

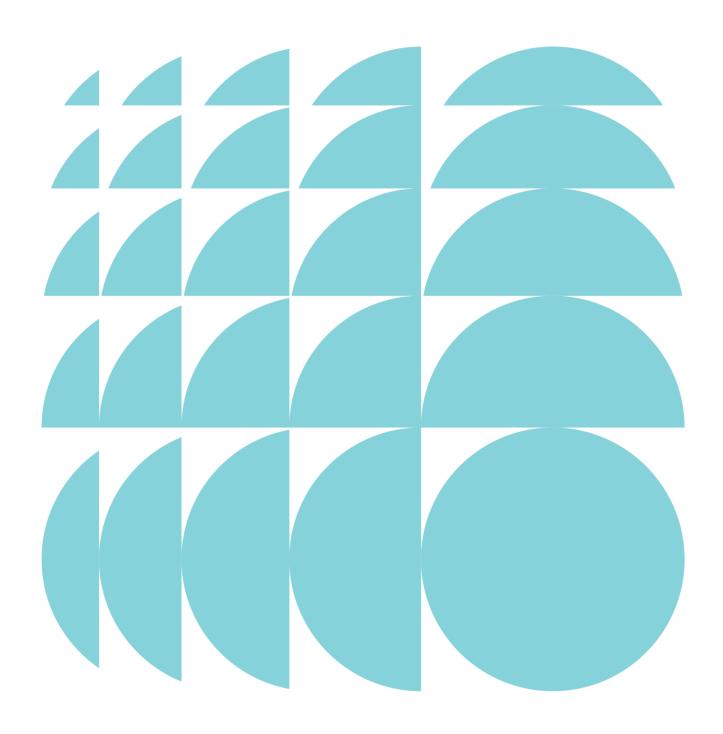
Statement of Environmental Effects

Stage 2 Development Application Liverpool Civic Place – Phase B and C 40-42 Scott Street, Liverpool

Commercial office building and co-living accommodation building

Submitted to Liverpool City Council
On behalf of Built Development Group

10 December 2020 | 2200620



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1.0	Introduction	6
1.1	Background	7
1.2	Consultation	9
2.0	Site Analysis	10
2.1	Site location and context	10
2.2	Site description	11
2.3	Surrounding development	15
3.0	Description of Proposed Development	20
3.1	Numerical Overview	21
3.2	Development/Urban Design Principles	22
3.3	Site layout and proposed buildings	22
3.4	External materials and finishes	24
3.5	Land use and floor space	28
3.6	Landscaping and public domain	30
3.7	Transport, access and parking	32
3.8	Co-living facility operation	35
3.9	Public art	36
4.0	Planning Assessment	37
4.1	Strategies and environmental planning instruments	37
4.2	Development Control Plans	42
4.3	Consistency with the approved Concept DA	43
4.4	Built form and urban design	45
4.5	Impact on adjoining properties	57
4.6	Transport and accessibility	59
4.7	Heritage	61
4.8	Wind	61
4.9	Noise and vibration	62
4.10	Aeronautical impact	62
4.11	Ecologically sustainable design	63
4.12	Utilities	63
4.13	Stormwater management and flooding	64
4.14	Geotechnical	64
4.15	Structural adequacy	64
4.16	Social impact	64
4.17	Waste management	65
4.18	Building Code of Australia and National	
	Construction Code	66
4.19	Site suitability	66
4.20	Public Interest	66
5.0	Conclusion	67

_				
	10	IU	re	10
	ıv	ıu	15	73

Figure 1	Liverpool Civic Place approved concept (overall site)	7
Figure 2	Liverpool Civic Place Phase B and C site (the subject of this DA)	8
Figure 3	Site location	10
Figure 4	Site lot boundaries	11
Figure 5	Site aerial	12
Figure 6	Two storey commercial building occupying the site	12
r igure o	as viewed from Scott Street	12
Figure 7	Rear car park of the commercial building as viewed	12
. iga.o .	from Terminus Street	12
Figure 8	Vehicular entry south west of the site	13
Figure 9	Vehicular entry at the south of the site	13
Figure 10	Heritage items in the vicinity of the site	14
Figure 11	Site context	15
Figure 12	Retail and commercial buildings to the north	16
Figure 13	Higher density development to the north east	16
Figure 14	Macquarie Street to the north	16
Figure 15	George Street to the north	16
Figure 16	Two storey commercial building to the east of the	
	George Street through site link	17
Figure 17	Two storey commercial building at the intersection	
	of Scott Street and Terminus Street	17
Figure 18	Telstra Exchange building and adjoining retail	
	tenancies to the south	17
Figure 19	Retail and medium density residential uses fronting	
	Terminus Street to the south	17
Figure 20	Commercial building occupying the site as viewed	
	from Scott Street (north east)	18
Figure 21	Commercial building occupying the site as viewed	
	from Scott Street (north west)	18
Figure 22	Above ground car parking structure as viewed from	
F: 00	Terminus Street (south east)	19
Figure 23	Nine storey mixed use residential building to the	40
Figure 24	West	19
Figure 24	Rear party wall presented to the site	19
Figure 25	Memorial Arts building	19
Figure 26	Consolidated automotive service tenancies to the west	19
Figure 27	Photomontage of the proposed development	20
Figure 28	Commercial office building (viewed from Terminus	20
rigure 20	Street to the south-west)	23
Figure 29	Co-living building (viewed from Scott Street)	24
Figure 30	Commercial office building materials and finishes	25
Figure 31	North-facing façade	25
Figure 32	Typical tower façade	26
Figure 33	West-facing façade	26
Figure 34	Co-living building materiality as shown at Scott	
J	Street Façade (left) and south façade (right)	27
Figure 35	Northern façade balcony design	28

Figure 36	Commercial office building level by level use (north-	
	south section)	29
Figure 37	Landscape character zones	30
Figure 38	Level 7 co-living terrace landscaping	31
Figure 39	Level 7 commercial office building terrace	
	landscaping	32
Figure 40	Pedestrian access to the proposed commercial	
	office building	33
Figure 41	Arrival sequence to the primary entrance to the	
	commercial office building	33
Figure 42	Connection to and from upper civic plaza	34
Figure 43	Scott Street pocket park connection	34
Figure 44	East-west pedestrian laneway providing a	
	connection to Phase A	34
Figure 45	Loading dock configuration	35
Figure 46	Proposed locations of public artwork	36
Figure 47	Reduced bulk and scale providing an extension to	
	the upper civic plaza (Phase B/C to the right)	45
Figure 48	Reduction to commercial envelope	45
Figure 49	Reduction to building envelopes	45
Figure 50	Commercial office building as viewed from Scott	
	Street at the north-west	46
Figure 51	Pedestrian pathway to entry foyer	47
Figure 52	Double-storey entry foyer at ground level	47
Figure 53	Activated retail edges	47
Figure 54	Chamfered edge of the commercial office building	48
Figure 55	Bronze core on western façade breaking down the	
	façade	48
Figure 56	Significant outlook afforded to the north and south	49
Figure 57	Activated retail edges of the co-living building	50
Figure 58	Co-living building as viewed from Scott Street to the	
	south-west	50
Figure 59	Concept DA approved upper civic plaza	51
Figure 60	Proposed extension to upper civic plaza	51
Figure 61	Proposed through-site links	52
Figure 62	Building setbacks and separations	53
Figure 63	Hoddle grid characteristic	54
Figure 64	Hoddle grid informed building separation	54
Figure 65	Approved building separation variations under	
- : 00	Concept DA approval (DA-585/2019)	56
Figure 66	Potential opportunity site redevelopment within the	
F:	street block (Concept DA context)	57
Figure 67	Perforated metal screen on the southern façade of	
F'	the co-living building	58
Figure 68	Precast walls form the western façade	58

Tables

Table 1

Table 2

Table 3

		building			
Table	e 4	Level by level description of the co-living building			
Table 5		Parking schedule			
Table	'				
Table	ble 7 Summary of consistency with strategies and				
Tabl	. 0	environmental planning instruments			
Table	ео	Compliance with the Liverpool LEP 2008 Design Excellence Provisions			
Table	e 9	Consistency of the proposed development with the			
		Concept DA			
Table	e 10	Results summary of intersection performance			
		(existing)			
Table	e 11	Traffic generation			
App	endices	3			
Α	Architect	ural Drawings			
	FJMT	Ç			
В	Site Surv	rev			
	Veris				
С	Design R	eport .			
•	FJMT				
D	Landscar	pe Drawings			
_	FJMT	2. Z. a. m. igo			
E	Plan of M	lanagement			
_	Ethos Urba	•			
F	QS Repo				
•	Built	nt			
_		an aut			
G	BASIX R	eport			
	Stantec				
Н	Civil and Stormwater Engineering Report				
	WSP				
I	I Clause 4.6 Variation Request				
	Ethos Urba	an			
J Heritage Impact Statement		Impact Statement			
	NBRS Arc	hitecture			
K	Geotechi	nical and Environmental Investigation Report			
Golder Associates		sociates			

Summary of lot details

Key development information

Level by level description of the commercial office

11

21

28 29

34 35

37

40

43

59 60

L	Crane Operation Approval
	Department of Infrastructure, Transport, Regional Development and Communications
М	DCP Compliance Table
	Ethos Urban
N	ESD Report
	Stantec
0	Traffic Impact Statement
	PTC
Р	Wind Impact Statement
	Windtech
Q	Noise Impact Assessment
	Stantec
R	Utility Services Report
	WSP
S	Civil Engineering Drawings
	WSP
Т	Structural Statement
	TTW
U	Social Impact Assessment
	Ethos Urban
٧	Operational Waste Management Plan
	Elephants Foot Recycling Solutions
W	BCA Report
	McKenzie Group
X	Access Report

Morris Goding Accessibility Consulting

1.0 Introduction

This Statement of Environmental Effects (SEE) is submitted to Liverpool City Council in support of a Development Application (DA) for a detailed 'Stage 2' proposal for Phase B and C of the Liverpool Civic Place mixed-use development, located at 40-42 Scott Street Liverpool.

The DA follows the approval of a Concept Proposal in September 2020 (DA-585/2019), which set out land uses and building envelopes for the entire Liverpool Civic Place project. This DA constitutes the second detailed 'Stage 2' proposal following approval of the Concept Proposal and represents the second and third phase of the development. Specifically, the DA seeks approval for:

- Construction and use of a 22 storey commercial office building, comprising:
 - lower ground and upper ground retail floor space; and
 - 19 commercial office levels.
- Construction and use of a 9 storey co-living building, comprising:
 - lower ground level retail floor space; and
 - 8 co-living levels.
- Construction of a 4 level basement, including:
 - 150 parking spaces;
 - motorcycle, bicycle parking spaces and end of trip facilities; and
 - loading dock facilities;
- Landscaping and public domain works including:
 - a pocket park fronting Scott Street; and
 - an east west through site link connecting George Lane to the central public plaza.
- Extension and augmentation of services and infrastructure as required.

This Stage 2 DA has been developed with consideration of a suite of applications that are required for the design coordination and delivery of the envisaged Liverpool Civic Place redevelopment. The overall planning pathway to realise the project has included three previous DAs, including a Concept DA (DA-585/2019), an Early Works DA (DA-906/2019), and a DA for Phase A (DA-836/2020), being a Stage 2 DA for Phase A (western portion) of the Liverpool Civic Place precinct. The approved Concept DA consent has set the land use and building envelope parameters for the overall project, and the Early Works DA has expedited site works for demolition, excavation, and the provision of a basement retention structure.

As this DA is lodged following approval of a Concept DA (Stage 1 DA) for the site, the provisions of Section 4.22 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) will apply in the assessment of this DA.

This SEE has been prepared by Ethos Urban on behalf of Built Development Group and is based on the Architectural Drawings provided by FJMT (**Appendix A**) and other supporting technical information appended to the report (see Table of Contents). This report describes the site, its environs and the proposed development, and provides an assessment of the environmental impacts and identifies the steps to be taken to protect or lessen the potential impacts on the environment.

1.1 Background

Clause 7.5A of the *Liverpool Local Environmental Plan 2008* (Liverpool LEP 2008) relates to certain land within the Liverpool City Centre which is provided incentive planning controls (FSR and height) if certain criteria within the clause are met. Pursuant to clause 7.5A(2) of the Liverpool LEP 2008, in order to realise the incentives within the clause, a site must be located within 'Area 8' on the Floor Space Ratio (FSR) map, have a lot size exceeding 1,500m² and have two or more street frontages, and at least 20% of the proposed GFA must be used for the purposes of business premises, centre-based child care facilities, community facilities, educational establishments, entertainment facilities, food and drink premises, functions centres, information and education facilities, medical centres, public administration buildings or retail premises. Clause 7.5A(3) requires that a site-specific development control plan is prepared for development benefitting from the clause.

Section 4.23 of the EP&A Act identifies that if an environmental planning instrument requires the preparation of a development control plan before any particular or kind of development is carried out on any land, that obligation may be satisfied by the making and approval of a Concept DA in respect of that land. A Concept DA made under Section 4.22 of the EP&A Act is one that sets out concept proposals for the development of a site, and for which detailed proposals for separate parts of the site are to be the subject of subsequent DAs.

In accordance with Section 4.22 of the EP&A Act and clause 7.5A of the Liverpool LEP 2008, a Concept DA (DA-585/2019) was approved by the Sydney Western City Planning Panel. The Concept DA consent has set the parameters for the future development of the site, including the approved land uses, building envelopes and an expanse of public domain and basement. The Concept DA did not approve any physical works. The full Liverpool Civic Place site, subject to the Concept DA approval is illustrated at **Figure 1**. A detailed DA has been lodged and is currently under assessment for Phase A of Liverpool Civic Place, while the subject DA's scope is limited to Phase B and C, as illustrated at **Figure 2**

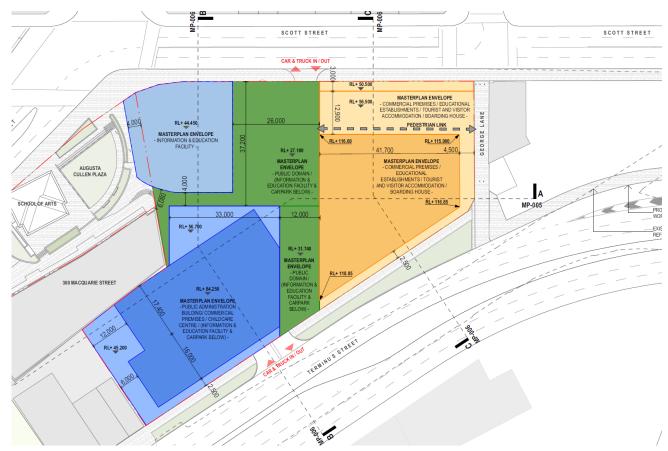


Figure 1 Liverpool Civic Place approved concept (overall site)

Source: FJMT

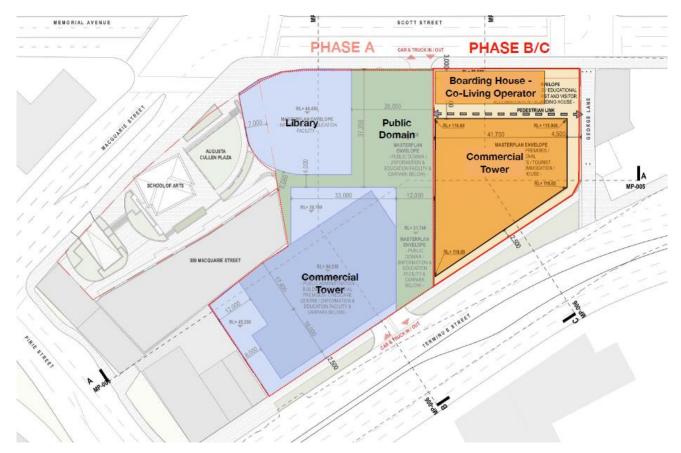


Figure 2 Liverpool Civic Place Phase B and C site (the subject of this DA)

Source: FJMT

1.1.1 Early works DA

DA-906/2019 was approved by the Sydney Western City Planning Panel on 29 June 2020. The determination provided development consent for the following works:

- The demolition of all structures on site including:
 - the two storey commercial building fronting Scott Street and the associated above ground car parking structure fronting Terminus Street; and
 - the two storey retail building fronting Scott Street and the associated at grade car park fronting Terminus Street.
- Bulk earthworks involving the excavation of land at 52 Scott Street to a maximum depth of RL 10.35 to accommodate the required basement levels.
- Removal of seven trees select tree removal and bulk earthworks including shoring through the use of piles.

Importantly, a modification to DA-906/2019 was lodged on 25 September 2020 seeking to modify the approved consent to increase the depth of excavation by 3.6m below the approved level (to RL 6.75), in order to accommodate a fifth basement level, given identified additional demand for public car parking in the future basement.

Early works commenced on site in September 2020 and are scheduled for completion in August 2021.

