Copyright of this drawing is vested in HASSELL Ltd 2013



First Floor - Level 1 Balcony Option
 Existing structural frame and stairs to be retained
 Do not scale drawings
 All dimensions shall be verified on site
 Indicative information only
 © Copyright of this drawing is vested in HASSELL Ltd 2013



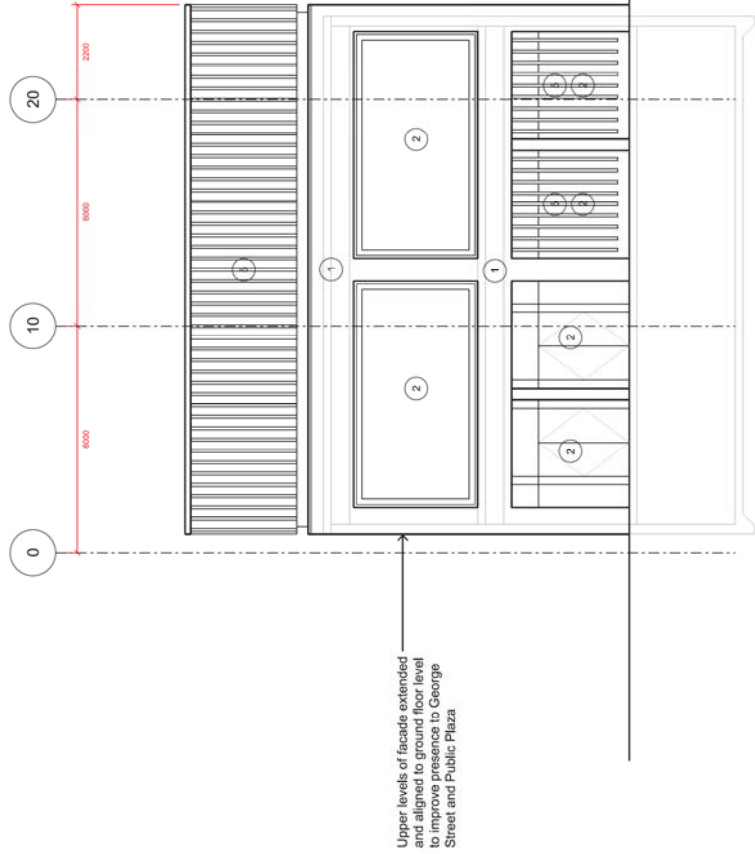


Roof Terrace - Level 2

Existing structural frame and stairs to be retained
 Do not scale drawings
 All dimensions shall be verified on site
 Indicative information only
 © Copyright of this drawing is vested in HASSELL Ltd 2013

Existing roof structure removed and replaced with light weight steel roof garden terrace

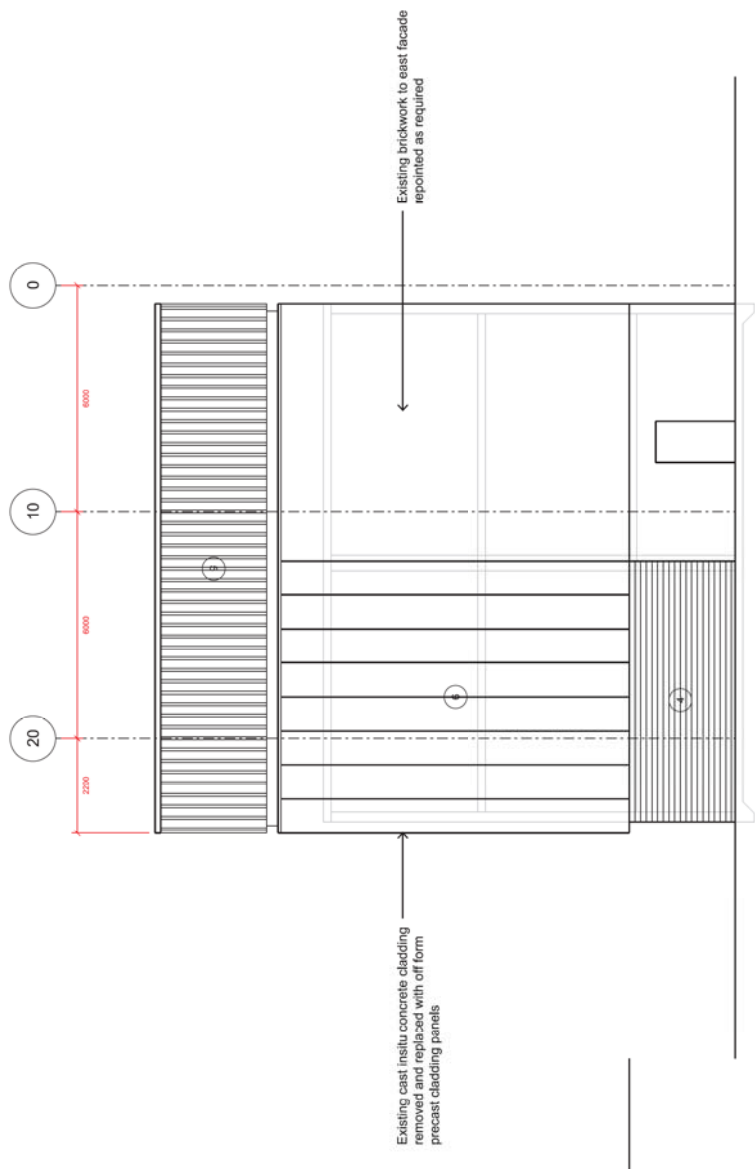
300mm zone for new facade shaded light grey.
 Existing facade zone shaded dark grey



