



APP Corporation



Statement of Environmental Effects

RESIDENTIAL DEVELOPMENT 24-26 GEORGE STREET, LIVERPOOL

Date: February 2017

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1. Introduction

This Statement of Environmental Effects (SEE) is submitted to Liverpool Council (the Council) in support of a Development Application (DA) for a new residential flat development at 24-26 George Street, Liverpool (hereafter referred to as the site).

The DA seeks approval for:

- excavation of the site including demolition of existing building structures;
- removal of ten (10) trees;
- construction of two (2) buildings comprising 96 residential units (Buildings A and B) with two combined basement car parking levels:
 - Building A has 11 levels and 52 residential units in total;
 - Building B has 8 levels and 44 residential units in total;
- the apartment mix will consist of;
 - 17 x 1 bedroom apartments (8 adaptable units);
 - 75 x 2 bedroom apartments (1 adaptable unit); and
 - 4 x 3 bedroom apartments;
- A Gross Floor area (GFA) of 7,966.5m²;
- Floor Space Ratio (FSR) of 3.21:1;
- Vehicular access from George Street;
- Car parking for 108 vehicles (including 11 disabled spaces); and
- 256 m² of communal open space.

This SEE has been prepared by APP Corporation Pty Limited (AAP) on behalf of Synergy Development Group. It is based on the plans prepared by Algorry Zappia and Associates Building Designers and Consulting Civil and Structural Engineers and other supporting technical information appended to the report (see Table of Contents).

This report describes the site, its environs, the proposed development and provides an assessment of the proposal in terms of the relevant matters for consideration under section 79C(1) of the *Environmental Planning and Assessment Act 1979* (the Act).

2. Site Analysis

2.1. Site Location and Context

The site is located at 24-26 George Street, within the Liverpool Local Government Area (LGA), to the north of the Liverpool City Centre and approximately 200m to the north-east of the Liverpool Westfield (refer to Figure 1). The site has good access to transport links, being approximately 850m north of Liverpool Railway Station, 850m to the south west of Warwick Farm railway station and 260m from the Hume Highway, located to the north of the site. Regular bus transport also services the site and the surrounding area.