1.2 Consultation

Architectus has been engaged by Council to undertake an independent assessment of the DA. Accordingly, a pre-lodgement meeting was held with Council and Architectus staff on 26 November 2020. In addition, the Proponent met with Council's Design Excellence Panel (DEP) on 1 December 2020, to give the Panel an opportunity to inform the detailed design of the proposal.

Feedback obtained from the meetings has been addressed in the proposed design and DA documentation, where possible. It is noted that the Proponent has been committed to productive engagement with the assessment stakeholders from the inception of the Concept DA, through to the submission of this Stage 2 DA. This has included numerous meetings, as set out below:

Concept DA:

- 21 June 2019 Pre DA Meeting 1 (Architectus and Council)
- 9 September 2019 Pre DA Meeting 2 (Architectus and Council)
- 26 November 2019 DEP Meeting 1 (DEP, Architectus and Council)
- 17 March 2020 DEP Meeting 2 (DEP, Architectus and Council)

Phase A Stage 2 DA:

- 19 August 2020 Pre DA Meeting 1 (Architectus and Council)
- 20 August 2020 DEP Meeting 1 (DEP, Architectus and Council)
- 1 December 2020 DEP Meeting 2 (DEP, Architectus and Council)

Phase B/C Stage 2 DA:

- 26 November 2020 Pre DA Meeting (Architectus and Council)
- 1 December 2020 DEP Meeting (DEP, Architectus and Council)

The Proponent is committed to further engagement with the key stakeholders throughout the assessment of this Stage 2 DA.

2.0 Site Analysis

2.1 Site location and context

The site is located at 40-42 Scott Street, Liverpool within the Liverpool City Council Local Government Area (LGA), as illustrated in **Figure 3**. The site is located approximately 300m south west of Liverpool Railway Station and is also in the vicinity of a number of regionally significant land uses and features including Liverpool Hospital, Westfield Liverpool, Western Sydney University Liverpool Campus, the Georges River and Biggie Park public open space as illustrated in **Figure 3**.

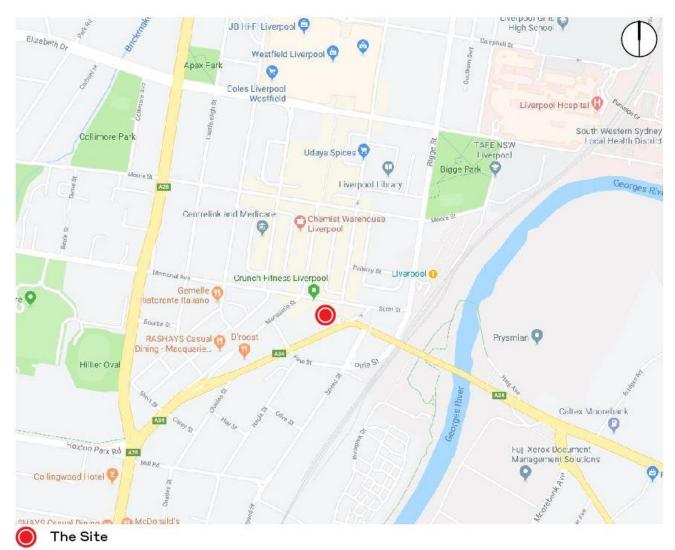


Figure 3 Site location

Source: Google Maps and Ethos Urban

2.2 Site description

The Phase B and C site to which this DA relates is identified within the Liverpool Civic Place overall boundary in **Figure 4**, with the 12 lots constituting Phase A and Phase B/C summarised in **Table 1**. The overall Liverpool Civic Place site (the subject of the wider Concept DA approval) is irregular in shape, and comprises 12 lots, as shown in **Figure 4**.

Table 1 Summary of lot details

rable i Guilliary of lot details		
Phase A		Phase B and C (the subject site)
• Lot 100 in DP 877435	• Lot 1 in DP 507070	• Lot 17 in DP 81842
• Lot 22 in DP 441010	• Lot 23 in DP 441010	• Lot 11 in DP 522284
• Lot 1 in DP 229979	• Lot 2 in DP 229979	• Lot 12 in DP 657056
• Lot 3 in DP 229979	• Lot 201 in DP 1224084	• Lot 3 in DP 229979
• Lot 1 in DP 514817		• Lot 1 in DP 507070



Figure 4 Site lot boundaries

Source: Sixmaps and Ethos Urban

The overall Liverpool Civic Place site has a total area of 9,189.5m² and has three primary road frontages including a primary frontage to Scott Street (98m frontage) to the north, George Lane (40m frontage) to the east and Terminus Street (115m frontage) to the south. The site boundary also extends along Macquarie Street.

The Phase B and C site to which the DA relates comprises a total site area of approximately 2,311m². The Phase B and C site has three primary road frontages, including a primary frontage to Scott Street (32m frontage) to the north, George Lane (40m frontage) to the east and Terminus Street (26m frontage) to the south. An aerial photograph of the site is shown at **Figure 5**.

The following sections of this site analysis will describe the Phase B and C site, to which the subject DA relates.

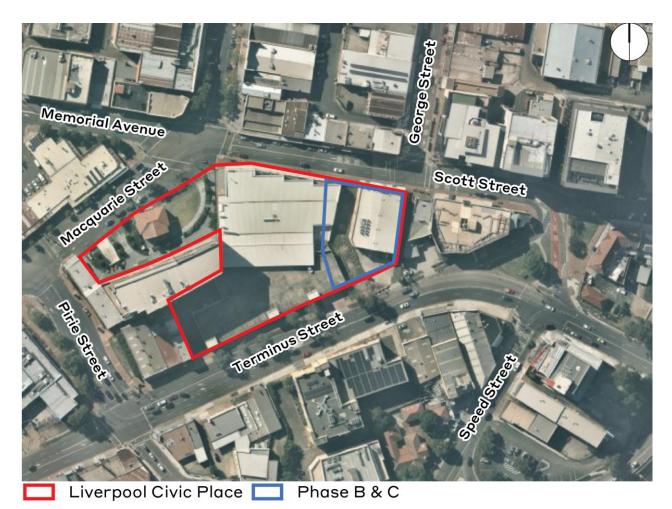


Figure 5 Site aerial
Source: Nearmap & Ethos Urban

2.2.1 Existing development

At the time of writing, the following elements described in this section exist on site, however the Early Works DA approved under DA-906/2019 approves the demolition of existing structures on site. The site is largely occupied by two vacant lots with scattered grass cover and immediately east of these lots, a two storey retail building (**Figure 6**) with an adjoining car park at the rear (**Figure 7**). Photographs of the existing development are provided at **Figure 6** and **Figure 7** below.



Figure 6 Two storey commercial building occupying the site as viewed from Scott Street



Figure 7 Rear car park of the commercial building as viewed from Terminus Street

2.2.2 Topography and vegetation

A Site Survey has been prepared by Veris is provided in **Appendix B**. The survey illustrates that the site slopes to north with a fall of approximately 3.5m from its Terminus Street frontage (RL 25.95) to its Scott Street frontage (RL 22.74). The site is largely free of vegetation, with street trees lining the Terminus Street boundary.

2.2.3 Access and connectivity

Vehicular access and parking

The site has two primary street frontages, to Scott Street and Terminus Street. The site also has a frontage to George Lane. Scott Street functions as a collector road connecting Memorial Avenue through to Bigge Street and is aligned in an east-west direction. Scott Street is a two-way, two lane road within a 12m wide carriageway with no vehicle access points to the site. Terminus Street is a classified RMS road including a two-way, two lane road within a 13m carriageway. The site is currently provided with two left in/left out vehicle access points off Terminus Street Figure 8 and Figure 9.





Figure 8 Vehicular entry south west of the site

Figure 9 Vehicular entry at the south of the site

Surrounding the site, on-street parking is generally paid and subject to a one hour time restriction. The western side of Macquarie Street has approximately four kerbside spaces. The northern side of Scott Street has approximately nine kerbside spaces and the southern side has approximately three kerbside parking spaces. The following offstreet car parking is available within a short walking distance from the site:

- Northumberland Street Car Park 440 spaces
- Speed Street Car Park 87 spaces
- Bathurst Street South Car Park 49 spaces
- Warren Service Way Car Park 704 spaces

Pedestrian access

Scott Street, Terminus Street and Macquarie Street are well-established pedestrian routes, with Liverpool Railway Station and the Liverpool retail precinct to the north being major generators of footfall traffic around the site. The site's eastern boundary fronts the George Street pedestrian access way which links Scott Street to Terminus Street.

Public transport

The site is well serviced by public transport, with Liverpool Railway Station located approximately 300m to the north west of the site. Liverpool Railway Station can be accessed via the T3 Bankstown Line, the T2 Inner West and Leppington Line, and the T5 Cumberland Line.

Bus services are active along George Street to the north of the site. Specifically, George Street is serviced by five bus routes, linking Liverpool to Casula, Moorebank, Holsworthy, Chipping Norton, Burwood.

2.2.4 Heritage

The site does not contain any heritage items, nor is it located within a heritage conservation area. Notwithstanding, the Phase A portion of Liverpool Civic Place comprises a heritage item at Lot 201 DP 1224084, 306-310 Macquarie Street, in the form of the Memorial School of Arts building (I99), with numerous other heritage items located in the vicinity of the site. The heritage context is illustrated in **Figure 10**. Notable heritage items in the vicinity include:

- 189 Plan of Town of Liverpool (Early town centre street layout Hoddle 1827);
- I91 Commercial Building (formerly Rural bank and State bank);
- 192 Boer War Memorial, including memorial to Private A.E Smith;
- 193 Macquarie Monument;
- 194 Row of 3 palm trees; and
- I109 Liverpool Fire Station.



Figure 10 Heritage items in the vicinity of the site

Source: Liverpool LEP 2008 with additions

2.3 Surrounding development

The Liverpool CBD is a growing strategic centre within Greater Western Sydney, comprising a true mixed-use character. The Liverpool CBD is currently presented with opportunities for renewal and urban transformation which reflects the precinct's strategic positioning between Parramatta as Sydney's Central CBD and the future Badgerys Creek Aerotropolis. Key land uses within the surrounding area are illustrated in **Figure 11** and the site's immediate surrounding context is outlined below.



Figure 11 Site context

Source: FJMT

North

Development to the north of the site, on the opposite side of Scott Street, includes retail and commercial buildings of two to three storeys, primarily containing retail and commercial uses (**Figure 12**). To the north east, the street block contains higher density commercial and serviced apartment uses (**Figure 13**). Further north, this development transitions into the Liverpool civic and retail centre bounded by Macquarie Street (**Figure 14**) and George Street (**Figure 15**).



Figure 12 Retail and commercial buildings to the north



Figure 13 Higher density development to the north east



Figure 14 Macquarie Street to the north



Figure 15 George Street to the north

East

Development to the east of the site includes a two storey commercial building (**Figure 16**). This building is not listed as a heritage significant item. To the east of this building is a larger two storey commercial building (**Figure 17**) which extends to the Scott Street and Terminus Street intersection. The Georges River and Liverpool Railway Station are a further 300m from the site and effectively mark the eastern boundary of the Liverpool CBD.



Figure 16 Two storey commercial building to the east of the George Street through site link



Figure 17 Two storey commercial building at the intersection of Scott Street and Terminus Street

South

To the south of the site, and on the opposite side of Terminus Street, is the Telstra Exchange building that has a height of approximately four storeys (**Figure 18**). As well as this, various retail stores front Terminus Street. Further south of the commercial Terminus Street strip, the area transitions to a residential character with a number of four to five storey residential flat buildings (**Figure 19**).



Figure 18 Telstra Exchange building and adjoining Figure 19 retail tenancies to the south uses from



Figure 19 Retail and medium density residential uses fronting Terminus Street to the south

West

At the time of writing, the immediate west of the site is a two-storey commercial building with a large frontage to Scott Street (**Figure 20** and **Figure 21**). The commercial building is provided with an above ground car parking structure at the rear with a frontage to Terminus Street (**Figure 22**). Notably, this existing development is contained within the Liverpool Civic Place site. The Early Works DA relating to the Liverpool Civic Place site (DA-906/2019) approved early works to demolish these existing buildings. A detailed DA was subsequently lodged on this site for Phase A of Liverpool Civic Place (DA-836/2020). This DA proposes the delivery of a six storey public library, 14 storey mixed use building containing public administration, commercial office and childcare uses, five levels of basement car parking and a vast expanse of landscaped public domain area.

Further west is a nine-storey mixed use development at 300 Macquarie Street (**Figure 23**). The mixed-use building presents a partial blank party wall to the site at the rear (**Figure 24**) and contains ground floor retail uses which are set back from the Memorial Arts Building (and Macquarie Street (**Figure 25**). This adjoins a consolidation of low scale automotive service tenancies to the west (**Figure 26**).



Figure 20 Commercial building occupying the site as viewed from Scott Street (north east)



Figure 21 Commercial building occupying the site as viewed from Scott Street (north west)



Figure 22 Above ground car parking structure as viewed from Terminus Street (south east)



Figure 23 Nine storey mixed use residential building to the west



Figure 24 Rear party wall presented to the site



Figure 25 Memorial Arts building



Figure 26 Consolidated automotive service tenancies to the west

3.0 Description of Proposed Development

This DA seeks approval for the following development:

- Construction and use of a 22 storey commercial office building, comprising:
 - lower ground and upper ground retail floor space; and
 - 19 commercial office levels.
- Construction and use of a 9 storey co-living building, comprising:
 - lower ground level retail floor space; and
 - 8 co-living levels.
- Construction of a 4 level basement, including:
 - 150 parking spaces;
 - motorcycle, bicycle parking spaces and end of trip facilities; and
 - loading dock facilities;
- Landscaping and public domain works including:
 - a pocket park fronting Scott Street; and
 - an east west through site link connecting George Lane to the central public plaza.
- · Extension and augmentation of services and infrastructure as required.

Architectural drawings illustrating the proposed development are included in **Appendix A**.



Figure 27 Photomontage of the proposed development

Source: FJMT

3.1 Numerical Overview

The key numeric development information of the proposed development is summarised in Table 2.

Table 2 Key development information

Table 2 Key development information	
Component	Proposal
Overall development	
Site area	2,311m ²
Proposed GFA total	25,162m²
Commercial	• 21,660m ²
Boarding house (co-living building)	• 2,960m²
Retail	• 542m ²
FSR	2.69:1 ¹
Maximum Height	RL 116.75
Co-living rooms – total	84
Typical studio room	• 69
Adaptable room	• 9
Executive suite/family room	• 6
Car spaces – total	150
Normal spaces	• 131
Small vehicle spaces	• 15
Accessible spaces	• 4
Loading and servicing spaces - total	4
Small rigid vehicles	• 2
Medium rigid vehicles	• 2
Motorcycle parking spaces	12
Bicycle spaces	147
Commercial office building	
Height in storeys	22
Maximum building height	RL 116.75
GFA total	22,027m ²
Commercial	• 21,660m ²
Retail	• 367m ²
Podium setbacks and separations	Podium setbacks and separations
• North	 4.5m – 6.8m separation from co-living building
• South	0.48m – 0.725m setback from Terminus Street
• East	• 2.75m – 2.88m setback from George Lane
• West	 19.7m – 27.7m separation from civic building in Phase A and 30.8m separation from library building in Phase A
Tower setbacks and separations	Tower setbacks and separations
• North	15.95m – 16.025m setback from Scott Street
• South	• 2.48m – 2.725m setback from Terminus Street
• East	• 4.75m – 4.88m setback from George Lane
• West	• 19.7 – 27.7m separation from civic building in Phase A
Co-living building	
Height in storeys	9
Maximum building height	RL 54.20

¹ Site area for the purposes of calculating FSR in accordance with clause 4.5 of the Liverpool LEP 2008 is 9,348m².

Component	Proposal	
GFA – total	3,112m ²	
Boarding house (co-living)	• 2,874m ²	
Retail	• 175m ²	
Building setbacks and separation		
• North	Nil setback to Scott Street	
South	4.5m – 6.8m separation from commercial office building	
• East	7.1m setback to George Lane	
West	31.7m separation from library building in Phase A	

3.2 Development/Urban Design Principles

The planning and design principles adopted for the proposed development of the site are as follows:

- ensure the design of the Liverpool Civic Place project positions it prominently as a key civic and focal point in the context of the Liverpool CBD and Metropolitan Sydney;
- identify key heritage, urban design, built form, civic, public domain and transport opportunities and constraints throughout the wider precinct;
- create a next generation workplace environment that realises the opportunities that are emerging in future work
 practice, wellbeing and sustainability, communication and digital technologies, security, and mixed-use
 development;
- provide an innovative and diverse housing model in a highly accessible location to public transport and within easy walking distance to a wide range of the city's attractions;
- create a development that is consistent with transit-oriented development principles, to reflect the scale and density appropriate for a site within the Liverpool CBD and proximity to the railway station;
- make an outstanding contribution to Liverpool's urban realm both in terms of its fit into the existing and emerging built fabric, and in terms of its public experience;
- create a visible gateway precinct at the southern end of Liverpool's CBD which will be highly visible from arterial roads, Liverpool Railway Station and main civic streets including Macquarie Street and George Street;
- provide a mixed-use precinct that supports community and neighbourhood collaboration through a range of functions and versatile spaces, reflecting the needs of Liverpool and its diverse demographic; and
- respond to the transitioning population that is set to dramatically increase over the next 20 years by breaking the precinct down into a variety of scales, providing social infrastructure that assists in reinforcing community, and delivering a hybrid precinct typology which helps in offering an attractive destination.