Upper levels of facade extended and aligned to ground floor level to improve presence to George Street and Public Plaza

West George Street Elevation

- 1 Sandstone cladding
- 2 Glass
- 3 Palinated copper / zinc cladding
- 4 Horizontal louvers with access as required to loading dock
- 5 Horizontal louvre blades clad with palinated copper / zinc
- 6 Precast concrete panels



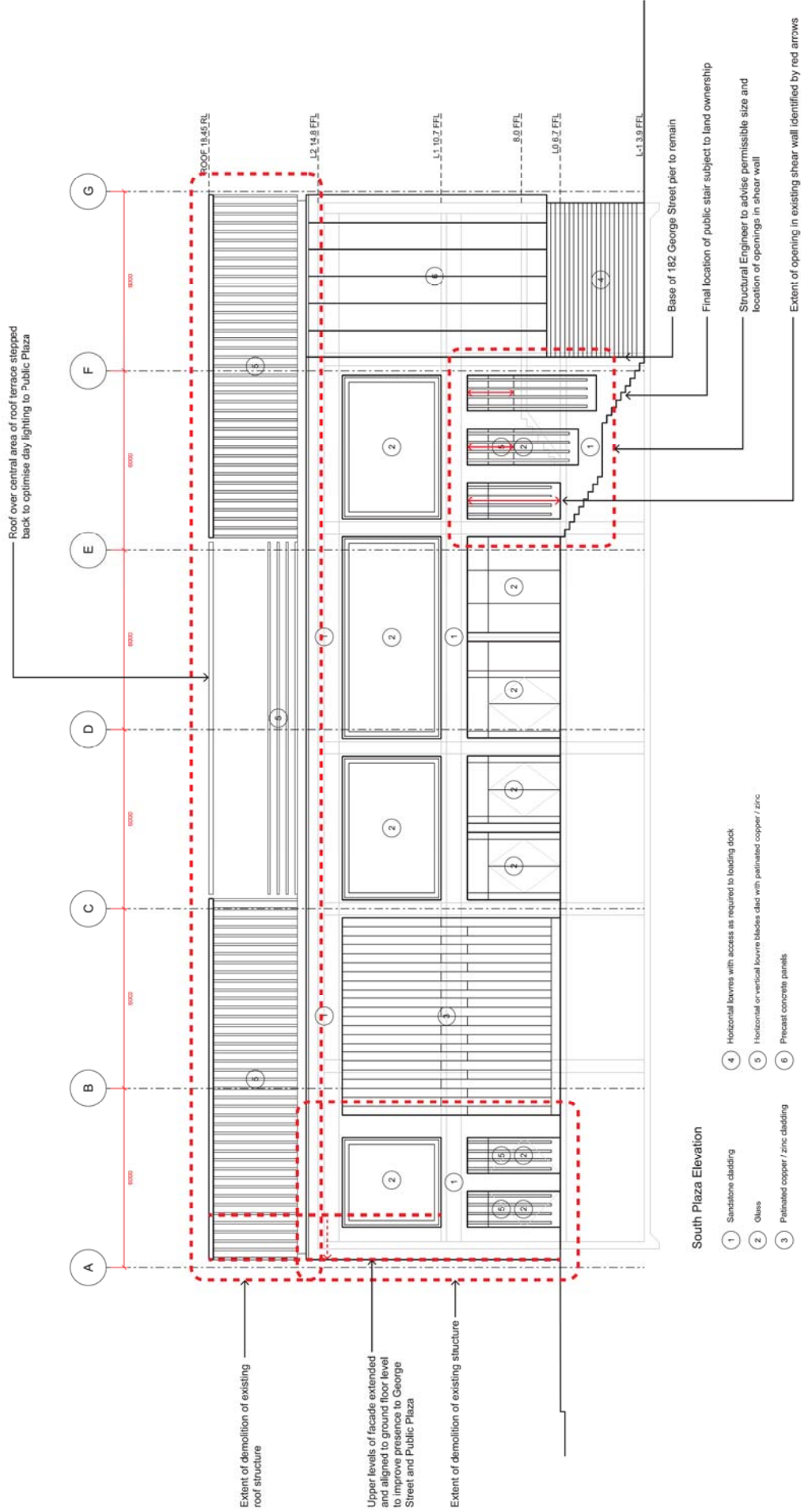
Existing cast insitu concrete cladding removed and replaced with off form precast cladding panels