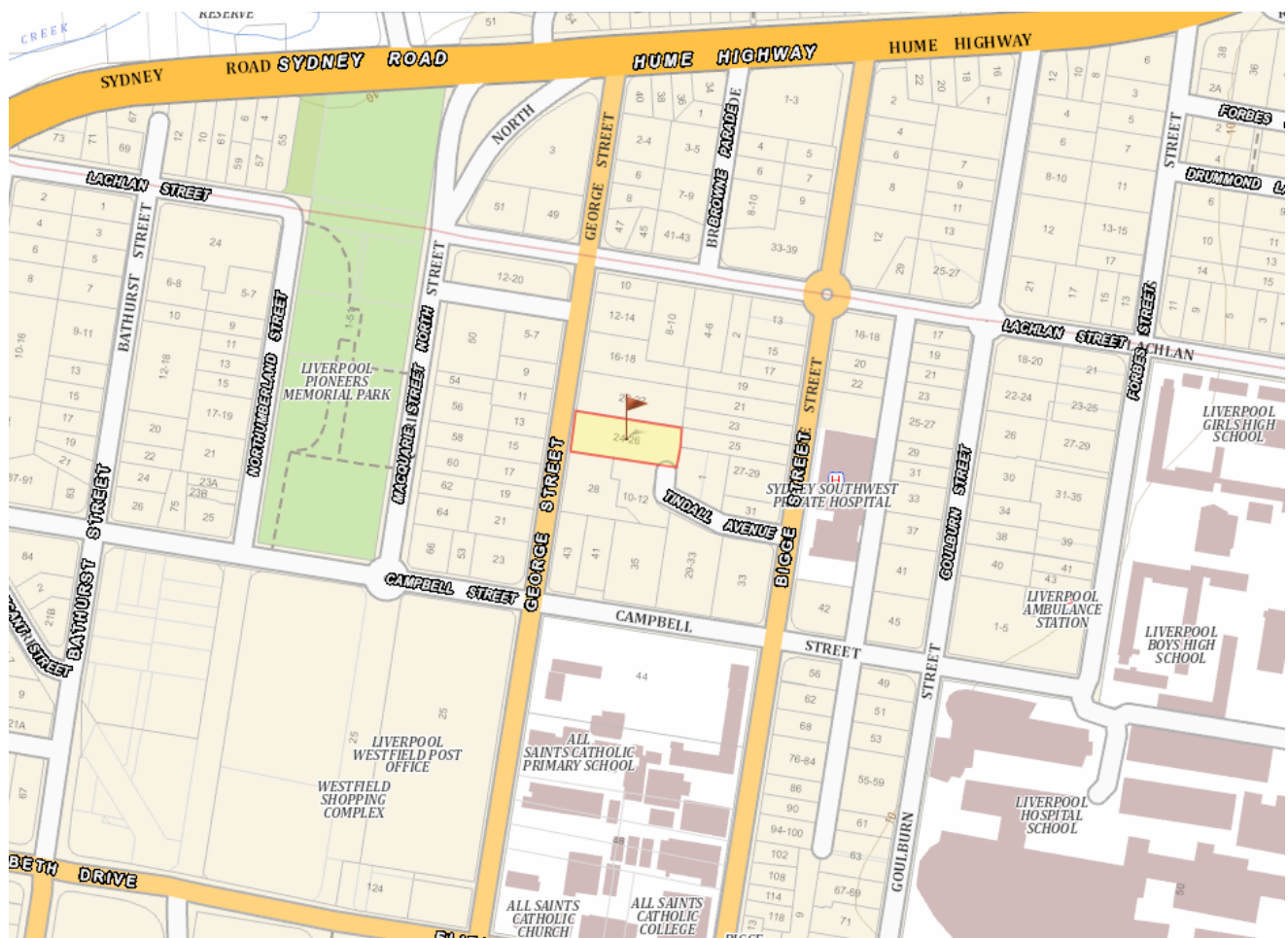


Figure 1 Location Plan

The site has an overall area of 2,483m² with a western frontage of 31m to George Street. The site is surrounded by existing residential flat buildings. George Street has experienced significant uplift in recent years and now predominantly consists of residential flat buildings of varying age and scale. Lachlan Street to the north, Campbell Street to the South and Bigge Street to the east of the site, also comprise residential land uses.

All streets in the surrounding area bounded by the Hume Highway, Copeland Street, Memorial Avenue, Scott Street, Georges River and Main Southern Railway Line (excluding Tindall Avenue and service ways) are listed as local heritage items under Liverpool Local Environmental Plan (LLEP) 2008. Other heritage items in the vicinity of

the site consist of a dwelling at 13 Bigge Street to the east and Liverpool Memorial Pioneer's Park (formerly St Luke's Cemetery and Liverpool Cemetery) to the west.

2.2. Liverpool City Centre

Liverpool is located within greater Western Sydney, approximately 32km south-west of the Sydney Central Business District (CBD) and is currently the major city centre within South Western Sydney. Liverpool city centre is becoming an increasingly popular residential area, which up until recently was surrounded by predominantly three storey units. Most new residential development is currently occurring on the periphery of the city centre, particularly in the northern precinct.

Liverpool City Centre Development Control Plan (DCP) 2008 (Part 4) identifies the site as within the residential area of the city centre. Under Council's development controls, the site and surrounding area is envisaged to comprise high density residential development of up to 35m. Over recent years, in line with the vision of Liverpool City Centre DCP, older residential flat buildings have gradually been replaced with larger scale residential developments.

2.3. Site Description

The site has an area of approximately 2,483m² and is rectangular in shape. It is legally described as Lot 48 in DP 1083428 (refer to Figure 2 below). A Site Survey, prepared by Lawrence Group is included at **Appendix A**.



Figure 2 *Aerial Photograph*

2.4. Topography

The site slopes gradually from the front to the rear by approximately 1.5m. Refer to the Survey plan at **Appendix A**.

2.5. Existing Development

The site is currently occupied by three buildings consisting of a single and two storey residence and an outhouse located towards the rear of the site.



Figure 3 *View of the existing developments on the site from George Street*

2.6. Surrounding Development

North

Neighbouring the site to the north at No. 20-22 North Street is a 6 storey residential apartment building. Adjacent to No. 20-22 are two 9 storey residential flat developments. Development further to the north of the site is predominantly characterised by residential apartment buildings up to ten storeys in height. Some examples of development to the north are identified in Figures 4 and 5 below.



Figure 4 *Six storey residential flat development at No. 20-22 George Street*



Figure 5 *Nine storey residential flat developments located at No. 12-14 and No. 16-18 George Street*

South

To the south of the site at No. 28-32 is a 6 storey residential flat building. Development further south continues to comprise residential flat buildings of varying size and height. At the intersection of George Street and Campbell Street is the Westfield Liverpool shopping centre, containing a number of retail establishments and associated car parking. Opposite Liverpool Westfield on George Street is a YMCA Before and After School Care centre and All Saints Catholic Primary School and College and Girls College as well as the All Saints Catholic Church.