3.3 Site layout and proposed buildings

The detailed design can be separated into three main components, being the commercial office building, the coliving building, and the expanse of public domain. Details of each of these elements of the proposal are provided in the following sections:

- Commercial office building (Section 3.3.1, Section 3.4.1, and Section 3.5.1);
- Co-living building (Section 3.3.2, Section 3.4.2, and Section 3.5.2); and
- Public domain and landscaping (Section 3.7).

3.3.1 Commercial office building

On the southernmost portion of the site is the proposed commercial office building. This building comprises lower ground and upper ground retail levels to activate the ground plane, and 19 storeys of office space, with an additional two plant levels. The commercial office building is characterised by its two primary wings facing north and south, which both comprise a neutral grey tone and soft, curved edges. These wings are separated by the west facing bronze glazing and lower terracotta elements which are intended to present as a separate component to the main wings of the building. The elements of the podium and tower facing north are responsive to the surrounding development and public domain and represent the main civic address of the building to the public domain.

The Terminus Street frontage reflects a traditional tower and podium form, with both components providing a consistent alignment to Terminus Street, while comprising a chamfered edge that opens to the upper civic plaza of the Liverpool Civic Place precinct. The Terminus Street frontage constitutes a podium built up to approximately 32.8m in height and setback 0.48m – 0.725m from Terminus Street. The tower form is then setback 2.48m – 2.725m from the Terminus Street wall, extending to a maximum building height of 90.8m (when measured from the Terminus Street level).

The commercial office building does not occupy the full extent of the building envelope approved under the Concept DA, which allows the provision of additional activated public domain at the interface with the ground plane. This is particularly evident to the west of the commercial office building footprint, where additional space at the upper civic plaza is provided. A render of the proposed commercial office building is provided in **Figure 28**.

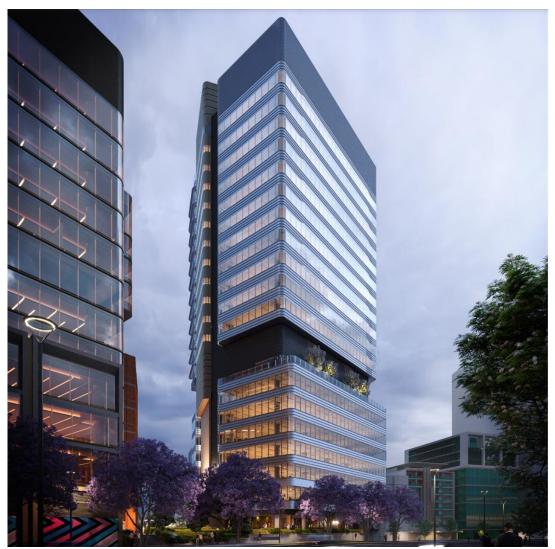


Figure 28 Commercial office building (viewed from Terminus Street to the south-west)

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23

Source: FJMT

3.3.2 Co-living building

To the north of the commercial office building is the proposed co-living building. The co-living building contains floor space distributed over nine levels, including ground level retail space and eight upper levels of co-living accommodation floor space.

The co-living building is of a generally rectangular shape, exhibiting visual interest through horizontal and vertical articulation. The building comprises a height of up to approximately 31.46m (when measured from the Scott Street level) and is built to the Scott Street boundary. The proposed co-living building as viewed from Scott Street to the north-west is shown in the render at **Figure 29**.



Figure 29 Co-living building (viewed from Scott Street)

Source: FJMT

3.4 External materials and finishes

The proposed external materials and finishes are set out in detail in the design report (**Appendix C**). The proposal comprises a unique design constituting varied materials and finishes of a high quality throughout the two buildings, which is discussed in the following sections.

3.4.1 Commercial office building

The commercial office building consists of high quality materials and finishes, which comprise the following elements:

- 1. tower façade type 1 the northern façade incorporating the northern grey wing of the building;
- 2. tower façade type 2 the southern façade incorporating the southern grey wing of the building;
- 3. tower façade type 3 the upper element of the western façade, incorporating the bronze panelling dividing the northern and southern wings;
- 4. terracotta core cladding the lower portion of the western façade incorporating the terracotta component that divides the grey northern and southern wings; and
- 5. aluminium louvres.

Each of the above components of this landmark building's materials and finishes are identified in **Figure 30** below and the façade elements are detailed in the following subsections.





Figure 30 Commercial office building materials and finishes

North façade, upper volume

The north facing façade includes a curtain wall system with neutral grey double-glazed panels that are 1.5m wide, and a 2.5m high vision panel. The panels are straight with curved corners. Attached to the upper portion of these vision panels is a 6m wide aluminium sunshade to mitigate the heat load along the building's northern aspect. A 1.25m high insulated spandrel zone that presents as silver horizontal ribbons is included above the vision panels. **Figure 31** illustrates the detailing of the façade fronting the northern public domain area.

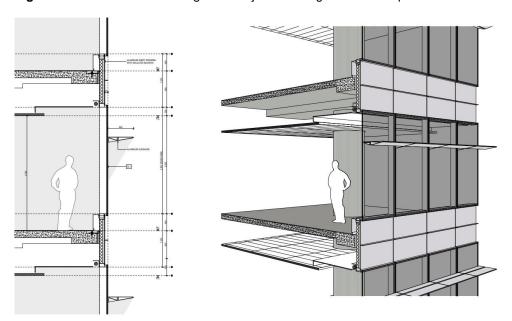


Figure 31 North-facing façade

Source: FJMT

Typical tower façade

The typical tower façade is composed of a curtain wall comprising neutral grey double glazed panels that are 1.5m wide with a vision panel that ranges in height from 1.8m on the east and west elevations and 2.3m along the southern elevation. The vision panels are framed above and below by 1.45m high silver insulated spandrels. The detailing of the typical tower façade is illustrated in **Figure 32**.

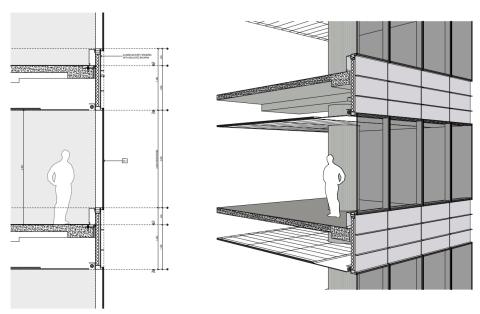


Figure 32 Typical tower façade

West façade, upper volume and core cladding

The middle portion of the western façade is differentiated from the remainder of the western façade, by incorporating a bronze finish. The materiality of this portion of the western façade contains two parts for further articulation of the design. The low rise concrete core is clad with terracotta tiles as illustrated above in **Figure 30**.

The upper portion of the façade includes bronze double glazing and aluminium panels. In order to mitigate against the strong western sun, the height of the vision panel is reduced for this part of the development to 1.3m, with a 2.45m insulated spandrel zone above each of the vision panels. The detailing of the upper portion of the western façade is shown in **Figure 33**.

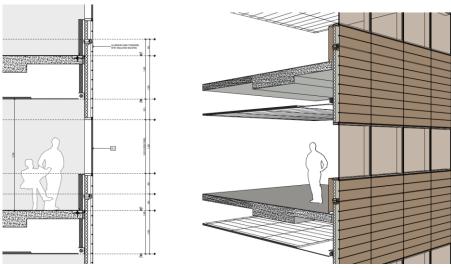


Figure 33 West-facing façade

Source: FJMT

3.4.2 Co-living building

The co-living building consists of a careful selection of materials and finishes which include the following:

- 1. glazing behind metal palisade balustrade;
- 2. precast walls and blades;
- 3. perforated metal screen bronze; and
- retail glazing.

These key components are identified in **Figure 34** below and are described in the subsequent sections in relation to their respective locations.



Figure 34 Co-living building materiality as shown at Scott Street Façade (left) and south façade (right)

Source: FJMT

Ground level

As illustrated in **Figure 34** above, at street level, the co-living building includes glazing at the location of the ground level retail tenancies. This glazing is consistent at all the ground floor orientations of the co-living building, where retail tenancies will be located.

Northern façade

The northern portion of the co-living building's façade comprises 2.7m glazing behind the bronze palisade balustrades that screen the co-living rooms. The upper portion of the balcony includes a dark balcony wall with sliding doors. This is illustrated in **Figure 35** below.

Eastern and western façade

The eastern and western façades solely include precast cladding walls and blades which is conveyed in **Figure 34** above.

Southern façade

The southern aspect of the co-living building's façade comprises a bronze perforated metal screen that provides privacy to residents of the accommodation. This is shown in **Figure 34**.

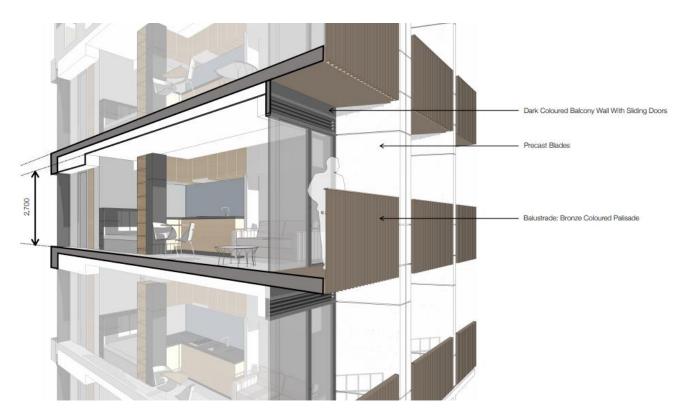


Figure 35 Northern façade balcony design

3.5 Land use and floor space

3.5.1 Commercial office building

A level by level summary of the proposed commercial office building is provided in **Table 3**. The design of each level is illustrated on the Architectural Drawings at **Appendix A**, with a snapshot of the commercial office building layout and further detail on the configuration of uses shown in **Figure 36**.

Table 3 Level by level description of the commercial office building

Level	Use
Basement level 3-4	Car park, plant, mechanical services
Basement level 2	Car park, plant, mechanical services, pit
Basement level 1	Car park, plant, mechanical services, end of trip facilities, bike storage, communications
Lower ground	Retail, foyer, café, concierge, public lobby, mail room, waste room, storage, services, loading
Upper ground	Retail, foyer, switch room, substation
Level 1-5	Commercial, services
Level 6	Commercial, terrace, plant
Level 7	Commercial, terrace, services
Level 8	Plant, services
Level 9-19	Commercial, services
Level 20	Commercial, services
Level 21	Services, solar panels



Figure 36 Commercial office building level by level use (north-south section)

3.5.2 Co-living building

A level by level summary of the uses contained in the co-living building is provided in **Table 4**. The design of each level is illustrated in the Architectural Drawings at **Appendix A**.

Table 4 Level by level description of the co-living building

Level	Use
Lower ground	Retail, foyer, mail room, waste holding, storage
Level 1	Co-living rooms, gym, communications, services
Level 2-6	Co-living rooms, communications, services
Level 7	Co-living rooms, dining area, communal laundry, terrace, communications, services, plant

3.6 Landscaping and public domain

A conceptual public domain and landscape scheme has been prepared by FJMT and is set out in the Landscape Drawings (**Appendix D**) and the Design Report (**Appendix C**). The landscape scheme has been carefully designed to provide a climate appropriate response, with varied experiences. It is noted that the proposed landscaping and public domain is indicative at this stage and will be further developed as part of the public domain plan that is to be prepared pursuant to conditions 4, 5 and 6 of the Concept DA approval (DA-585/2019). The proposed indicative landscape design is discussed further below.

Ground plane

The landscaping elements at the ground plane have been carefully designed to enhance permeability and activate the ground plane. The ground plane landscaping elements are divided into five landscape zones that allow for the categorisation of the varying public domain and landscaping spaces, as illustrated in **Figure 37**.

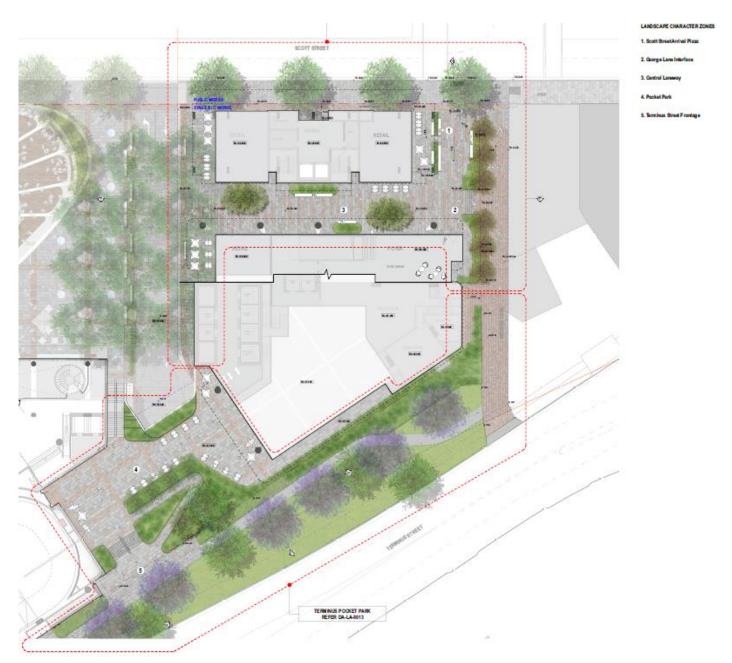


Figure 37 Landscape character zones

Source: FJMT

Scott Street arrival plaza

The Scott Street arrival plaza is situated at the north-east of the Phase B and C site, which is the anticipated primary pedestrian access way to the site from George Street. The proposed landscaping elements include benches, seats, raised garden beds, and turfed areas. These have been included while also achieving an open and connected space that provides a sense of arrival to Liverpool Civic Place and prioritises pedestrians.

George Lane interface

The George Lane interface at the east of the site is proposed to be lined with numerous new trees throughout the north-south laneway. This creates a walkable, inviting, and interesting tree-lined avenue for pedestrians.

Central laneway

The central laneway between the commercial office building and the co-living building includes a variety of amenity planting elements including new trees, groundcovers, integrated planter and bench seats and mass planting features.

Pocket park

The pocket park has been extended as a result of the proposed development, as the approved building envelope for the commercial office building has been significantly reduced, particularly at the western side of the building. This has produced more generous building separation and an extended and considerably better activated pocket park at the upper civic plaza.

Terminus Street frontage

The Terminus Street frontage includes terraced landscaping, vegetative screening, and new trees to mitigate against wind effects and help to shelter the pocket park.

Terraces

The proposed development includes landscape elements on the terrace areas proposed on level 6 of the co-living building and level 7 of the commercial office building. Each of these are described below.

The level 7 terrace in the co-living building includes a variety of plantings including raised planters at the northern aspect of the terrace to screen views from the terrace area into the private apartments. Raised planters are also proposed along the western perimeter of this terrace, to soften the balcony edge and create a sense of enclosure. The landscaping proposed for the level 7 terrace of the co-living building is illustrated in **Figure 38**.

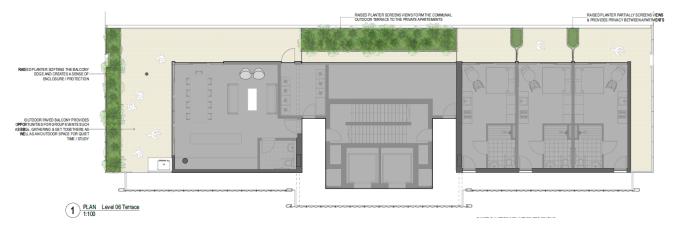


Figure 38 Level 7 co-living terrace landscaping

Source: FJMT

The level 7 terrace of the commercial office building includes raised planters at the southern aspect to provide shelter and amenity to the outdoor space. The northern side of the terrace incorporates four raised planters, with two of these including integrated seating and small trees which form a sheltering canopy to these seats. Nevertheless, there is considerable space at the north of the terrace, allowing for the provision of additional moveable furniture. The landscape arrangement on the level 7 terrace of the commercial office building is conveyed in **Figure 39**.



Figure 39 Level 7 commercial office building terrace landscaping

3.7 Transport, access and parking

3.7.1 Pedestrian access

Building entries

The primary pedestrian access point to the commercial office building is gained from an entry foyer positioned on the north eastern corner of the building (see **Figure 40**). This location has been nominated due to it aligning with the George Street axis and the pedestrian desire path from the railway station through to the Scott Street pocket park and into the entry foyer. After arriving in the double height foyer space, a grand stairway takes building users to the upper ground level where lifts provide access to the tower levels. A depiction of the arrival sequence to the commercial office building is illustrated in **Figure 41**.