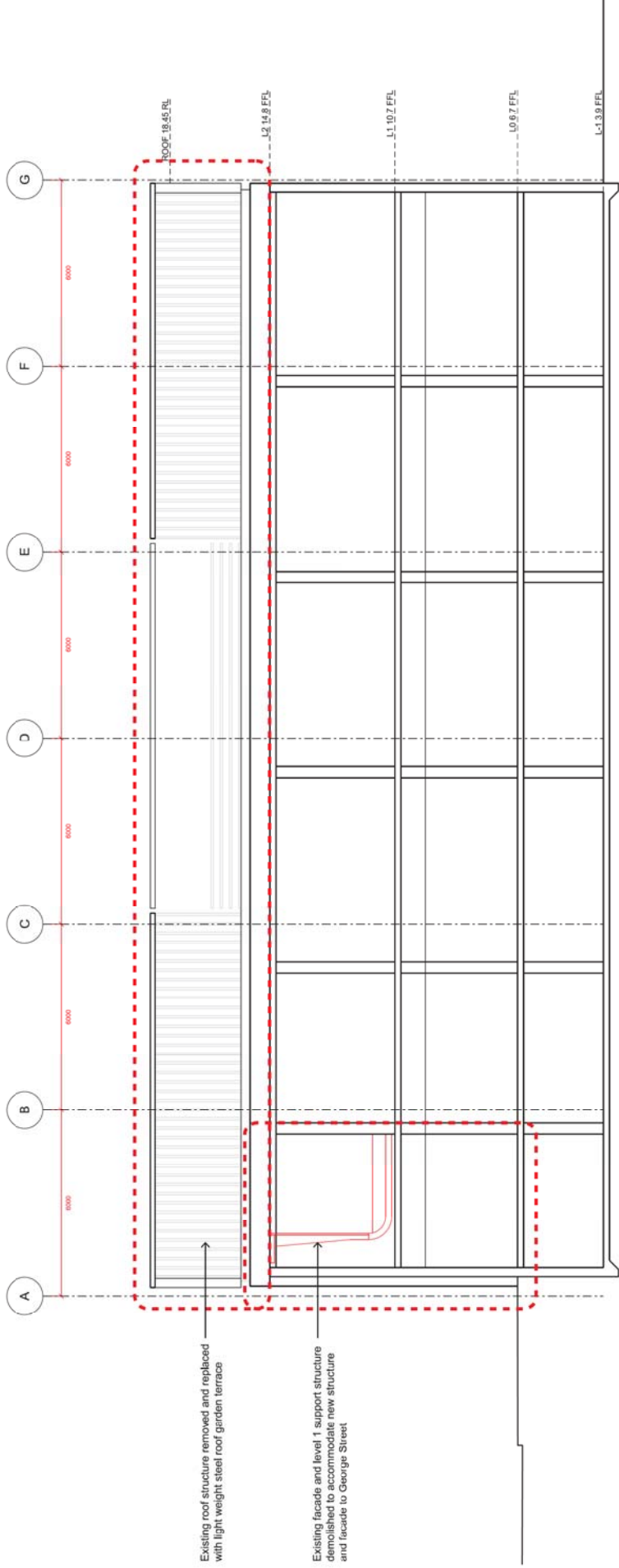
Existing brickwork to east facade repointed as required