Figure 6 *Six storey Residential flat building located at No. 28-32 George Street*



Figure 7 *Westfield Liverpool shopping centre*



Figure 8 *All Saints Catholic Primary School*

East

Development to the east comprises several one storey residential properties and one 6 storey residential development with frontages to Bigge Street. On the opposite side of Bigge Street, to the east of the site, is the Sydney Southwest Private Hospital, South Western Day Surgery Centre and the Bigge Street Medical Centre.



Figure 9 *Single storey residential flat developments located along Bigge Street*



Figure 10 *Residential flat development located at No. 27-29 Bigge Street*

West

George Street is to the west of the site and consists of several residential flat buildings, generally 3-4 storeys in height. Further west is Macquarie Street, a regional road, which consists of commercial premises (i.e. clothing and furniture stores, Anytime Fitness Gym, electrical stores, car garages and the Australian Red Cross Blood Service). Liverpool Pioneer Memorial Park is located on the western side of Macquarie Street.

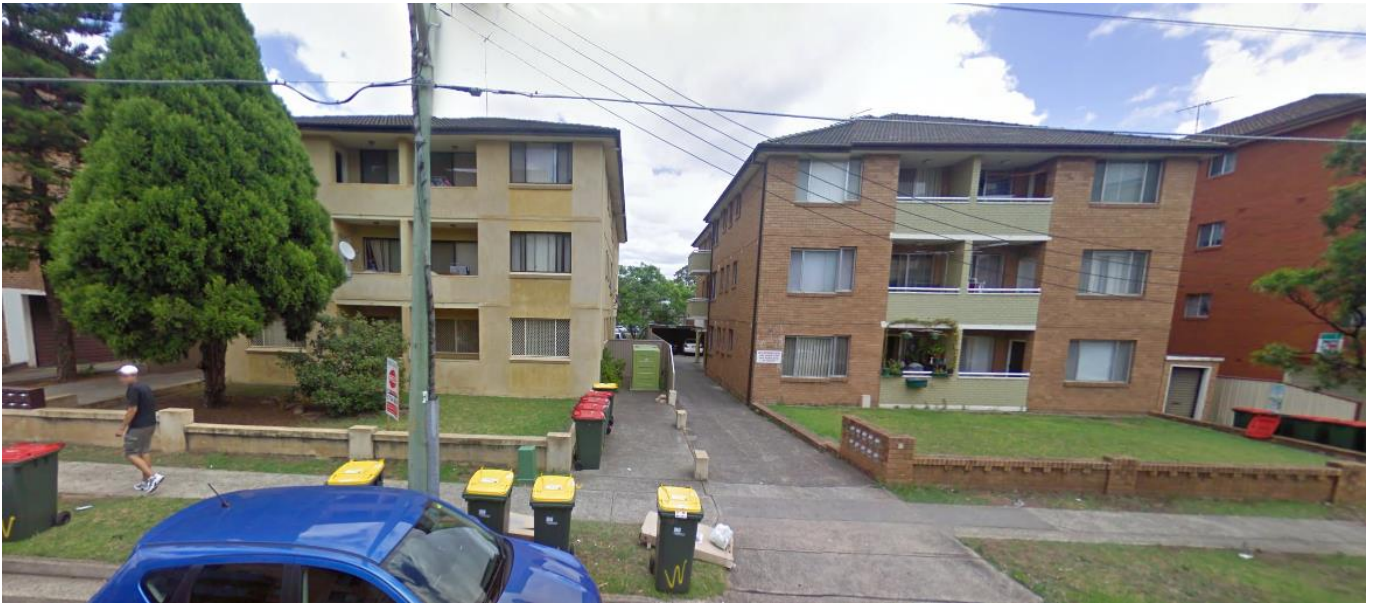


Figure 11 *Three storey residential flat developments located along the western side of George Street*



Figure 12 *Three storey residential flat developments located along the western side of George Street*



Figure 13 *Car garage located on Macquarie Street*



Figure 14 *Existing single storey commercial development located along Macquarie Street*

3. Proposed Development

This section of the report provides a detailed description of the proposed development, which comprises the following:

- excavation of the site including demolition of existing building structures;
- removal of ten (10) trees;
- construction of two (2) buildings comprising 96 residential units (Buildings A and B) with two combined basement car parking levels:
 - Building A has 11 levels and 52 residential units in total;
 - Building B has 8 levels and 44 residential units in total;
- the apartment mix will consist of;
 - 17 x 1 bedroom apartments (8 adaptable units);
 - 75 x 2 bedroom apartments (1 adaptable unit); and
 - 4 x 3 bedroom apartments;
- A Gross Floor area (GFA) of 7,966.5m²;
- Floor Space Ratio (FSR) of 3.21:1;
- Vehicular access from George Street;
- Car parking for 108 vehicles (including 11 disabled spaces); and
- 256 m² of communal open space.