A secondary entry from the upper civic plaza on Terminus Street is also provided and is shown in **Figure 40**, while this also indicates that the primary pedestrian access point to the lobby area of the co-living building will be via the centre of the Scott Street frontage.

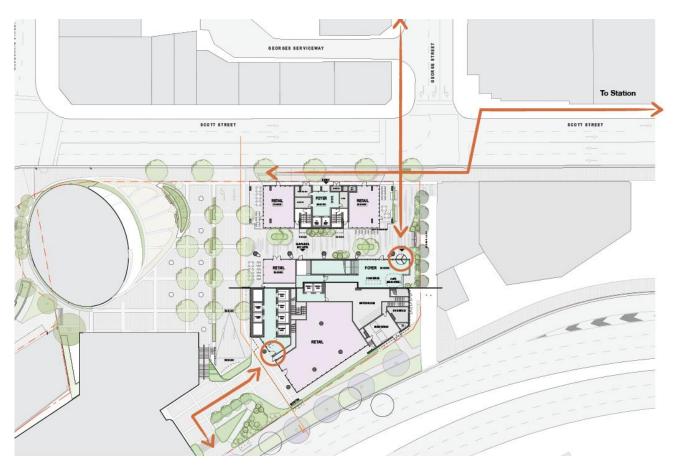


Figure 40 Pedestrian access to the proposed commercial office building



Figure 41 Arrival sequence to the primary entrance to the commercial office building

Source: FJMT

Through-site links

The proposed development includes a number of through-site links that maximise permeability throughout the site including:

- 1. Upper Civic Plaza (Terminus Street pocket park);
- 2. Civic Plaza
- 3. Scott Street Pocket Park
- 4. Pedestrian Laneway

Each of these through-site links included in the proposal are illustrated in Figure 42 below.



3

Figure 42 Connection to and from upper civic plaza

Source: FJMT

Figure 43 Scott Street pocket park connection Source: FJMT

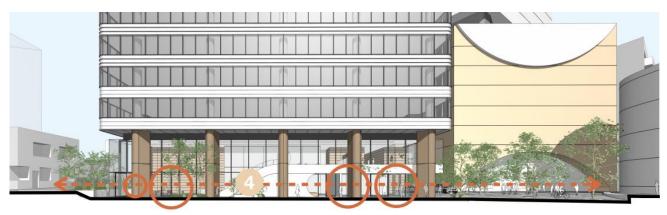


Figure 44 East-west pedestrian laneway providing a connection to Phase A

3.7.2 Vehicular access and parking

Vehicular access and egress to the proposed development is provided via the shared zone on Scott Street. The development provides a total of 150 car spaces (including four accessible spaces) across four basement levels. The parking allocation is detailed in **Table 5**.

Table 5 Parking schedule

Туре	Number of spaces
Car spaces – total	150
 Normal spaces 	• 131
 Small vehicle spaces 	• 15
 Accessible spaces 	• 4
Motorcycle	12
Bicycle	147

3.7.3 Loading and servicing

A loading dock is proposed within the southernmost portion of the lower ground level. This loading dock comprises two small-rigid vehicle spaces and two medium-rigid vehicle spaces (see **Figure 45**). The loading dock is accessible via the shared zone off Scott Street. The loading dock has been designed so that service vehicles can enter and exit in a forward direction.

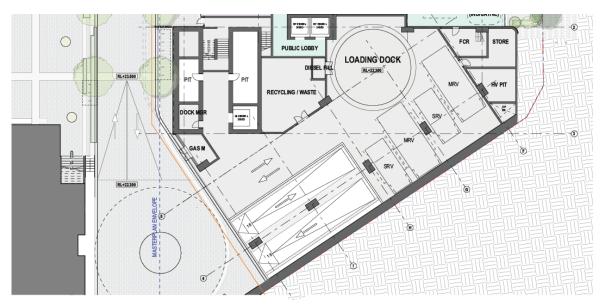


Figure 45 Loading dock configuration

Source: FJMT

3.7.4 End of trip facilities

To maximise tenant wellbeing and building amenity, the proposed development includes end of trip facilities (EOT) at Basement Level 1. The proposed EOT facilities are summarised in **Table 6** below.

Table 6 End of trip facilities summary

Component	Number
Secure bicycle parking	147
Showers	16
Lockers	148

3.8 Co-living facility operation

The co-living facility will be operated by UKO. UKO is the leading operator of co-living in Australia, successfully bringing an accommodation concept familiar in major cities around the world to Sydney. As an operator and manager of co-living facilities, UKO partners with developers and investors to deliver a quality rental accommodation product that meets the needs of the modern renter.

UKO is an established and experienced co-living operator, with nine facilities currently in operation or nearing completion of construction, including Stanmore, West Ryde, Paddington, Newtown, Marrickville, Paddington Village, Alexandria, Miranda and Thornleigh. Unlike a traditional boarding house typology, the UKO co-living model provides a collaborative village culture where residents share similar interests and values and are connected to their local community. There is an active interest in the people who will live there and a desire to foster a friendly and innovative network of residents. A goal of the facility is to provide tenants with access to both strong personal and professional networks.

Whilst it was initially expected for co-living to mainly appeal to the millennial demographic around the city fringe UKO has been pleased to see significant demand from a broader demographic of renters. These renters have engaged with the UKO product and embraced it in areas beyond the city fringe such as West Ryde. UKO co-living is currently occupied by the following market mix of renters:

- Young professionals (25-40 age category)
- Key workers including nurses, doctors and teachers
- Couples
- Singles with a greater ratio of females to males
- First time renters

- · Postgraduate students
- International and domestic students
- · Extended stay corporate renters
- Divorcees
- Crisis accommodation

This broad demographic is currently accommodated in either share-houses or private rentals which are not meeting their accommodation needs. UKO is particularly concerned around rentals which are leased usually to a head tenant who sublets to the occupants. These arrangements have no controls, and the occupants have little recourse for tenancy or occupancy related issues:

- · there is no requirement for a manager;
- there are no communal spaces required to be maintained; and
- · minimal requirements controls apply to fire safety or management of the premises.

UKO will be required to adhere to the policies and procedures outlined in the Plan of Management (PoM) which is provided at **Appendix E**. It is noted that the PoM will be a responsive document which continues to be refined with detailed input from UKO. It is acknowledged that the ongoing success of this facility in the Sydney market is to an extent reliant on quality management and guest experience, therefore UKO acknowledge that the appropriate management of the facility is paramount.

Further detail regarding the specific operation of the proposed co-living facility is provided in the PoM prepared by Ethos Urban at **Appendix E**.

3.9 Public art

The public art delivered throughout the proposed development will be a product of the Liverpool Civic Place Art Strategy (Public Art Strategy). The Public Art Strategy is community focussed and will incorporate elements that encapsulate components of Liverpool's character, culture, and environment. FJMT will collaborate with a curator that has strong ties to the region, expert knowledge of suitable artists and an enthusiasm to explore potential First Nations art.

The purpose of the Public Art Strategy is to ensure that the artwork incorporated into the development seamlessly integrates with the architectural and landscape qualities of the development. As such, the locations to display public art have been carefully selected, including:

- 1. Commercial foyer 'display case';
- 2. Co-living west façade 'canvas'; and
- 3. Co-living perforated screen 'integrated pattern'.

The public art locations are identified in Figure 46 below.



Figure 46 Proposed locations of public artwork

Source: FJMT

4.0 Planning Assessment

This section considers the planning issues relevant to the proposed development and provides an assessment of the relevant matters prescribed in section 4.15(1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

4.1 Strategies and environmental planning instruments

The DA's consistency and compliance with the relevant strategic plans, environmental planning instruments and policies is considered in **Table 7** below. Variations to, and non-compliances with the key standards and guidelines highlighted in the table are discussed in the following sections of this environmental assessment.

Table 7 Summary of consistency with strategies and environmental planning instruments

Plan	Comments			
Strategic Plans and Instruments				
The Greater Sydney Region Plan 'A Metropolis of Three Cities'	The Greater Sydney Region Plan is the current metropolitan strategy that establishes a vision for the future growth of Sydney to 2056. The proposal broadly supports the ten directions and objectives outlined in the Strategy in that it:			
	supports the aim of Liverpool, as an established centre, being a critical location for commercial and retail businesses;			
	contributes to the achievement of regional housing targets;			
	provides high quality commercial floor space and public domain;			
	co-locates employment generating uses with public transport; and			
	supports the economic sectors that contribute to investment and business.			
Western City District Plan	The vision for Greater Sydney envisages Sydney as a metropolis of three cities, including the Western Parkland City, the Central River City, and the Eastern Harbour City, comprising five more refined districts. Of these, the proposal is located within the Western City District. The proposal supports the objectives of the Western City District in that it:			
	protects and develops the Liverpool CBD commercial core as a key component of the Western Metropolitan Cluster;			
	 revitalises the southern end of the Liverpool CBD, with activated uses and public domain; 			
	 supports employment growth, investment and business opportunities in proximity to existing transport infrastructure; 			
	• provides diverse housing choice in the form of co-living accommodation to cater to the community's needs; and			
	enriches unique places and connections through facilitating a network of attractive, liveable centres and community hubs connected by convenient transport links.			
Liverpool City Activation Strategy	The Liverpool City Activation Strategy seeks to offer an innovative model for precinct activation that will ultimately encourage the development of a well-integrated and economically vibrant city centre, while also ensuring that a variety of social, cultural and environmental benefits can be generated. As part of its motive to activate the Liverpool CBD, it seeks to achieve an 18-hour economy. The proposed development will contribute to the achievement of an 18-hour economy as:			
	• it co-locates numerous services that will potentially contribute to public gathering and socialising within the uses offered on site;			
	it is located in the vicinity of Liverpool Railway Station, commercial offices, retail businesses, Liverpool Hospital and the University of Wollongong campus, with many of the workers, students and visitors potentially becoming key users of the Liverpool Civic Place development; and			
	The proposed development builds on the outstanding contribution to the urban realm of Liverpool CBD contained within Phase A of Liverpool Civic Place which included a new library and public domain, by providing additional public domain and landscaping. This increases the appeal of Liverpool Civic Place, enhances the sense of place and invites visitors to utilise the development during the day and after work hours.			

Plan	Comments	
Liverpool City Centre Retail Study	The proposed development is consistent with the recommendations in this study, given the following reasons:	
	a tower development containing commercial services is provided along Terminus Street;	
	public car parking is provided and is integrated with the design of the development;	
	service vehicle access for loading is provided for the development at its south along Terminus Street, with access to the loading dock provided via Scott Street;	
	 retail uses are provided at the ground level in accordance with the Scott Street precinct development guidelines; and 	
	the proposed development creates permeable spaces that facilitate connections to the Macquarie Street Spine precinct.	
State Environmental Planning Policy No.55 – Remediation of Land	A consent authority must not consent to the carrying out of any development on land unless it has considered whether land is contaminated and if the land is contaminated, it is satisfied that the land is or can be made suitable for the proposed development. A Preliminary Site Investigation (PSI) prepared by Douglas Partners accompanied the Concept DA (DA-585/2019) and considered that the site is/can be made suitable for the proposed uses, consistent with the requirements of SEPP 55.	
State Environmental Planning Policy (Infrastructure) 2007	The proposed development is deemed to be 'Traffic-generating' development under clause 104 of the Infrastructure SEPP as it seeks approval for commercial premises greater than 10,000m² in gross floor area. The application must therefore be referred to Roads and Maritime Services (RMS) for comment.	
State Environmental Planning Policy (State and Regional Development) 2011	As the proposal is a class of development described in Schedule 7 of State Environmental Planning Policy (State and Regional Development) 2011, being a Council related development that has a capital investment value (CIV) over \$5 million and a CIV over \$30 million (see Appendix F), Part 4 of the State and Regional Development SEPP applies to the DA. Under Part 4 of the SEPP, the Council's consent function is exercised by the Sydney Western City Joint Regional Planning Panel.	
State Environment Planning Policy (BASIX) 2004	The BASIX Report accompanying the DA at Appendix G confirms the proposed development's compliance with BASIX requirements.	
Greater Metropolitan Regional Environmental Plan No 2 – Georges River Catchment	The GMREP No. 2 is a regional environmental plan which was established to guide developments and land use activities within the Georges River catchment areas. The GMREP No. 2 sets out a series of principles developed to protect the environmental sustainability and natural processes associated with the catchment areas from impacts arising from new developments. The Civil and Stormwater Engineering Report prepared by WSP (Appendix H) illustrates the typical arrangements that will be adopted across the site to ensure the development does not adversely impact upon the health, quality and sustainability of the river and its tributaries and ecosystems.	
Liverpool Local Environmental Pla	nn 2008	
Clause 2.3 – Zone Objectives and Land Use Table	The site is zoned B4 Mixed Use under Liverpool LEP 2008. The proposed development includes commercial (office and retail), and boarding house uses. All proposed uses are permissible with consent in the B4 Mixed Use zone.	
	The proposed development is consistent with the objectives of the zone as it:	
	provides a mixture of compatible land uses in a highly serviced and CBD location;	
	 supports increased employment opportunities in proximity to existing and planned transport infrastructure; 	
	provides upper level co-housing accommodation with ground floor active retail uses at street level to support visitors in the Liverpool CBD; and	
	 facilitates a high standard of urban design, convenient urban living, and exceptional public amenity. 	
Clause 4.3 – Height of Buildings	The proposed building height is RL 54.20 for the co-living building and RL 116.75 for the commercial office building. This accords with the heights of RL 56.00 and RL 118.85 that were approved for the respective envelopes, under the Concept approval (DA-585/2019).	
Clause 4.4 – Floor Space Ratio	The proposed development achieves a maximum FSR of 2.67:1 which is well below the maximum permissible FSR afforded under clause 7.5A of 10:1	
Clause 4.6 – Exemptions to development standards	A request under clause 4.6 to vary the development standards relating to building separation contained in clause 7.4 of the LEP has been prepared (Appendix I). This variation is further explained in Section 4.4.4 .	

Plan	Comments
Clause 5.10 – Heritage Conservation	The site is not a heritage item, nor is it located within a heritage conservation area. The site is however proximately located to a number of local heritage items as identified at Section 2.2.4 . Accordingly, a Heritage Impact Statement has been prepared by NBRS (Appendix J) which assesses the potential impacts of the proposal in the context of the surrounding heritage listed items. Further discussion is provided at Section 4.7 .
Clause 7.1 – Objectives for development in Liverpool City	The proposed development is consistent with the objectives for development in the Liverpool City Centre as it will facilitate a future development which:
Centre	preserves the existing street layout, and enhances the CBD connectivity by providing permeable spaces throughout the development;
	modulates the envelope massing to ensure sunlight is maximised to public domain;
	co-locates employment generating uses in proximity to the Liverpool Rail Station; and
	does not diminish significant view lines to natural river foreshore and places of heritage significance.
Clause 7.2 – Sun access in Liverpool city centre	The proposal does not create additional overshadowing to any of the areas nominated under this clause.
Clause 7.3 – Car parking in	Clause 7.3 requires that:
Liverpool city centre	at least one car parking space is provided for every 200m² of any new GFA that is on the ground floor level of the building;
	• at least one car parking space is provided for every 100m² of any new GFA that is to be used for the purposes of retail premises;
	• at least one car parking space is provided for every 150m² of any new GFA that is to be used for any other purpose.
	Based on the proposal's GFA and split of GFA at ground level and on all other levels, the proposal requires at least 145 car parking spaces to accommodate the proposed office and retail uses, given that this provision does not factor in residential uses as part of a building's gross floor area. As such, the proposed development complies with the car parking rates in the Liverpool LEP 2008 as it includes 145 car parking spaces to accommodate the proposed retail and office uses.
Clause 7.4 – Building separation in Liverpool city centre	The proposed development varies the building separation requirements of clause 7.4. Refer to Section 4.4.4 and the Clause 4.6 Variation Request at Appendix I .
Clause 7.5 Design excellence in Liverpool city centre	The proposed development achieves the highest standard of architectural, urban, landscape and environmental design and therefore design excellence. In addition, the proposed development will be reviewed by Council's Design Excellence Advisory Panel as part of the assessment of the DA. Refer to Section 4.1.1 .
Clause 7.5A Additional provisions relating to certain land at Liverpool city centre	The proposed development benefits from additional height and FSR available through the 'opportunity site' incentive provisions of clause 7.5A. Through the Concept DA approval (DA/585/2019) the site meets the opportunity site tests, in that it:
ony contro	is located in 'Area 8' on the FSR Map
	• includes a lot size exceeding 1,500m ²
	has at least two street frontages
	 includes retail uses, and in addition with the Phase A component of Liverpool Civic Place, the following uses provide at least 20% (37.1%) of the GFA across the entire Liverpool Civic Place site: business premises, centre-based child care facilities, community facilities, educational establishments, entertainment facilities, food and drink premises, function centres, information and education facilities, medical centres, public administration buildings or retail premises (emphasis bold).
	A Concept DA made under Section 4.22 of the EP&A Act sets out concept proposals for the development of a site, and for which detailed proposals (such as the subject DA) for separate parts of the site are to be the subject of subsequent DAs.
Clause 7.7 Acid Sulfate Soils	The site is mapped as Class 5 under the Acid Sulfate Soils Map of the LEP and the Geotechnical and Environmental Investigation Report at Appendix K identifies the acid sulfate soil content. Accordingly, an Acid Sulfate Soils Management Plan is not required to be prepared.
Clause 7.8 Flood Planning	As set out within the Civil and Stormwater Engineering Report at Appendix H , the site is outside of the flooding zone and as such, there are no flood planning requirements imposed on the development.