East Laneway Elevation

- 4 Horizontal louvers with access as required to loading dock
- 5 Horizontal louvre blades clad with palinated copper / zinc
- 6 Precast concrete panels



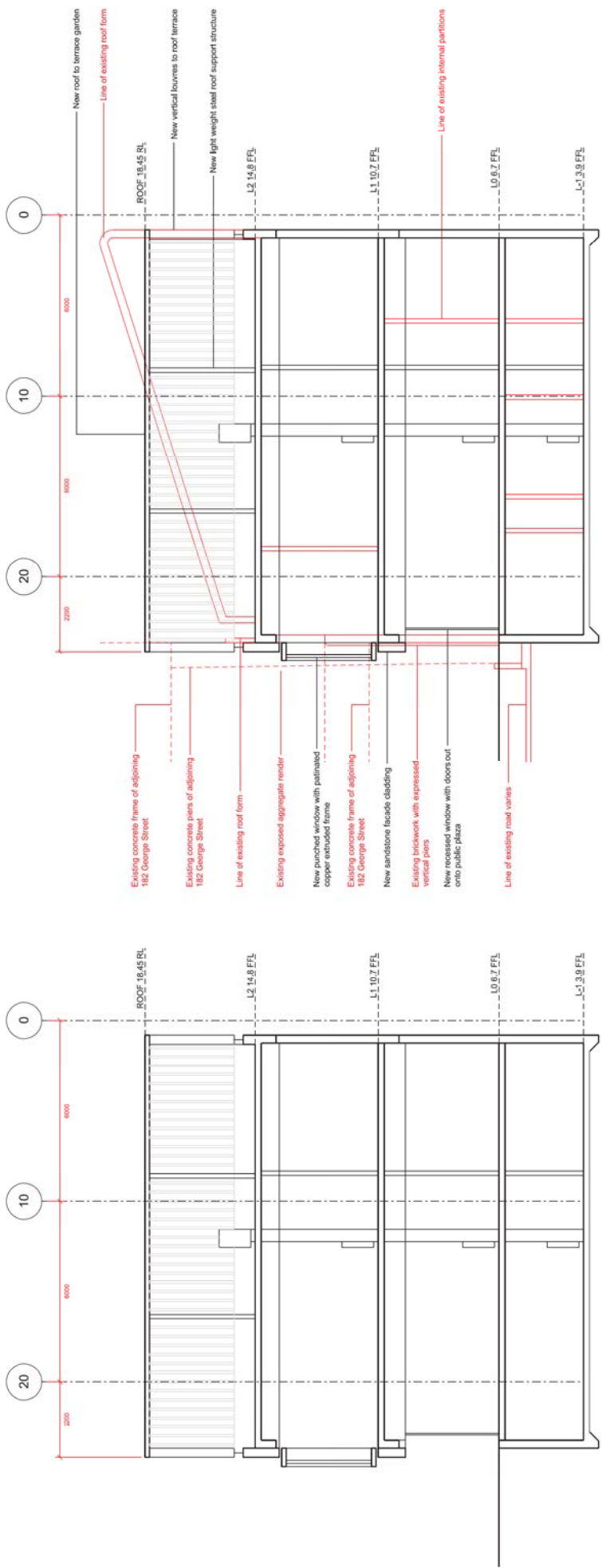




Existing roof structure removed and replaced with light weight steel roof garden terrace

Existing facade and level 1 support structure demolished to accommodate new structure and facade to George Street