Architectural Drawings, Photomontages and a SEPP 65 Design Statement prepared by Algorry Zappia and Associates are included at **Appendix B** respectively. Photomontages of the proposed development are reproduced in **Figure 15** below.



Figure 15 Photomontages of the proposed development at No. 24-26 George Street

3.1. Design Principles

The proposal includes an 8 and 11 storey residential development containing 96 units. Therefore the provisions of State Environmental Planning Policy No. 65 – Quality Design of Residential Flat Development (SEPP 65) apply. A SEPP 65 Design Verification Statement has been prepared by Algorry Zappia and Associates and included at **Appendix B**. An extract of this statement is provided below.

Principle 1: Context and Neighbourhood Character

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions. Responding to context involves identifying the desirable elements of an area's existing or

future character. Well-designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood. Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

Proposal

The site is within the northern section of Liverpool CBD. Redevelopment over the past several years and in the immediate vicinity of the site are existing six (6), five (5) and four (4) storey residential flat buildings, as well as nine storey residential flat buildings towards Lachlan Street.

The future character of the northern gateway to the town centre is described in detail within Part 4 of DCP 2008. The following important characteristics of the desired future character are noted:

- The site is within the R4 High Density Residential zone and is within an area at the northern periphery of the city centre for which new residential development will be focused.
- Landscaped setback requirement to George Street is 4.5m and the maximum height permissible is 35m. These controls result in a streetscape emphasis on built form and urban living rather than a suburban environment within generously proportioned landscaped settings.
- The DCP building envelope controls, together with consolidation patterns have tended to promote 'tower; and 'slab block' apartment typologies.

The most significant elements contributing to the character of this locality are a strongly defined street edge, which reinforces the Hoddle Grid street pattern with a 5 to 10 storey street edge along the eastern side of George Street and a 2 to 3 storey buildings on the western side of the same street.

The locality has developed subsequent to the introduction of SEPP 65 and it is clear that the Design Quality Principles have strongly informed the siting and design surrounding buildings. The proposed development is consistent with this context and character. The development provides a two tower buildings, one at the front with 12 storey and one at the back with 9 storey and will deliver a street wall height which is consistent with the maximum allowance in this area of the City Centre.

Principle 2: Built Form and Scale

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings. Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements. Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

Proposal

The bulk of the buildings generally comply with controls set out in the Liverpool DCP.

Due to the Design Excellence Panel suggesting to minimise the impact of adjoining neighbours, particularly in the centre of the site, they have suggested increasing the height of the front tower in order to achieve better amenity to adjoining properties as shown in figure 2.

Architectural features and balcony articulation will create patterns of light and shadow and reduce the perceived bulk of the building mass.

The scale of the proposed development, in terms of height, setback and site coverage is consistent with the Liverpool Design Excellence Panel suggestions and is also consistent with the scale of adjoining development. The following Figure 16 shows the siting, footprint and building separations incorporated into the subject design are entirely responsive to, and consistent with the pattern of adjoining and surrounding development.