Plan	Comments
Clause 7.16 – Ground Floor development in zones B1, B2 and B4	In accordance with clause 7.16, the ground floor of the commercial office and co-living buildings will not be used for the purposes of residential accommodation. The proposed buildings contained within the development are also designed with at least one entrance and comprise multiple windows facing a street.
Clause 7.17 – Airspace Operations	The operation of a crane to facilitate the proposed development is a 'controlled activity'. Notwithstanding, the controlled activity has been granted approval (see Appendix L). Further discussion in this regard is provided in Section 4.10 .

4.1.1 Design excellence

Clause 7.5 of the *Liverpool Local Environmental Plan 2008* (Liverpool LEP 2008) requires that the consent authority consider whether a proposed development exhibits design excellence. The Applicant is committed to working with Council's Design Excellence Advisory Panel throughout the DA process on the Liverpool Civic Place project to ensure all buildings and public domain elements exhibit design excellence.

Table 8 below provides an itemised assessment of the proposed development against the design excellence provisions contained in clause 7.5 of the Liverpool LEP 2008. In conclusion, it is considered that the proposal exhibits design excellence in accordance with clause 7.5 of the Liverpool LEP 2008, given it addresses all the requirements of the clause, and given it is consistent with the advice of the DEP.

Table 8 Compliance with the Liverpool LEP 2008 Design Excellence Provisions

Controls	Comments
In considering whether development exh	ibits design excellence, the consent authority must have regard to the following matters:
Whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved	The proposal's architectural design, materials and detailing are of a high standard, and are appropriate. The architectural design and materials reflect the landmark status of the overall Civic Place project and the role it will play for the Liverpool CBD. This is further discussed in Section 4.4 .
Whether the form and external appearance of the proposed development will improve the quality and amenity of the public domain	The form and external appearance of the commercial office building and co-living building has been carefully considered by FJMT, having regard to the built form objectives for Phase B and C of the overall project, with buildings that revitalise the built form within the site and thereby improve its visual amenity. Furthermore, retail uses are proposed on the ground floor and complemented by landscaped area to provide a high level of amenity to users of the proposed development. The various design elements and features set out in Section 3.0 ensure a world class mixed-use precinct is delivered.
Whether the proposed development detrimentally impacts on view corridors	No significant view corridors from surrounding buildings or public places have been identified that would be impacted by the proposal. The proposed development facilitates a high quality urban environment and does not unreasonably impede on views from the public domain to highly utilised parks or public parks in the vicinity of the site.
Whether the proposed development detrimentally overshadows Bigge Park, Liverpool Pioneers' Memorial Park, Apex Park, St Luke's Church Grounds and Macquarie Street Mall (between Elizabeth Street and Memorial Avenue)	The proposed development will not overshadow any of these sites as illustrated in the overshadowing diagrams prepared by FJMT at Appendix C and discussed in Section 4.5.2 .
Any relevant requirements of applicable development control plans	Clause 7.5A(3) requires the preparation of a site-specific DCP. This is satisfied by virtue of the approved Concept DA, pursuant to Section 4.23 of the EP&A Act. Furthermore, the applicable provisions contained within the Liverpool DCP 2008 are addressed in the DCP Compliance Table included at Appendix M .
How the proposed development addresses the following matters: (a) the suitability of the site for development	This is addressed in Section 4.19 .

ntrols	5	Comments			
(b)	existing and proposed uses and use mix	The existing uses are set out in Section 2.2.1 . The proposed development contains a mixture of uses including commercial office, retail, and boarding house (co-living) space. These uses are to be serviced by car parking situated beneath in the four level basement car park. These uses are considered appropriate in the CBD context of the site, which is in proximity to Liverpool Railway Station.			
		The proposal has been designed to accommodate viable commercial floor plates in the podium and tower whilst balancing the built form objectives for the development and precinct.			
(c)	heritage issues and streetscape constraints	The proposal has been designed to ensure the heritage significance of nearby heritacitems is protected. The Heritage Impact Statement included at Appendix J determine that the proposal is appropriate from a heritage and streetscape perspective. Further discussion in this regard is provided in Section 4.7 .			
(d)	the location of any tower proposed, having regard to the need to achieve an acceptable relationship with	The commercial building envelope has been refined to remove volume and mass from the approved Concept DA envelope to achieve an improved relationship with the proposed buildings within the Phase A site, as well as increase the provision of public domain within the site.			
	other towers (existing or proposed) on the same site or on neighbouring sites in terms	Further, the commercial office building design includes terracotta and bronze panelling on the western façade in order to harmoniously integrate with the remainder of the Liverpool Civic Place precinct including the civic building tower.			
of separation, setbacks, amenity and urban form	The proposal will be setback an additional 7.7m (19.7m in total) from the civic buildin to the west, compared to the Concept Proposal's 12m separation. This increase in building separation provides an appropriate level of separation which significantly enhances the urban form by reducing the bulk and scale of the commercial office building.				
		Refer to Section 4.4 for further discussion.			
(e) bulk, massing and modulation of buildings		The proposed commercial office building adopts a unique built form, characterised b its two neutral grey wings contained on the northern and southern facades, which ar broken down by the terracotta and bronze panelling on the western façade in order f the building to be read as two separate components. The bronze element integrates seamlessly with the western half of Liverpool Civic Place and the surrounding area which comprises built form elements with a similar colour scheme. Moreover, this articulation helps to reduce the perceived bulk and scale of the tower form.			
		The co-living building design is significantly smaller in scale and comprises a refined architectural form and modulation, which enables the southern commercial office building to stand out as a significant urban marker. This contributes to the objective of transforming the site into the southern gateway into the city.			
(f)	street frontage heights	With a height of nine storeys to Scott Street and 10 storeys to Terminus Street, the street frontage heights of the proposed buildings have been designed to reinforce a pedestrian scale commensurate with this important mixed-use precinct, providing a sense of openness to the future public domain.			
		Street frontage heights proposed for the development are largely consistent with tho approved in the Concept DA. Further discussion is provided in Section 4.4 .			
(g)	environmental impacts such as sustainable design, overshadowing, wind and reflectivity	As discussed further in this section, the proposed development has been designed to minimise environmental impacts within the locality. Overshadowing, solar access, visual impacts, noise, and wind have all been carefully considered and the proposal is found to have negligible impacts. Sustainable design has been at the forefront of the building's design, as evident in the best practice Green Star and NABERs targets to adopted.			
(h)	the achievement of the principles of ecologically sustainable development	Ecologically sustainable development (ESD) principles are achieved through the development, as demonstrated in the ESD Report included in Appendix N . Further discussion relating to the attainment of ESD principles in the design of the development is provided in Section 4.11 .			

Controls Comments

 pedestrian, cycle, vehicular and service access, circulation and requirements **Pedestrian:** Whilst this DA only relates to Phase B and C of the overall Liverpool Civic Place project, the development has been designed as a truly integrated project, with the pedestrian experience in the public domain from east to west connecting the future precinct to the existing Augusta Cullen Plaza. The proposal prioritises pedestrian movements east to west and north to south, providing significant through-site link opportunities from Terminus Street to Scott Street, whilst blending in access to the civic, commercial, and retail areas of the wider precinct. The design of the proposal emphasises entrances which provide a sense of arrival for pedestrians, with meaningful connections to the public domain.

Cycle: The proposal's shared accessway from Scott Street and basement entries from the shared road provide ample opportunity for, and encourage, cycling, to and from the precinct. Comprehensive end of trip facilities located in the basement, as well as precinct bicycle parking, will further encourage sustainable transport use.

Vehicle and service access: All vehicular access to Phase B and C will be via the shared road. However, service vehicle access and normal vehicle access will have separate entry and exit points, with the service vehicles accessing the lower ground level loading dock, while normal vehicles will access the four level basement car park.

(j) the impact on, and any proposed improvements to, the public domain The proposed development includes a significant reduction in the bulk and scale of the commercial office building, which considerably improves the amenity afforded to visitors as the upper civic plaza component of the public domain has consequently been expanded. A central laneway has been proposed between the commercial office building and the co-living building, with significant landscape embellishments proposed that culminate in a much improved public domain.

Additional landscaping improvements have been included at the Scott Street pocket park and the civic plaza. The ground plane of the development includes retail uses which have been carefully located in order to activate key areas of the public domain including the Scott Street pocket park, the central laneway and the civic plaza.

Further details of proposed landscaping elements and the resultant improvements to the public domain are provided in the Design Report (**Appendix C**).

4.2 Development Control Plans

The Liverpool Development Control Plan 2008 (Liverpool DCP 2008) is the relevant DCP for the site. The proposed development is consistent with the objectives of the Liverpool DCP 2008 for the following reasons:

- the proposed development accords with the Concept DA approval for the site that was made pursuant to Section 4.23 of the EP&A Act, which results in the site being subject to more detailed development provisions;
- the proposed development includes a landscaped through site link, which will enhance the natural environment contained within the Liverpool City Centre;
- the proposed development will provide a significant and transformative benefit to the amenity and urban and environmental design of the City of Liverpool;
- it respects the environmental heritage of Liverpool, with the orientation of the proposed buildings set back considerably from the nearest heritage items; and
- the proposed development facilitates environmentally sustainable development outcomes.

Under Section 4.15(3A) of the EP&A Act, a consent authority is required to apply DCP provisions flexibly and allow reasonable alternative solutions that achieve the objects of those standards. A detailed review of the DA's consistency with the Liverpool DCP 2008 is provided in **Appendix M**. The assessment demonstrates that the proposal achieves a high level of compliance with the relevant development controls. Where compliance with numeric controls cannot be achieved, it is demonstrated that the alternative solutions proposed are reasonable and will achieve the relevant Council objectives.

4.3 Consistency with the approved Concept DA

As described in **Section 1.1**, DA-585/2019 is a Concept DA that applies to the site. The proposed development is the second Detailed DA lodged in accordance with the Concept DA development consent. A comparison of the key dimensions approved for the relevant building envelopes in the Concept DA and the dimensions sought as part of the subject DA is provided in **Table 9**.

Table 9 Consistency of the proposed development with the Concept DA

Control	Concept DA approval	Phase B & C proposal	Difference
Landscaped area	4,100m ² – for entire Liverpool Civic Place Site (44%).	1,719m ²	3,939m² included as part of Phase A. Therefore, the 1,719m² of landscaped area proposed for this DA enables the Liverpool Civic Place precinct to achieve 5,658m² of landscaped area, which exceeds the 4,100m² of landscaped area included in the Concept DA approval.
Car parking	413 spaces (indicative – subject to change with detailed design applications.	150	Factoring in the proposed 343 spaces included in the Liverpool Civic Place Phase A detailed DA (DA-836/2020), the car parking throughout the precinct totals 493 spaces. This exceeds the 413 spaces included in the Concept Proposal by 80 spaces. This is because the Concept Proposal did not anticipate the demand for car parking generated by the precinct, which was addressed by adding a fifth basement parking level to the Phase A DA. Notwithstanding, the car parking control applying to the site requires a minimum amount of car parking, and therefore there is no issue with the 413 spaces envisaged in the Concept Proposal being exceeded.
Land uses	Either (or a combination of) commercial premises, educational establishment, tourist and visitor accommodation or boarding house (student accommodation) uses	Commercial office, retail and boarding house uses	No educational establishment, tourist and visitor accommodation, or student accommodation uses are included. A boarding house use which includes co-living accommodation has been included instead of tourist and visitor accommodation.
Building height			
 Podium/Smaller building 	• RL 56.00	• RL 54.20	- 1.80m
• Tower	• RL 118.85	• RL 116.75	- 2.10m
GFA	27,961m ² Final GFA to be determined in subsequent detailed design applications	25,162m ²	2,799m² less

Control	Concept DA approval	Phase B & C proposal	Difference
Boundary setbacks and separation			
• North	Om front setback to Scott Street	Om front setback to Scott Street	Nil
• South	Om rear setback to Terminus Street	0.48m rear setback to Terminus Street	+0.48m
• East	Om side setback to laneway	2.75m side setback to laneway	+2.75m
• West	12m separation from south-	19.7m separation from	+7.7m from the civic building
	western envelope building and 20m separation from north-western envelope	civic building, 30.8m separation from commercial office building to library and 31.7m	+10.8m separation between the commercial office building and library building in Phase A
		separation from co-living building to library contained in Phase A	+11.7m separation between the co-living building and the library building in Phase A
Tower setbacks and separation			
• North	15.9m front setback from Scott Street	15.95m front setback from Scott Street	+0.05m
• South	2.5m rear setback from Terminus Street	2.48m rear setback from Terminus Street	-0.02m
• East	4.5m side setback to laneway	4.75m side setback to laneway	+0.25m
• West	12m separation from south- western envelope and 20m	civic building and 30.8m	+7.7m separation from civic building
	separation from north- western envelope	separation from library building in Phase A	+10.8m separation from library building in Phase A

4.3.1 Building envelope comparison

A detailed assessment of the proposal's relationship with the Concept DA building envelope is provided within the Design Report in **Appendix C** and illustrated in **Figure 47 – Figure 49** below. It is evident from these images that the proposed detailed designs have emerged within the approved planning envelopes. As demonstrated through the detailed designs, FJMT has skilfully incorporated building articulation and removed bulk and scale to present an optimal design solution for the site and its surrounds. Specifically:

- The bulk and scale of the commercial office building has been reduced at the western side of the building, affording additional public domain within the Terminus Street pocket park (see Figure 47). The reduction in bulk has also enabled a more elegant design, shown in the architecture with the two neutral grey wings at the north and south, divided by terracotta and bronze glazed panelling on the western façade.
- The building height of the commercial office building has been reduced, thereby resulting in less overshadowing, particularly due to the 5.2m reduction in building height and the reduced bulk (see **Figure 48**).
- The single uniform building envelope for Phase B and C approved under the Concept DA has been divided into two separate buildings, which allows for the appropriate division of land uses amongst the two buildings, contributing to the delivery of a true mixed-use precinct, while also allowing for an east west through-site link providing better activation and connectivity throughout the site.
- The building height of the co-living building has been reduced by 2.3m and the design has been refined, providing an elegant architectural form that is responsive to the remainder of the Liverpool Civic Place and is appropriate to enable maximum amenity to the co-living accommodation (see **Figure 48** and **Figure 49**).

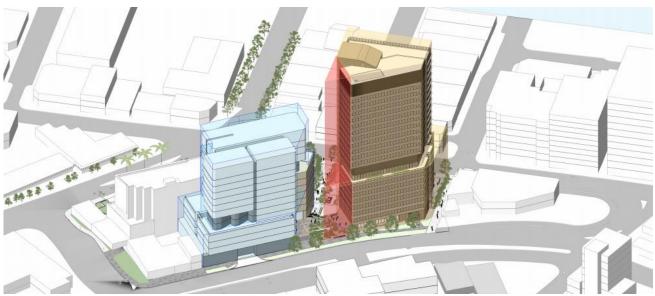


Figure 47 Reduced bulk and scale providing an extension to the upper civic plaza (Phase B/C to the right)

Source: FJMT

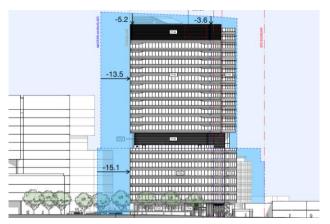


Figure 48 Reduction to commercial envelope
Source: FJMT



Figure 49 Reduction to building envelopes
Source: FJMT

4.4 Built form and urban design

The Concept DA established the vision and planning framework to assess the detailed design of the future development on the Liverpool Civic Place site. Specifically, the proposal has been informed by the design principles established by FJMT at Concept DA stage, and further refined by Architectus, Council and the Design Excellence Panel through the assessment of the Concept DA. These principles provide for a well-considered and respectful approach to rejuvenating a large site of significant strategic importance for Greater Western Sydney. The proposal has addressed and built upon these principles through the proposed detailed design.