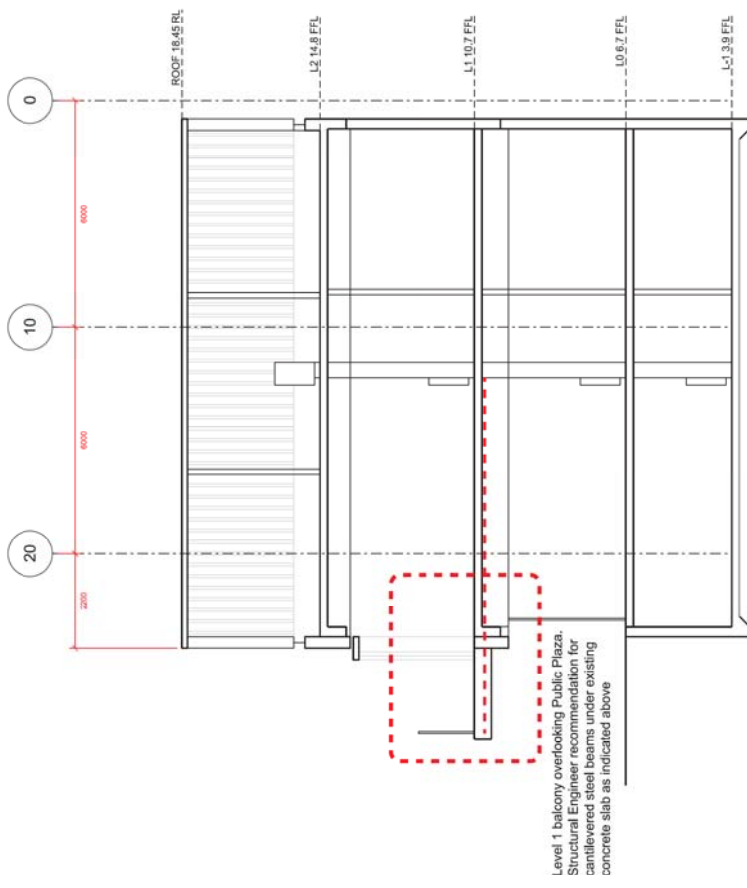
Long Section



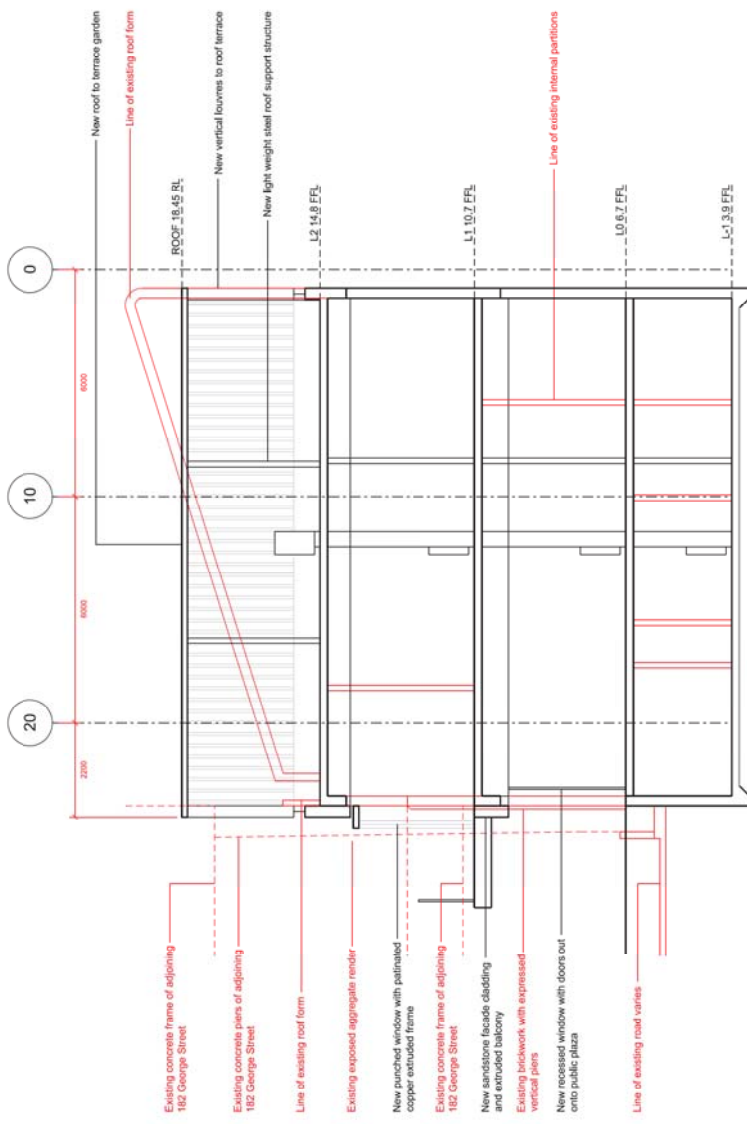
Short Section Comparator

Short Section





Short Section with Plaza Balcony



Short Section Comparator