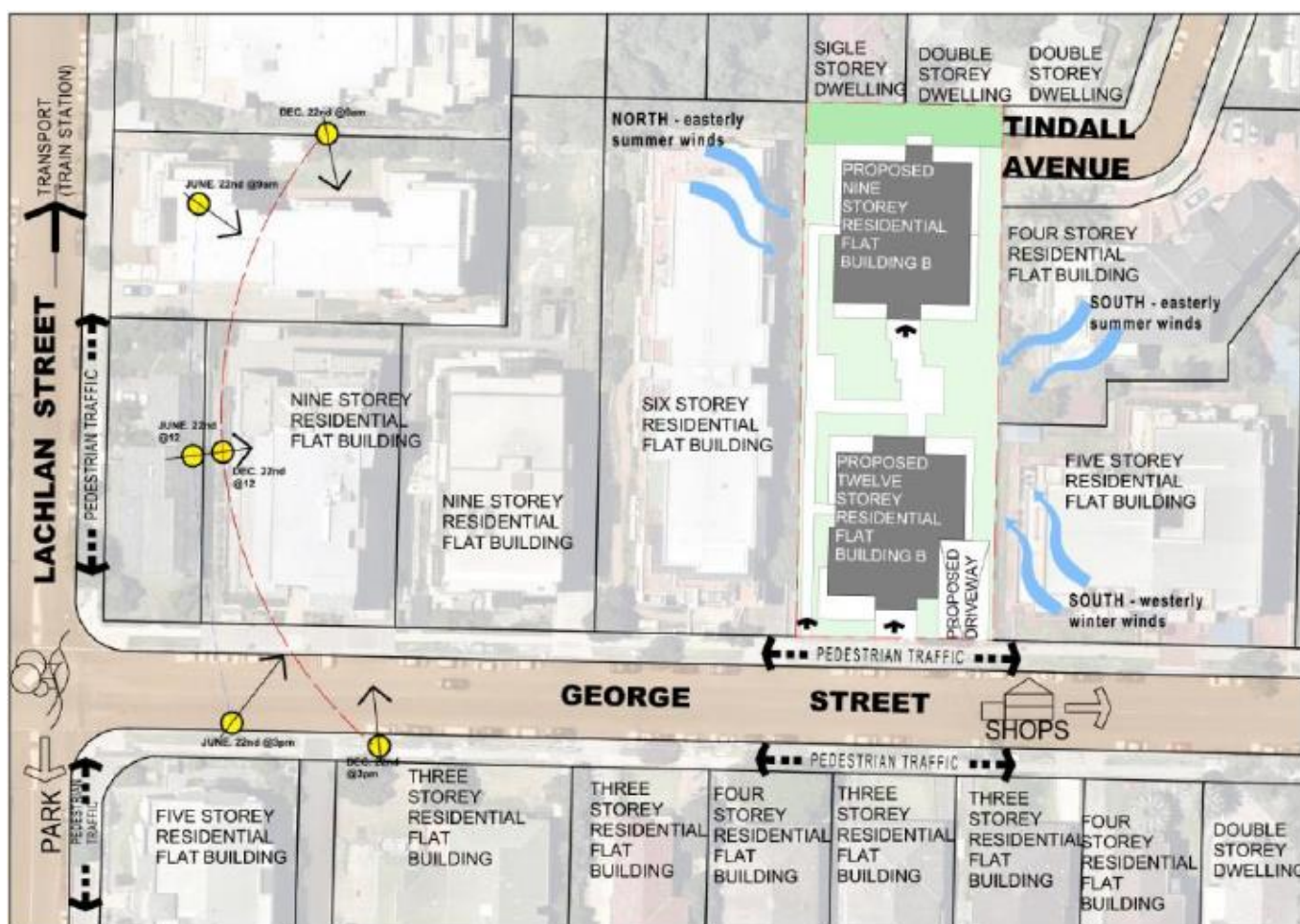


Figure 16 Site analysis extract showing consistency of site coverage, building separation, height and setback with adjoining development.

Principle 3: Density

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context. Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

Proposal

The density of the proposed development when assessed as a floor space ratio is 3.32:1. This compares to the maximum permissible FSR of 2.99:1. The proposed density exceeds the FSR control by 11%. However, after following the suggestion of the Liverpool Design Excellence Panel the proposed density is considered to be appropriate and positively responds to the planning intentions for this locality in terms of delivering a high concentration of housing with good access to transport, services and facilities.

Principle 4: Sustainability

Good design combines positive environmental, social and economic outcomes. Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials, and deep soil zones for groundwater recharge and vegetation.

Proposal

A minimum of 2 hours solar access is achieved to all of units and 82% of units are naturally cross ventilated. The western building fronting George Street is provided with 1 single aspect, east facing unit at each level, such that 9 single aspect east facing units are proposed. The same is true for the back tower, with only 8 single aspect east facing units, with a total of 17 units out of 96.

Building materials from the demolition will be salvaged and recycled offsite as stated within the proposed construction waste management plan. Lastly, I note that the application is submitted with a BASIX Certificate which sets out, among other things, the required energy rating of proposed appliances.

Principle 5: Landscape

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood. Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values and preserving green networks. Good landscape design optimises useability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity and provides for practical establishment and long term management

Proposal

The landscaping concept for the proposed development involves a perimeter landscape treatment, including street frontages and deep soil at the back of the property.

The internal building separation area allocates a central communal open space principally accommodates pedestrian movement functions, including disabled access, as well as recreation facility for the residents of the property. Densely planted formal garden areas are provided surrounding the entire building in order to provide a vegetated buffer separation with the adjoining property and George Street.

The eastern part of the central communal open space area provides communal recreation opportunity. The area is internally divided by hedge for the purposes of limiting the opportunity for ball games which have greater potential to impact

Principle 6: Amenity

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being. Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas and ease of access for all age groups and degrees of mobility.