Overall, the proposed development delivers a built form that is responsive to the context and characteristics of the precinct, the character of the surrounding area, and the location of the precinct at the southern end of Liverpool's CBD grid. The design and layout of the proposed buildings and public domain is a complex response to a uniquely shaped and located site and its specific constraints, the features of the site and the surrounding area, and the future character of this precinct that is undergoing significant change. In addition, the proposal's design has been informed by the commercial office market's expectations regarding floor plate sizes and configurations. The internal arrangements have been designed with future tenant requirements in mind and in part has influenced the building's external presentation to its context.

The following subsections set out the key principles established through the Concept DA stage with the proposal's response to each relevant principle.

4.4.1 Commercial office building

Through the Concept DA, the vision of the commercial office building was to create a tower building which would provide a new landmark tower in the urban landscape of a revitalised and growing Liverpool CBD. The building was intended to:

- form a transition in scale from the smaller scale commercial and retail lane uses to the north;
- offer design excellence to convey the Liverpool CBD's strategic importance;
- · offer retail uses to support visitation and vibrancy; and
- create a gateway precinct at the southern end of Liverpool's CBD which will be highly visible from arterial roads (across the Georges River), from the train station and from Liverpool's 'high streets'.

Through careful design in consultation with Council's Design Excellence Panel, the design strategies employed to achieve this include:

- locating the tower at the southern end of the site, having regard to the importance of scale transition from lower (Macquarie Street) to higher (Terminus Street), ensuring it is a secondary backdrop to the Civic precinct rather than in the foreground;
- the volume of the tower has been reduced to form a better relationship with existing and emerging detailed designs and enable enhanced amenity and functionality to the tenancies within; and
- secondary facades are presented to the eastern and western sides to reduce the potential for overlooking while orienting the building to vistas available to the north and south.

The design of the commercial office building achieves the overarching vision for the tower building form. Its scale, varied design elements and articulation ensure it is a prominent, unique, and significant urban marker in the Liverpool City Centre. The building is highly recognisable from a distance and contributes to Liverpool Civic Place's position as a visible gateway precinct at the southern end of Liverpool's CBD, as illustrated in **Figure 50**. The following section assesses the design of the development, its achievement of the above design strategies and outlines additional positive features incorporated into the built form and architectural design.



Figure 50 Commercial office building as viewed from Scott Street at the north-west

Source: FJMT

Ground plane

The entrance to the building is at the north-east corner, aligning with the desired pedestrian path from the Liverpool Station, via George Street to the north, thereby affording workers with a clear commercial address and ease of access to the premises. The entry provides access to a double height foyer space which directly leads to a grand stairway to the upper ground level where lifts transfer workers to the upper levels. Images of the entry location at the north-east corner of the development are provided in **Figure 51** and **Figure 52**.



Figure 51 Pedestrian pathway to entry foyer Source: FJMT

Figure 52 Double-storey entry foyer at ground level Source: FJMT

In order to activate the ground plane, enhance vitality and encourage visitation to the precinct (key objectives of the Concept DA), the ground floor area is provided with a number of retail tenancies at the lower and upper ground floors. The retail tenancies have been selectively located so that they address key external spaces including the Civic Plaza and the central laneway. The proposed activated edges are highlighted in orange in **Figure 53** below.



Figure 53 Activated retail edges

Source: FJMT

Building façades and articulation

The proposal has significantly reduced the bulk and scale of the commercial office building and its separation from the civic building contained in Phase A of Liverpool Civic Place. This has enabled the reconfiguration of the building, whereby a chamfered edge has been incorporated to the south which provides a softer more inviting entryway into the Liverpool Civic Place precinct and enables greater public domain within the Terminus Street pocket park (see **Figure 54**).

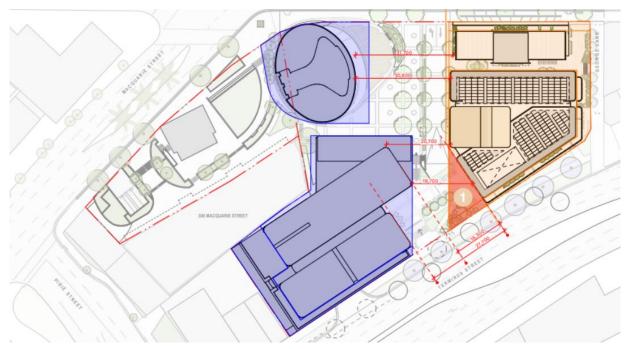


Figure 54 Chamfered edge of the commercial office building

Source: FJMT

The commercial office building incorporates a variety of materials and specific detailing to reduce its bulk and scale. Namely, it adopts two distinct components in the form of neutral grey toned wings fronting the northern and southern aspects of the building, while terracotta and bronze panelling is integrated into the western façade core to effectively break down the façade vertically (see **Figure 55**). The bronze core elements pick up on the warm stone and masonry tones predominant in Liverpool, enabling the building to harmoniously integrate within the wider precinct. The two wings maximise the outlook opportunities available from the northern and southern façade (see **Figure 56**), which was highlighted as a key design strategy within the Concept DA. Moreover, the southern wing of the commercial office building is aligned parallel with Terminus Street which produces a better relationship between the commercial office building and the adjacent civic building in Phase A of Liverpool Civic Place.



Figure 55 Bronze core on western façade breaking down the façade

Source: FJMT



Figure 56 Significant outlook afforded to the north and south

Source: FJMT

Market appropriate floor plates

The proposed massing of the development has also been driven by the delivery of market appropriate floor plates. Through the release of The Greater Sydney Region Plan 'A Metropolis of Three Cities' and the Central City District Plan, it is abundantly clear that the GSC in conjunction with the NSW State Government is prioritising the growth of Greater Western Sydney by attracting investment, business activity and jobs throughout the Western Metropolitan Cluster which contains Liverpool.

The proposed development seeks to provide 21,660m² of commercial and retail floor space, which is a significant contribution to the growth and transformation of Liverpool and Greater Western Sydney at large. In developing the proposed floor plates, FJMT has acknowledged the evolving workplace environment, therefore proposing floor plates that are flexible, functional, and adaptable for either single or multiple tenants per floor. The depth of space from façade to core is 12m on both the north and south wings above the podium, which is optimal for daylight access and creates large contiguous workspace zones. In turn, this heightens workplace amenity and functionality, which was a key design strategy of the Concept DA for the commercial office building.

4.4.2 Co-living building

Through the concept DA, it was established that the northern portion of the eastern building envelope, now the co-living building, would transition upwards from the adjacent library building, while constituting a mid-level height allowing the southern tower forms to stand out as urban markers. It was envisaged for this building to help break down the precinct into a variety of scales and provide a transition between current and future building heights throughout the Liverpool CBD. Moreover, the hybrid uses would render the precinct both self-sustaining and attractive as a destination. The main design principles underpinning the future design were:

- provision of residential accommodation that would invite populations to utilise ground floor retail uses;
- adopting a mid-level height that allows the southern tower forms to stand out as urban markers, while producing human scale development along Scott Street.

The design of the co-living building achieves these principles. The proposal incorporates retail uses at the ground level, which are carefully positioned to help activate the primary public domain areas that will accommodate large volumes of pedestrians. Namely, the retail uses will enhance the vitality of the precinct, intentionally located at key locations such as along the Scott Street frontage, Scott Street pocket park, the central laneway to the south of the building and the civic plaza to the west of the building (see **Figure 57**). Clear glazed finishes are also provided for the ground floor retail tenancies to maximise outlook, natural surveillance and concomitantly heighten the activation of the Liverpool Civic Place ground plane. The provision of retail uses around the perimeter of the co-living building's ground level provides residents of the building, visitors to the precinct and workers with attractive uses that significantly contribute to the transformation of Liverpool Civic place into an appealing destination.



Figure 57 Activated retail edges of the co-living building

Source: FJMT

Further, the co-living building presents a design that allows for a human scale to be established along Scott Street, contributing to the character of Liverpool Civic Place as an inviting and attractive destination for workers, residents, and visitors. This building transitions in height from the public library envelope to the west, providing modulation whilst anchoring the Scott Street edge. This seamlessly integrates with the larger built forms further east along Scott Street, while still allowing for the proposed commercial office building and the adjacent civic building to rear of the site to be read as significant urban markers. An image of the proposed co-living building is provided at Figure 58.

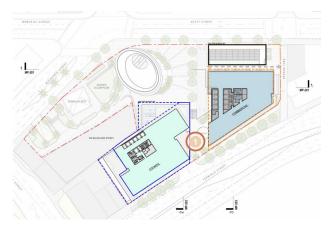


Figure 58 Co-living building as viewed from Scott Street to the south-west

Source: FJMT

4.4.3 Public domain

The public domain forms an integral part of the Liverpool Civic Place mixed-use precinct. The proposal significantly enhances this component of the precinct by reducing the commercial office building envelope and as a result, increasing the area of the upper civic plaza to create a more open and activated area as illustrated at **Figure 59** of the masterplan scheme and **Figure 60** of the proposed development for Phase B and C.



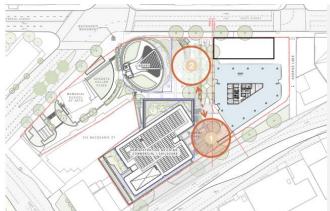


Figure 59 Concept DA approved upper civic plaza Source: FJMT

Figure 60 Proposed extension to upper civic plaza Source: FJMT

The Liverpool Civic Place is an integrated landscape and architectural response that is inspired by the natural environment, which merges sustainable ESD initiatives within a vibrant and historic and cultural growing urban context. The proposed public domain and landscape approach is to create a landscape as an integral part of the built form, connected with the CBD through a community plaza that facilitates social interaction through events, workday activities and social cultural functions.

The main design principles underpinning the design of the public domain are to:

- provide an increase in canopy cover offering shaded microclimates for recreational amenity and habitat;
- provide equitable space for cultural backgrounds;
- provide strong, inviting and engaging public places;
- · promote active and passive pursuits;
- establish a distinctive community identity and create a strong sense of place;
- showcase innovative environmentally sustainable design;
- · promote health and wellbeing;
- support both day time and night time economies;
- · offer high amenity landscape and streetscape linkages;
- provide a safe, inclusive and sustainable place; and
- harness emerging technologies and innovative art forms.

These objectives are achieved through various techniques including:

- providing a number of through-site links that enhance linkages throughout the locality (Figure 61);
- the design and scale of the public domain stitched together by ground floor retail uses will ensure these important buildings will be seamlessly connected to each other at the pedestrian level; and
- high quality landscaped elements and materials will extend and improve existing public domain with seating, planting and venues for small and large groups, and is an exemplar of good public realm.

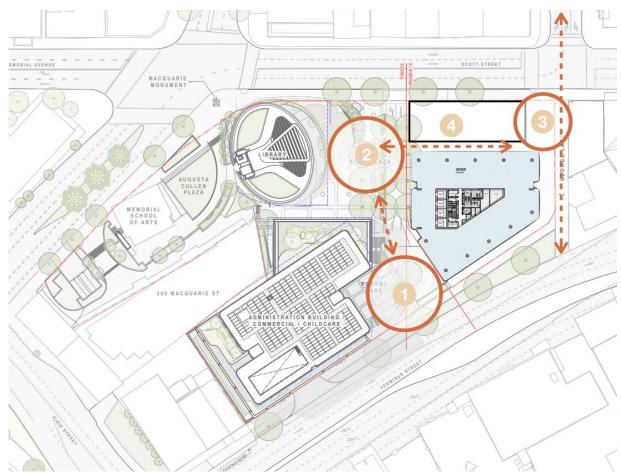


Figure 61 Proposed through-site links

Source: FJMT

A detailed landscape scheme has been prepared by FJMT and is illustrated in the Landscape Drawings in **Appendix D** and the Design Report in **Appendix C**. The landscape scheme has been designed to integrate with the future open space network and enhance the proposed built form.

Public Domain Plan - Concept DA Condition 4(a)

It is noted that Condition 4a) of the Concept DA requires that, prior to the determination of any Detailed DA subject to the Concept Approval, that a detailed Public Domain and Landscape Plan must be prepared by a suitably qualified AILA Registered Landscape Architect or Urban Designer, in accordance with the requirements of this condition. Detailed proposals for the public domain areas within the precinct (such as public domain concept proposed with this DA) must demonstrate consistency with the final public domain plan as endorsed.

4.4.4 Building separation

Clause 7.4 of the Liverpool LEP 2008 requires that the separation distance from neighbouring buildings and between separate towers, or other separate raised parts, of the same building is at least:

- 12m for parts of buildings between 25m and 45m above ground level (finished) on land in Zone B3 Commercial Core of B4 Mixed Use; and
- 28m for parts of buildings 45m or more above ground level (finished) on land in Zone B3 Commercial Core or B4 Mixed Use.

The building separation development standards within clause 7.4 have been embedded in the Liverpool LEP 2008 for over a decade. In the time since, the strategic vision for Liverpool has evolved which is supported by key strategic plans prepared by the NSW State Government, including the Greater Sydney Region Plan 'A Metropolis of Three Cities' and the Western City District Plan. Specifically, the NSW State Government has identified Liverpool as a Metropolitan Centre within the Western Parkland City (the third city in the 'Three Cities' vision) identifying that:

The established centres of Liverpool, Greater Penrith and Campbelltown-Macarthur will be critical locations for commercial and retail businesses and health, education and other services as the city grows.

Given the location of the site within the Liverpool Metropolitan Centre and the strategic objectives for Liverpool as set out in the Greater Sydney Region Plan and the Western City District Plan, the current statutory building separation controls are not considered to be conducive to growing a strong and competitive CBD, and one which takes advantage of limited CBD zoned land to deliver jobs and employment generating floor space.

As illustrated in **Figure 62** below, there are two proposed variations to the building separation development standard set out in clause 7.4, herein referred to as the 'central variation' and the 'laneway variation'. The central variation relates to the proposed commercial office building and its proximity to the civic building contained within Phase A of Liverpool Civic Place, immediately adjacent to the subject site. The laneway variation refers to the building separation between the proposed commercial office and co-living buildings. The variations are:

- Central variation: the proposed separation between the proposed commercial office building and the south-western building included in Phase A of Liverpool Civic Place (DA-836/2020) ranges from 19.7 to 27.7m above 45m in height. Clause 7.4(2)(e) requires a minimum separation at this height to be 28m. The proposed variation to this development standard ranges from 0.3m (1.1%) to 8.3m (29.6%).
- Laneway variation: the proposed separation between the proposed commercial office building and co-living building ranges from 4.5m to 6.8m between 25m and 45m in height above ground level. Clause 7.4(2)(d) requires a minimum separation at this height to be 12m. The proposed variation to this development standard ranges from 7.5m (62.5%) to 5.2m (43.3%).

Accordingly, a request under clause 4.6 of the LEP to vary the building separation development standards is provided in **Appendix I**, and the justification contained within is outlined below.

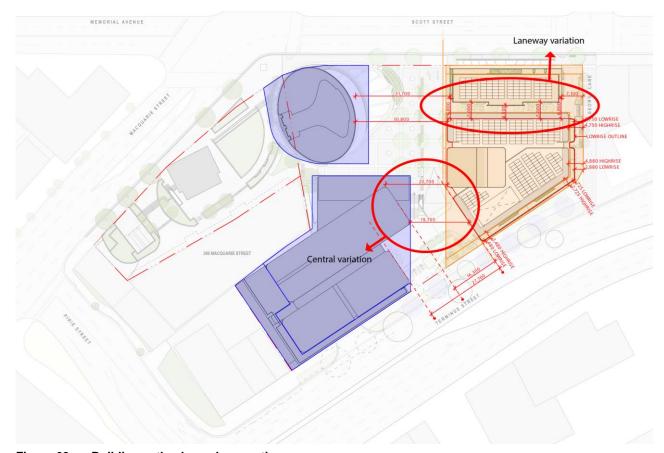


Figure 62 Building setbacks and separations

Source: FJMT

The clause 4.6 variation request details that the objective of the building separation development standards is achieved notwithstanding non-compliance with the standards. Specifically, the single objective of the development standard contained in clause 7.4 of the Liverpool LEP 2008 is:

'to ensure minimum sufficient separation of buildings for reasons of visual appearance, privacy and solar access'.

The objective places an emphasis on visual appearance, privacy and solar access. The clause 4.6 variation request in **Appendix I** provides a detailed assessment of the proposed variations having regard to these three measures. A summary of its assessment is provided under the relevant subheadings.

Visual appearance

- The building separation between the commercial office building and the co-living building allows for the provision of a laneway between the two buildings and facilitates a permeable and activated ground plane. It is noted that close building proximity and ground floor activation are inherent to a successful laneway. In this regard, further separation will diminish the laneway pedestrian experience.
- When viewed from key vistas, particularly from the west, the separation provided between the two buildings is appropriate and allows for a positive spatial relationship between the two buildings.
- The separation distance between the proposed commercial office building and the civic building contained within Phase A of Liverpool Civic Place has been informed by the spatial characteristics of the George Lane service grid. This is a visual gesture to the heritage significant 'Hoddle grid' (refer to **Figure 63** and **Figure 64**).