Proposal

The development provides 17% of one bedroom apartments, 78% of two bedrooms apartments and 5% of three bedrooms apartments, ensuring a good mix of units and size. A 10% of the units are designed to the requirements of AS 4299-1995 Adaptable Housing. 20% of units in total are designed to the Universal Design standards, including the 10% requirement for adaptable housing.

The unit layout is consistent with the better design practice guidelines contained within the NSW Apartment Design Guide and serve to achieve good acoustic privacy. Window and balcony locations, together with the use of blade wall privacy screens, will ensure satisfactory visual privacy both internal and external to the site.

Private internal storage spaces are provided in each units as well as overhead storage at basement level. Balconies exceed minimum size requirements whilst maximizing ground floor private open space.

The residential amenity of the development is further improved by the provision of generously proportioned, high quality communal open space.

Principle 7: Safety

Good design optimises safety and security within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety.

Proposal

The building has been designed to incorporate safety by providing clearly defined quality pedestrian entries at ground floor level along with a secondary entry for the rear tower that complies with all regulations and codes referring to disability (AS 1428.1).

The threshold between public communal and private areas are clearly defined to ensure a sense of ownership between public and private domains.

The building maintains direct site lines to the residential lobby to the street. All entrance lobby's will provided with lighting at night to ensure a passive surveillance to the street.

Both access paths are well distinguished with different materials and height levels. Each apartment overlooks generally two aspects of the property, avoiding blind corners and hidden spaces.

Security key system will be provided for each units, as well as secure car park located in two locked up basement levels.

Principle 8: Housing diversity and social interaction

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets. Well-designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix. Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among residents.

Proposal

The proposed development provides a good mix of unit sizes and includes 17 x one-bedroom units; 75 x two bedroom units and 4 x three-bedroom units. This proposed unit mix satisfies DCP requirements, as well as the Apartment Design Guide providing opportunity for families in the surrounding suburbs to move in the area when it is needed with also a good choice of affordable houses and price differentiation.

Communal Open space is well connected through the internal lobbies and supports the communal life of the building. The subject site is well serviced in terms of access to social facilities and the proposal will add to the supply and choice of housing opportunities within the Liverpool CBD.

Principle 9: Aesthetics

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures. The visual appearance of a well-designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.

Proposal

The aesthetic treatment of the development has sought to emphasise vertical expression as well as provide elegant yet simple street facades. These Facades integrate with the architectural language of surrounding sites whilst avoiding visual pastiche.

Each elevation is heavily comprised of balcony balustrades and careful attention has been paid to manipulating the materials, colours and treatments of the same to achieve distinctive and patterned elements into the street elevations.

The design has also achieved a well defined base, middle and top element with light weight metal cladding used to define the top two storeys of the front tower.

Proposed materials have been selected on the basis of proven durability. Proposed colours include a mixed pallet of earthy tones which are consistent with surrounding buildings combined with other materials and tones more appropriate to the high-density suburban context of the site.

3.2. Development Statistics

Table 1 provides a summary of the key development statistics for the proposed development.

Table 1 Development Statistics

Element	Proposed
Site Area	2,483.0m ²
Gross Floor Area (GFA)	7,966.5m ²
Floor Space Ratio (FSR)	3.21:1
Building Height ¹	39.1m
Building Setbacks	
Front	2.4m
Side	
- Building A	4.5m – 5.728m
- Building B	4.5m – 4.655m
Rear	6m - 6.5m
Development Mix	
- 1 bedroom	17
- 2 bedroom	75
- 3 bedroom	4
- Total	96
Adaptable apartments	9 (9.375%)
Landscaped Area	807m ²
Communal Open Space	256m ² (10.31%)
Car Parking Spaces	108

3.3. Land Uses

The DA seeks development consent for an 8 storey and 11 storey residential flat development, comprising 96 residential apartments, with two adjoining basement levels.

¹ **building height** (or **height of building**) means the vertical distance between ground level (existing) and the highest point of the building, including plant and lift overruns, but excluding communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like.

3.4. External Materials and Finishes

The proposed external materials and finishes are shown in Table 2 and on the Architectural Drawings prepared by Algorry Zappia and Associates included at **Appendix B**.

Table 2 Proposed External materials and finishes

Element	Proposed
External brick veneer wall type construction	Boral 'Capital Red' or similar
External brick veneer wall type construction parapets and balcony hobs Render and paint finishes	Dulux 'Natural White'
External brick veneer wall type construction Aluminium composite panels wall cladding	Vitrabond Satin Black Anodised look or similar
External brick veneer wall type construction Blockwork wall type construction Render and Paint finishes	Dulux 'Pail Grey' or similar

3.5. Vehicular Access and Parking

Vehicular access to the proposed development and the combined basement level car park is from George Street via a 6.1m wide combined ingress / egress driveway, located at the western end of the site.

Car parking within the proposed development is distributed as follows (Table 3):

Table 3 Car parking

Level	Number of spaces
Basement Level 1	
Residential (Including 7 disabled)	37
Visitor	9
Subtotal	46
Basement Level 2	
Residential (including 4 disabled)	62
Visitor	0
Total	108
Bicycle parking	41
Motor cycle	6

3.6. Pedestrian Access

Pedestrian access to Building A is via George Street. In order to access Building B residents must walk through the lobby of Building A and through the area of common open space located between the two buildings. Side access is also provided to the north of the site via an external pedestrian pathway. From the residential lobbies of both buildings pedestrians can access the lifts which provide access to all floors of the development including the basement car parking areas. Access to and from the basement car park is also provide via an external staircase located in the area of common open space. A maximum of 5 residential apartments are arranged off a lobby within each storey of the development.

3.7. Demolition and Tree Removal

Development consent is sought for the demolition of all existing building structures on the site and the removal of ten trees on the site, none of which are significant.

3.8. Landscaping and Open Space

The proposed development provides 807m² of landscaped open space (or 30.7% of the site). All open space is located on the ground floor of the development.

Communal open space

The proposed development provides 256m² of communal open space. The communal areas of open space will have controlled access for residents use only. These spaces will provide residents with a number of amenities including:

- 3 x Bench and Table sets
- Outdoor seating
- BBQ area

Footpath upgrade and street tree planting

The proposed development also includes an upgrade (new street trees and paving) along George Street. This periphery paving will be undertaken to Council's requirements and will be sympathetic to the local heritage status of George Street.

3.9. Residential Amenity

The proposed development provides for a high level of residential amenity.

Unit size

The proposed development provides for generous apartment sizes, ranging from:

- 50.08m² – 50.76m² for 1 bedroom apartments;
- 72.81m² – 86.24m² for 2 bedroom apartments; and
- 99.84m² – 114.46m² for 3 bedroom apartments.

The proposed apartment sizes are consistent with the minimum requirements as set out in the NSW Government's Apartment Design Guide (SEPP 65), enabling well organised, functional, high quality apartment layouts.

A schedule of unit sizes (internal and external areas) and areas of storage is included at **Appendix B**.

Private Open Space

Each apartment is provided with an area of open space in the form of a balcony or terrace area accessed from the main living room. The proposed areas of private open space range from:

- 4.2m² – 4.81m² for 1 bedroom apartments;
- 12.19m² – 70.76m² for 2 bedroom apartments; and
- 31.28m² – 33.10m² for 3 bedroom apartments.

All areas of private open space have a minimum depth of 2.3 m and are capable of accommodating a table and chairs.

Storage

Each apartment within the proposed development has been provided with an adequate area for storage. The area of storage provided to each apartment is detailed in **Appendix B**.

Natural Ventilation

The proposed configuration of the buildings and apartments results in all units achieving acceptable levels of natural ventilation under SEPP Apartment Design Guide as 82% of units are naturally cross ventilated

Outlook and Views

Apartments facing west look out towards Liverpool Pioneer Memorial Park. Apartments facing south look towards the Liverpool city centre; Apartments facing north look towards Lachlan Street.

Daylight and Sunlight Access

A minimum of 2 hours solar access is achieved to all of units. The western building fronting George Street is provided with 1 single aspect, east facing unit at each level, such that 9 single aspect east facing units are proposed. The same is true for the back tower, with only 8 single aspect east facing units, with a total of 17 units out of 96.

3.10. Civil and Engineering Design

A Stormwater Concept Plan and Report for the proposed development has been prepared by SGC and is included at **Appendix D**. It has been prepared in accordance with the 'Liverpool City Council's On-site Stormwater Detention Technical Specification (June 2003) and Floodplain Management Plan.

3.11. Waste Management

A Waste Management Plan for the proposed development has been prepared by Elephants Foot Recycling Solutions and is included at **Appendix E**. Garbage is proposed to be collected from the kerbside of George Street by Liverpool Council. On collection days, the building caretaker will transfer all full 660L garbage and recycling bins, via the vehicle ramp, to the kerbside of George Street.

4. Planning Framework

4.1. Relevant Legislation, Plans and Policies

In accordance with s.79C(1)(a) of the Act, the relevant strategies, policies, planning instruments and development controls applying to the proposed development are:

- State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development (SEPP 65);
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004;
- Liverpool Local Environmental Plan 2008 (Liverpool LEP 2008); and
- Liverpool Development Control Plan 2008 (Liverpool DCP 2008).