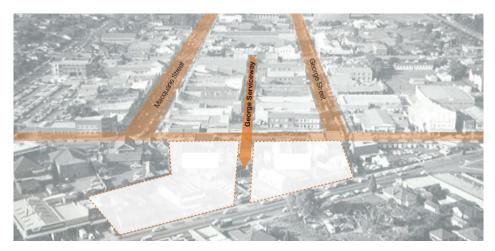


Figure 63 Hoddle grid characteristic

Source: FJMT

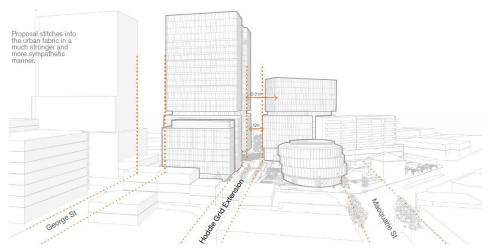


Figure 64 Hoddle grid informed building separation

Source: FJMT

Privacy

- The central variation is dividing commercial uses from public administration, childcare and other commercial uses. As such, privacy impacts internal to the site are considered negligible.
- Bronze perforated screening is incorporated into the southern façade of the co-living building in order to screen the co-living rooms from any privacy impacts.
- Privacy is further discussed at Section 4.5.3.

Solar access

- The shadow cast by the proposed development allows the public domain area to the west of Phase B and C to be provided with quality solar access throughout the day.
- The building separation variation does not unreasonably stifle sky views from key locations within the public domain.
- Solar access is further discussed at Section 4.5.2.

Concept DA Approval (DA-585/2019)

In approving the Concept Proposal (DA-585/2019) for the site, the Sydney Western City Planning Panel approved variations to the same building separation development standards in the same location as the central variation, proposed with this variation request, but of a greater magnitude. The panel in its determination and statement of reasons noted the following in relation to its support for the clause 4.6 Variation request:

Application to vary a development standard

There are two areas of non-compliance with clause 7.4(2)(d) and clause 7.4(2)(e) of the Liverpool LEP 2008 concerning building separation arising from the proposed concept:

- (i) First, a nil separation is provided from the proposed south-western building envelope to the existing mixed-use building at 300 Macquarie Street up to nine storeys high. That non-compliance arises in the context of 300 Macquarie Street presenting a blank rear wall its western boundary, with all apartments and tenancies of that building oriented to the north west. Issues of visual appearance, privacy and solar access which are the objectives of the standards are therefore unlikely to be compromised through that non-compliance.
- (ii) Second, adjacent to the central thoroughfare between Scott Street and Terminus Street, separation between the proposed south-western tower envelope and the eastern tower envelope is 12m above 45m in height, whereas the minimum separation required at this height by clause 7.4(2)(e) strictly applied is 28m. The proposed variation to this development standard ranges from around 7m (25%) to 16m (57%).

Again however, the panel is satisfied that the aims of achieving a superior outcome in terms of visual appearance, privacy and solar access can be achieved without strict compliance provided that the final DA design responds to the pinch point between the two built forms with strong articulation and a creative approach to the final facades. That process has been begun with the rotation of the above podium tower on the western side of the thoroughfare. The issue of wind velocity between the two building elements will require further attention at detailed DA stage and potentially will require modelling of the final proposals to ensure a satisfactory result. Shadow modelling has been supplied to demonstrate that adequate compliance can be achieved in future detailed designs.

The Panel was particularly persuaded by the information included with the concept proposal to the effect that the envelopes for which approval is sought have been "deliberately designed as a 'loose fit' with sufficient excess volume to allow for design excellence to be achieved through the detailed building design and articulation". The Panel will look to see that commitment carried through to the final design, and anticipates that it will be a strong theme in future consultation with Council's Design Excellence Advisory Panel.

It is on that basis that following careful consideration of the design against the written request from the applicant, made under cl 4.6 (3) of the Liverpool Local Environmental Plan 2008 (LEP), that the Panel is satisfied that the proposal has demonstrated that:

- a) compliance with clause 7.4(2)(d) and clause 7.4(2)(e) of the Liverpool LEP 2008 is unreasonable or unnecessary in the circumstances; and
- b) there are sufficient environmental planning grounds to justify contravening the development standards.

The panel is satisfied that:

- a) the applicant's written request adequately addresses the matters required to be addressed under cl 4.6 (3) of the LEP; and
- b) the development is in the public interest because it is consistent with the objectives of clause 7.4(2)(d) and clause 7.4(2)(e) of the LEP and the objectives for development in the B4 Mixed Use zone; and
- c) the concurrence of the Secretary to the variation has been assumed.

On the basis that the consent authority has recently determined that a variation greater than the central variation proposed with this request (in the same location) satisfies the requirement of clause 4.6 of the Liverpool LEP 2008, it is considered that there are sufficient environmental planning grounds to support the proposed central variation. The central variation the subject of this request is of a lesser magnitude given the proposed buildings do not occupy the full extent of the approved building envelopes.

Figure 65 below illustrates the variations² approved by the Panel on 31 August 2020.

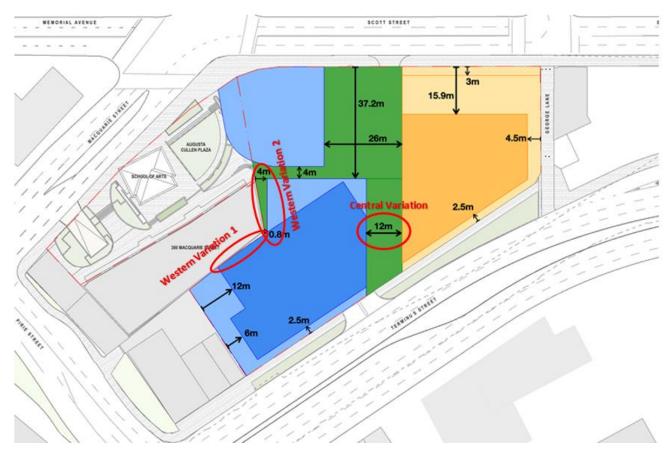


Figure 65 Approved building separation variations under Concept DA approval (DA-585/2019)

Source: FJMT

Ethos Urban | 2200620 56

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² Of these three variations approved as part of the Concept DA consent, this DA and the accompanying clause 4.6 variation request only relates to the central variation and the new laneway variation created by breaking the eastern building envelope as part of this development proposal.

4.5 Impact on adjoining properties

The scale of the proposed development does not result in any unreasonable impacts on surrounding properties in terms of overshadowing, views, and privacy. This is further discussed below with supporting analysis in the Design Report (**Appendix D**).

4.5.1 Opportunity sites' development potential

Future redevelopment scenarios within the street block were investigated as part of the Concept DA. Specifically, there are two other potential 'opportunity sites' within the street block, however site amalgamation is required to achieve the development uplift available pursuant to clause 7.5A of the Liverpool LEP 2008 on these sites (above the mapped 3:1 FSR and 28m height controls). The two potential opportunity sites, their indicative development potential and how the Concept Proposal respected this development potential was investigated as part of the Concept DA.

Pursuant to detailed modelling and rigorous development assessment, the Concept Proposal was determined to afford sufficient redevelopment opportunities on the adjacent sites, should they be amalgamated and redeveloped. In this regard, as the proposed detailed designs do not occupy the full extent of the approved Concept DA envelopes, the detailed development proposal the subject of this development application will also enable the redevelopment of these sites in accordance with their strategic potential should the opportunity eventuate.



Figure 66 Potential opportunity site redevelopment within the street block (Concept DA context)

Source: FJMT

4.5.2 Overshadowing

FJMT has prepared a shadow analysis of the proposal which is provided in **Appendix D**. This analysis illustrates the shadow cast by the proposal on the winter solstice at hourly intervals between 9am and 3pm, therefore demonstrating the worst-case scenario. The shadow analysis also overlays the shadow cast by the approved Concept DA envelopes for comparison.

The shadow diagrams demonstrate that the proposal will be acceptable from an overshadowing perspective as:

• The shadow diagrams approved as part of the approved Concept DA were based on the maximum approved planning envelope. As detailed in **Section 4.3.1**, the detailed building designs the subject of this DA do not occupy the full extent of the approved Concept DA envelopes. As such, the proposed shadow impact is less than what was considered acceptable through the assessment and determination of the Concept DA.

- The site is not affected by the Liverpool City Centre Sun Access provisions set out in clause 7.3 of the Liverpool LEP 2008. Further to this, the proposal will not result in any overshadowing to Bigge Park, Liverpool Pioneers' Memorial Park, Apex Park, St Luke's Church Grounds and Macquarie Street Mall (between Elizabeth Street and Memorial Avenue).
- The shadow cast by the proposed development during the winter solstice will reach south of Pirie Street but not impact upon residential blocks, allowing over 3 hours sunlight between 9am and 3pm.
- The maximum building height is placed at the southern end of the site to minimise overshadowing of proposed public space. Shadows are predominantly cast over Terminus Street and the commercial zone to the south.

Considering the site's CBD context and the absence of additional overshadowing to significant public places, the proposed development is considered appropriate from an overshadowing perspective.

4.5.3 Privacy and views

Privacy

At Concept DA stage, careful consideration was given to create appropriate building separations between future buildings within the Liverpool Civic Place precinct surrounding existing (and potential future) buildings within the block. The focus was to avoid direct view lines into and between surrounding buildings. As detailed in the clause 4.6 variation request at **Appendix I**, the privacy of the co-living rooms is enhanced through the incorporation of a perforated metal screen, which conceals the co-living rooms from any views from the commercial office building and public domain (see **Figure 67**).

The northern aspect of the co-living building contains bronze palisade balustrades that also provide screening of the co-living rooms. Moreover, the western and eastern façades of the co-living building contain precast walls and blades that provide complete privacy to the internal rooms (see **Figure 68**). As such, the privacy impacts are effectively addressed throughout the design and are therefore considered negligible.



Figure 67 Perforated metal screen on the southern façade of the co-living building



Figure 68 Precast walls form the western façade Source: FJMT

Source: FJMT

Views

No significant view corridors from surrounding buildings or public places have been identified that would be impacted by the proposal. The proposed development facilitates a high quality urban environment and does not unreasonably impede on views from the public domain to highly utilised parks or public parks in the vicinity of the site.

Whilst the site currently contains a low scale development, it is not reasonable nor the intent of the applicable planning controls for opportunity sites within this site to remain at this scale in order to allow views across the site. It is considered that the proposed development will generate an overall positive visual impact on the locality, providing a vibrant mixed-use precinct, of high urban design quality, thereby contributing to the urban transformation of Liverpool. Furthermore, the proposal is a significant visual improvement on the current site situation which includes ageing buildings with minimal public domain.

4.6 Transport and accessibility

A Traffic Impact Assessment has been prepared by PTC and is provided in **Appendix O**. The assessment involves an assessment of the operational traffic generation including cumulative impacts. A summary of the assessment and proposed mitigation measures are provided below.

4.6.1 Existing traffic conditions

Key intersections within the surrounding road network comprise:

- · Scott Street / George Street;
- Scott Street / Macquarie Street / Memorial Avenue;
- · Macquarie Street / Pirie Street;
- · Terminus Street / Pirie Street; and
- Terminus Street / Scott Street.

These intersections were selected based on their proximity to the site and as they from the intended route of vehicle travel to and from the site. The operational performance of the key surrounding intersections under the existing traffic flows, geometry and traffic signal phasing circumstances has been assessed using SIDRA modelling and **Table 10** below summarises the results of the modelling.

Table 10 Results summary of intersection performance (existing)

Intersection	Period (peak)	Level of Service	Degree of	Average Delay	95% Que Length
			Saturation	(sec)	(m)
Scott Street /	AM	B - Acceptable	0.241	27.7	48.0
George Street	PM	delays & spare capacity	0.342	24.3	78.3
Macquarie Street/	AM	B - Acceptable	0.350	23.5	75.4
Memorial Avenue/ Scott Street	PM	delays & spare capacity	0.677	19.7	49.6
Macquarie Street /	AM	B - Acceptable	0.375	19.7	78.7
Pirie Street	PM	delays & spare capacity	0.547	25.0	114.2
Terminus Street / Newbridge Road/ Speed Street	AM	B - Acceptable delays & spare capacity	0.827	18.5	298.8
	PM	D - Operating near capacity	0.934	45.4	460.0
Terminus Street / Pirie Street	AM	C - Satisfactory, but accident study required	0.870	29.9	171.4
	PM	B - Acceptable delays & spare capacity	0.451	25.2	91.7
Terminus Street/	AM	A - Good operation	0.106	2.7	2.8
Scott Street	PM	A - Good operation	0.095	2.2	1.4

The results of the SIDRA assessment indicate that these intersections generally operate to a satisfactory level of service at present, with lower levels of performance experienced at the Terminus Street / Newbridge Road / Speed Street intersection during the afternoon peaks.

4.6.2 Traffic generation and intersection performance

The proposed development's traffic generation has been assessed having regard to the RMS Guide to Traffic Generating Developments (2002). It is noted that the PtC has utilised modelling undertaken as part of the Concept DA, given that the Concept DA modelling considered the worst-case traffic generation for the master plan site.

The RMS Guide to Traffic Generating Development v2.2 (2002) and the subsequent technical direction TDT2013/04a (2013) sets out the vehicle trip generation rates for particular land uses. When the RMS undertook its Traffic Generation and Parking Generation Survey study in 2010 for updating the Guide to Traffic Generating Development v2.2 (2002), the suggested vehicle trip generation rates were derived from ten sites within both Sydney Urban area and regional areas, which largely have unconstrained parking provisions. Therefore, for the purpose of determining a more suitable trip generation rate, the data collected from the Warren Serviceway Car Park has been integrated into this analysis.

Based on PtC's calculations, the future generation of the proposed development in addition to the future Phase B and C development during the morning and evening peak periods is summarised in **Table 11** below.

Table 11 Traffic generation

Land use	Parking spaces	Trip rate AM	Trip rate PM	Trip generation AM	Trip generation PM	Access
Public administration*	142	0.56	0.48	79	68	Scott Street
Fleet parking*	46	0.56	0.48	26	22	Terminus Street
Public parking*	156	0.61	0.33	95	51	Terminus Street
Library*	Included in pu	Included in public administration and public parking				
Phase A sub total*	344	-	-	200	141	-
Phase B/C commercial and co-living	150	0.56	0.48	84	72	Scott Street
Total	494	-	-	284	213	-

^{*}Not part of this DA

The Phase B and C project involves a similar level of traffic compared with the concept approval, being an increase of 12 and 11 vehicles during the morning and evening peaks respectively. PtC conclude that this a negligible increase and is not considered to have any material impact on the road network given the daily variations that occur.

In terms of intersection performance, the SIDRA results indicate that the Scott Street and Terminus Street accesses will operate with acceptable delay and queuing in both AM and PM peaks. The George Street and Scott Street intersection will operate in similar level of delay and queuing as the existing conditions. It is noted that the average delay and queuing for the eastern leg of the Macquarie Street / Memorial Avenue / Scott Street intersection will increase during the post-development scenario. The average delay and queuing distance will be approximately 27 seconds and 65m respectively during the PM peak which may impact the proposed access driveway along Scott Street with remained acceptable Level of Service.

4.6.3 Access

All vehicular access to the proposed development will be gained via the shared road accessed from Scott Street. The proposed four level shared basement car park comprises one vehicular entry and exit point for normal vehicles which is accessible via ramp access. Adjacent to the ramp access to the basement car park is a separate entry and exit point provided for service vehicles to enter the loading dock at the lower ground level. Right turn movements to exit via the Scott Street access way will be prohibited due to the heavy vehicle traffic turning right from George Street during peak periods.

4.6.4 Parking

The Liverpool LEP 2008 provides minimum parking provision controls for the Liverpool City Centre in Clause 7.3. Based on the floor space and uses proposed in the development, a minimum of 145 spaces are required. Moreover, the Liverpool DCP 2008 requires that no less than 2% of the car parking demand is to be allocated to disabled car parking spaces. The proposed development is compliant with these rates as it includes the provision of 145 car parking spaces for the private components of the development, including four accessible car parking spaces.

Part 4 of the Liverpool DCP 2008 establishes the minimum rate for motorcycle and bicycle parking. These require that one motorcycle space be provided per 20 cars and one bicycle space is provided per 200m². Accordingly, the proposal includes 12 motorcycle parking spaces and 147 bicycle parking spaces, which complies with the relevant DCP 2008 rates.

4.6.5 Loading and servicing

A loading dock with a capacity of two small rigid vehicles and two medium rigid vehicles is located on the lower ground level of the commercial office building, accessed via the shared accessway on Scott Street. Sufficient room is provided to allow service vehicles to manoeuvre their way into and out of the loading dock in a forward direction, as illustrated in the swept path diagrams included in the traffic report at **Attachment P.**

4.7 Heritage

A Heritage Impact Statement (HIS) has been prepared by NBRS and is provided at **Appendix J**. The HIS includes a description of the history of the site, the established significance of the locality and important heritage items and an assessment of the potential heritage impact of the proposal on surrounding items of heritage significance. The site itself is not considered a heritage item, however multiple heritage items surround the site, including:

- I189 Plan of Town of Liverpool (Early Town Centre Street Layout Hoddle 1827);
- I91 Commercial Building (formerly Rural Bank and State Bank);
- 192 Boer War Memorial, including memorial to Private A.E Smith;
- 193 Macquarie Monument;
- 194 Row of 3 palm trees;
- I99 Memorial School of Arts
- I109 Liverpool Fire Station.

The HIS concludes that the proposed commercial office and co-living buildings comprise high quality designs and constitute an appropriate response to the approved development on the site, consequently not detracting from the heritage significant elements of nearby heritage items. Moreover, it notes that the proposed landscape elements will improve the amenity of the locality and the setting of heritage items in the vicinity of the site. Overall, the report concludes that the proposed development will not adversely affect the identified heritage significant elements within the vicinity of the site.

4.8 Wind

A Wind Impact Assessment has been prepared by Windtech and is provided in **Appendix P**. This assessment has studied the existing wind conditions in the locality and the potential effects of the proposed buildings through a wind tunnel study, which assessed wind speeds at selected critical outdoor trafficable areas within and around the subject development. The wind speeds measured during testing were combined with a statistical model of the regional wind climate to provide the equivalent full-scale wind speeds at the site. The measured wind speeds were compared against appropriate criteria for pedestrian comfort and safety.

The results of the wind analysis have confirmed that it is not expected that the wind conditions at the site will pose any safety risks to pedestrians in the area, and that wind conditions for the majority of trafficable outdoor locations within and around the development will be suitable for their intended uses, subject to the recommendations of the report, specifically:

· Lower ground floor

 The inclusion of the proposed landscaping as indicated on the lower ground floor plans, with densely foliating, evergreen species.

Upper ground floor

- The inclusion of a 3m wide awning at the north-eastern aspect of the office building. The awning should start approximately midway along the northern aspect and wrap around the corner continuing all the way along George Lane.
- The inclusion of a 3m high impermeable screen located on the south eastern corner of the office building.
 The screen should abut the awning along George Lane and wrap around along George Lane.
- The inclusion of a densely foliating evergreen tree capable of growing 5-8m high and wide, located inside the south eastern wrap-around screen.
- Level 7 terrace commercial office building
 - The inclusion of the proposed landscaping as indicated on the level 7 terrace plan drawings, with the use of densely foliating, evergreen species.
 - Recommended additional landscaping along the eastern aspect of the level 7 terrace, using densely foliating evergreen species with interlocking canopies.
 - The inclusion of a 3m high impermeable screen along the eastern perimeter of the level 7 terrace. The screen should wrap around the south-east corner and continue along until it reaches the first adjacent landscaping zone.

4.9 Noise and vibration

A Noise Impact Assessment has been prepared for the proposed development by Stantec (**Appendix Q**). The report has provided criteria, in-principle treatment and design requirements which aim to achieve statutory criteria. In terms of noise and vibration, the report provided criteria for the following acoustic considerations to which the assessment of noise and vibration has been considered. These criteria include:

- internal noise levels in accordance with AS/NZS 2107:2016;
- noise emissions from the development to noise-sensitive receivers in accordance with the NSW NPI;
- traffic noise generation for additional vehicle movements on public roads;
- · construction noise; and
- construction vibration for human comfort and structural damage.

The Noise Impact Assessment concludes that the proposed development is compliant with the relevant noise and vibration controls for the proposed types of uses, as it is expected to comply with all applicable regulations with regards to noise and vibration and other criteria, particularly those listed above.

4.10 Aeronautical impact

An Aeronautical Impact Assessment prepared by Avlaw Consulting was submitted with the original Concept DA. This assessment examined the proposed development against necessary safety clearances mandated in legislation that must be provided between an aircraft and an obstacle such as a building or crane. The following key findings are derived from the assessment:

- the maximum height of the proposed development of RL 116.75 is below the Obstacle Limitation Surface (OLS), which is 124 – 129m AHD;
- the PAN OPS surface for Bankstown Airport is distanced 19.15m from the maximum building height of the proposed development; and
- with respect to helicopter operations, Avlaw has determined that the airspace protected under National Airport Safeguarding Framework – Guideline H for strategically important helicopter landing sites does not limit the height of the proposed development as approaches and departures are clear of the site.

The report concluded that the temporary construction cranes and the overall building height inclusive of plant room and ancillary features all remain below the PANS-OPS of 135.9m AHD and aviation approval should be granted. Accordingly, the operation of the crane, which is considered a 'controlled activity' has been granted approval through a Crane Operation Approval which accompanies the DA at **Appendix L**.

4.11 Ecologically sustainable design

The incorporation of Ecologically Sustainable Development (ESD) principles into the proposal has been ongoing during the preliminary design of the building and will continue through the detailed design. An Ecologically Sustainable Development Report has been prepared by Stantec and is provided at **Appendix N**. The report addresses the ESD principles and outlines the sustainable development initiatives that will be incorporated into the future development, including:

- Thermal performance designed to meet stringent NCC 2019 Section J requirements;
- Commercial office building is designed to achieve:
 - 5 Star NABERS Energy Base Building
 - 3.5 Star NABERS Water Whole Building ratings
 - 5 Star Green Star Design & As Built v1.3 certification
- BASIX energy and water compliance for the co-living.

Specifically, these targets will be sought through the following key initiatives:

- use of passive design elements, including shading devices and consideration of glazing extents to naturally provide comfort and minimise energy consumption;
- creation of healthy environments including reduction in the use of harmful volatile organic compounds in glues, sealants and paints;
- · bespoke design solutions that provide for long term climate adaptation and resilience;
- minimising consumption of natural resources, including water and raw materials;
- minimising environmental impacts during construction, including embodied energy and the ecological cost of materials;
- · minimising environmental impacts during operation, including energy consumption and waste creation; and
- provision of access to sustainable, integrated and convenient travel options.

4.12 Utilities

A Utility Services Report has been prepared by WSP and is provided at **Appendix R**. The site is well serviced by existing infrastructure, however WSP has confirmed the following infrastructure and service upgrades or connections are required to accommodate the density of the proposed development:

- Electrical Services: There are two existing HV feeders interconnected to the existing power infrastructure
 network. WSP has noted that it would be the intention to bring the HV feeder into the new 3MVA chamber
 substation from Terminus Street. The final arrangement is subject to the Endeavour Energy Design Information
 Pack (DIP) and network study/assessment.
- Communications Services: WSP has identified the availability of existing Communications Asset along
 Terminus Street. The existing services are considered adequate to service the proposed development and can
 be connected to by tenants as necessary.
- Gas: The gas infrastructure available in the Liverpool area and surrounding the site are considered low pressure (7kpa). Jemena do not ensure 7kpa will always be available and could range between 7kpa and 3kpa. WSP identify that the gas infrastructure may need to be amplified prior to delivery of the proposal.
- Sydney Water: In terms of potable water, WSP has identified that there is an existing SWC trunk watermain available to service the development. WSP has identified that there is a DN225 VC gravity sewer line located in Scott Street that appears to be a suitable connection point for the project. However, as per Sydney Water

conditions of the Concept DA consent, flows from the development exceed the capacity of the existing wastewater main, therefore the current wastewater network is unable to service the proposed development. The second main is required to service the development and enable connections.

4.13 Stormwater management and flooding

A Stormwater and Civil Engineering Report has been prepared by WSP and is included at **Appendix H**, along with associated Civil Engineering Drawings at **Appendix S**. The report addresses the proposed stormwater drainage system, connection to existing stormwater infrastructure, stormwater quality treatment and flooding.

4.13.1 Stormwater

The stormwater and drainage measures for the site have been prepared in accordance with the Liverpool DCP 2008, Council's Development Design Specification, Section D5 Stormwater Drainage Design, dated January 2003 and Council's Development Design Specification, Section D2 Pavement Design, dated October 2003.

The proposed stormwater system involves one combination treatment tank installed within the commercial office building to service both buildings. The roof catchment of the commercial office building will be discharged into the proposed tank. The proposed development has been designed to ensure that the post development stormwater runoff from the total development area does not exceed the pre-development run off.

4.13.2 Water quality

The development has undergone MUSIC modelling for the stormwater treatment devices and estimates their respective performance against the performance targets of the project. To maintain water quality during the construction of the project, erosion and sediment control measures will be installed. An Erosion and Sediment Control Plan is included at **Appendix S**.

4.13.3 Flooding

The report concludes that since the site is not in the flooding zone, there are no flood planning requirements for the proposed development.

4.14 Geotechnical

A Geotechnical Investigation has been carried out by Golder Associates and is included at **Appendix K**. The report presents the findings of the likely geotechnical, soil and groundwater characteristics of the site. This would determine if there are any potential ground related risks to support the design of the four level common basement and foundations for the development.

Golder Associates has identified that the base of the basement, which reaches a depth of RL 9.1, will be approximately 6m to 10.5m below the current static groundwater level. Consequently, groundwater will flow into the excavation from the bulk rock and more importantly from the fractured rock. As such, Golder has proposed a number of detailed design parameters based on an understanding of a typical retention system and foundation. These parameters have been considered in the detailed design of the development.

4.15 Structural adequacy

A Structural Statement has been prepared by TTW, assessing the structural adequacy of the proposed buildings and impacts on nearby structures (refer to **Appendix T**). Accordingly, TTW conclude that the proposed works are structurally feasible.

4.16 Social impact

Ethos Urban has prepared a Social Impact Assessment (SIA) (**Appendix U**) in accordance with Council's Social Impact Assessment Policy to assess social impacts associated with the proposed development, given that the proposal contains residential uses. Overall, the SIA notes that the overall long-term benefit of the proposed development is considered to be positive, with negative impacts of the proposal ranging from low to moderate, with no identifiable significant negative impacts that cannot be mitigated.

Key challenges associated with the proposal include:

- Temporary amenity impacts emanating from the construction phase of the development, including noise and vibrations, traffic and parking, views, and air quality – all of which will be managed through a Construction Management Plan.
- Permanent loss of existing businesses on site, which will need to find alternative locations.

The SIA confirms that the proposed development will culminate in a range of positive social impacts including the following:

- Improvements to the way of life and daily routines for residents of the co-living facility and workers in the
 commercial offices on the site, associated with the co-location of housing and employment options with public
 transport, planned social infrastructure and major employment hubs associated with Liverpool Innovation
 Precinct (e.g. Liverpool Hospital).
- Supporting the planned transformation of Liverpool CBD into a major metropolitan centre for Greater Sydney by providing increased housing choice and employment opportunities in a highly accessible location, thereby contributing to the attainment of the GSC's 30-minute city vision.
- Supporting the anticipated expansion of Liverpool Hospital by providing high quality, accessible and
 comparatively affordable co-living facilities that will be accessible to hospital staff, visiting health professionals
 and patients. The co-living facility will meet the demand of hospital staff, patients and their families for increased
 accommodation options to support the effective functioning of the facility.
- Potential improvements to social cohesion stemming from the delivery of increased spaces for people to meet
 and gather within the Liverpool CBD. The site is located in close proximity to Liverpool Station, surrounding
 commercial offices, retail businesses, Liverpool Hospital and the University of Wollongong campus. As such,
 workers, students, and visitors from these facilities may be attracted to the proposed development as a space
 for gathering, socialising and connecting with each other.
- The provision of co-living spaces will facilitate improvements to the way of life and community cohesion of
 residents of co-living facilities associated with the mix of private and shared spaces which encourage social
 interaction. Emerging evidence suggests that co-living accommodation is effective in decreasing social isolation
 fostering mutual support networks and improving an overall sense of community.
- Increased activation of the site through Phase B and C of Liverpool Civic Place which will make an outstanding
 contribution to the urban realm of the Liverpool CBD and thereby resulting in positive impacts to the sense of
 place.

In the balance of the resultant impacts, the proposed development will result in a strong positive benefit to the site, its immediate surrounds and the overall Liverpool CBD, with the negative impacts associated with the development appropriately mitigated by operating in accordance with the Plan of Management included at **Appendix E** and a Construction Management Plan which will be developed at Construction Certificate stage in consultation with the contractor.

4.17 Waste management

An Operational Waste Management Plan (OWMP) has been prepared by Elephants Foot Recycling Solutions (EFRS) and is provided in **Appendix V**. This OWMP has been prepared to comply with the Liverpool Development Control Plan 2008, the relevant Australian Standards and other policies and guidelines.

The OMWP separately addresses waste for the residential co-living and the commercial and retail components of the development. The estimated volume of waste fill for the co-living component of the development will comprise 5880L/week of generated waste and 2940L/week of recycling. In order to appropriately group and accommodate these waste volumes, EFRS recommend the provision of 5x 660L general waste bins, 3x 660L commingled recycling bins. Bin collection is recommended two times a week for general waste and for commingled recyclables and will be conducted by a private contractor.

Further, it is estimated that the commercial and retail uses will generate 24,980L/week of waste, 20,859L/week of paper and cardboard recycling, and 10,430L/week of commingled recyclables. To accommodate the estimated

waste and recyclables generated, EFRS recommends the provision of 8x 1100L general waste bins, 4x paper and cardboard bales and 6x 660L commingled recycling bins. These bins are recommended to be collected three times a week for general waste and commingled recyclables and one time a week for paper and cardboard.

Otherwise, the report provides that general waste across the site will be managed by strata management and building contractors, as well as individual retail and commercial tenants who are responsible for managing back of house storage and correctly separating waste and recycling.

4.18 Building Code of Australia and National Construction Code

The following reports confirm that the proposed development is capable of achieving compliance with the requirements of the Building Code of Australia (BCA) and other relevant codes and standards:

- BCA Report prepared by McKenzie Group (see Appendix W); and
- Access Report prepared by Morris Goding Accessibility Consulting (see Appendix X).

4.19 Site suitability

Having regard to the characteristics of the site and its location, the proposed development is considered suitable for the site as it:

- will contribute to the urban renewal of a key site within Liverpool's City Centre;
- will contribute to the ongoing development of a diverse mixed use precinct;
- is capable of being developed in a manner that will minimise impacts to the natural, historical, and environmental qualities of the setting; and
- will not result in any adverse environmental impacts and any impact can be appropriately managed and mitigated.

The site is considered suitable for the proposed development in that:

- the site is currently underutilised and is in need of urban renewal and improved connections and integration with the surrounding locality; and
- · it is well serviced by frequent existing public transport.

4.20 Public Interest

In addition to delivering a world class mixed use development, the project is also a major urban renewal undertaking that will deliver significant public benefit as it will:

- contribute to the ongoing redevelopment of the Liverpool City Centre to strengthen it so that it becomes a key component of the Western Metropolitan Cluster;
- provide a development outcome that does not detract from and respects the surrounding heritage elements including the historic early town centre street layout and the adjacent Memorial School of Arts building;
- demonstrate excellence in design and environmental sustainability;
- facilitate high levels of public transport usage for workers and visitors of the precinct;
- · maximise the direct and indirect economic benefits to NSW from the project;
- deliver a rejuvenated site within the Liverpool CBD that preserves and embraces the adjoining rich heritage;
- create a more vibrant and activated precinct that provides a range of day to day services and offerings for employees, visitors, and the local community; and
- create new jobs during the construction and operation phases of the development.

5.0 Conclusion

The proposed development is consistent with the Concept Proposal approval under DA-585/2019 and otherwise aligns with the relevant environmental planning instruments, and does not give rise to any adverse environmental impacts in respect to overshadowing, privacy, view, social, structural, traffic, heritage, contamination, stormwater, waste, noise, ESD and accessibility. Where variations from the building separation development standards provided by the Liverpool LEP 2008 are requested, these variations are well supported by clause 4.6 requests with appropriate and logical planning arguments that will contribute to the betterment of this mixed-use development.

The proposed development that is the subject of this development application has planning merit in the following respects:

- it is permissible with consent, aligns with the approved Concept Proposal for the site and meets the objectives of the statutory planning controls for the site;
- it will not result in unreasonable or unmanageable environmental impacts;
- it will revitalise a significantly underutilised site within the Liverpool LGA;
- it contains large employment generating uses in proximity to existing transport infrastructure, consistent with transit-oriented development principles;
- it generates market appropriate floor plates to encourage tenants to locate within the Liverpool City Centre;
- design excellence has been achieved through a high quality architectural design accompanied by a wellconsidered selection of materials and a highly resolved built form which responds to the opportunities and constraints of the site;
- it will contribute to the on-going redevelopment of the Liverpool City Centre to protect and develop it as a key component of the Western Metropolitan Cluster; and
- the proposed development is suitable for the site and is in the public interest.

In light of the merits of the proposed development and in the absence of any significant environmental impacts, it is without hesitation that we respectfully recommend this application for development consent.