4.2. Zoning and Objectives

In accordance with Liverpool LEP 2008, the site is zoned R4 High Density Residential, as identified in Figure 17 below. Within the B4 zone Residential flat buildings are permissible with development consent.

Land zoning map - sheet LZN-011

Zone	
B1	Neighbourhood Centre
B2	Local Centre
B3	Commercial Core
B4	Mixed Use
B5	Business Development
B6	Enterprise Corridor
E1	National Parks and Nature Reserves
E2	Environmental Conservation
E3	Environmental Management
IN1	General Industrial
IN2	Light Industrial
IN3	Heavy Industrial
R1	General Residential
R2	Low Density Residential
R3	Medium Density Residential
R4	High Density Residential
R5	Large Lot Residential
RE1	Public Recreation
RE2	Private Recreation
RU1	Primary Production
RU2	Rural Landscape
RU4	Rural Small Holdings
SP1	Special Activities
SP2	Infrastructure
W1	Natural Waterways
WSP	SEPP Western Sydney Parklands

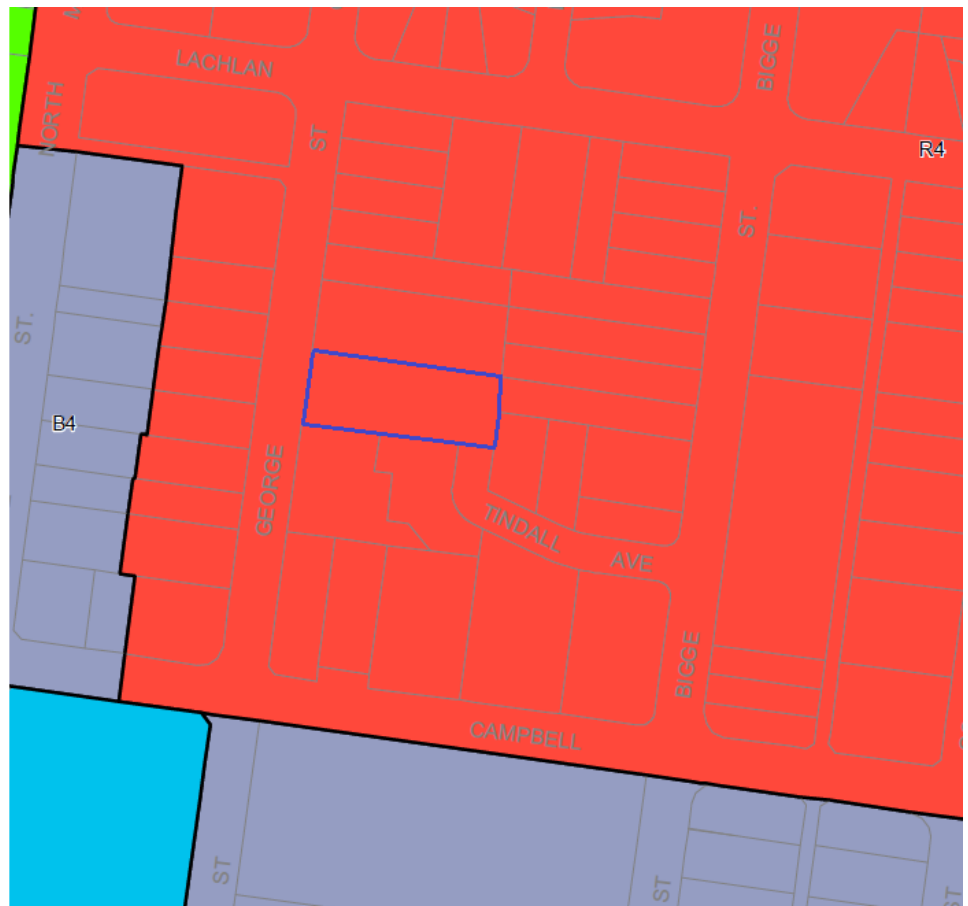


Figure 17 Extract of Zoning Map (Liverpool LEP 2008)

The objectives of the B4 mixed use zone are:

- To provide for the housing needs of the community within a high density residential environment.
- To provide a variety of housing types within a high density residential environment.

- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To provide for a high concentration of housing with good access to transport, services and facilities.
- To minimise the fragmentation of land that would prevent the achievement of high density residential development.

As the site is located in the Liverpool city centre (Part 4 of Liverpool DCP 2008), the objectives stated in Clause 7.1 also apply (refer to **Figure 18** below).

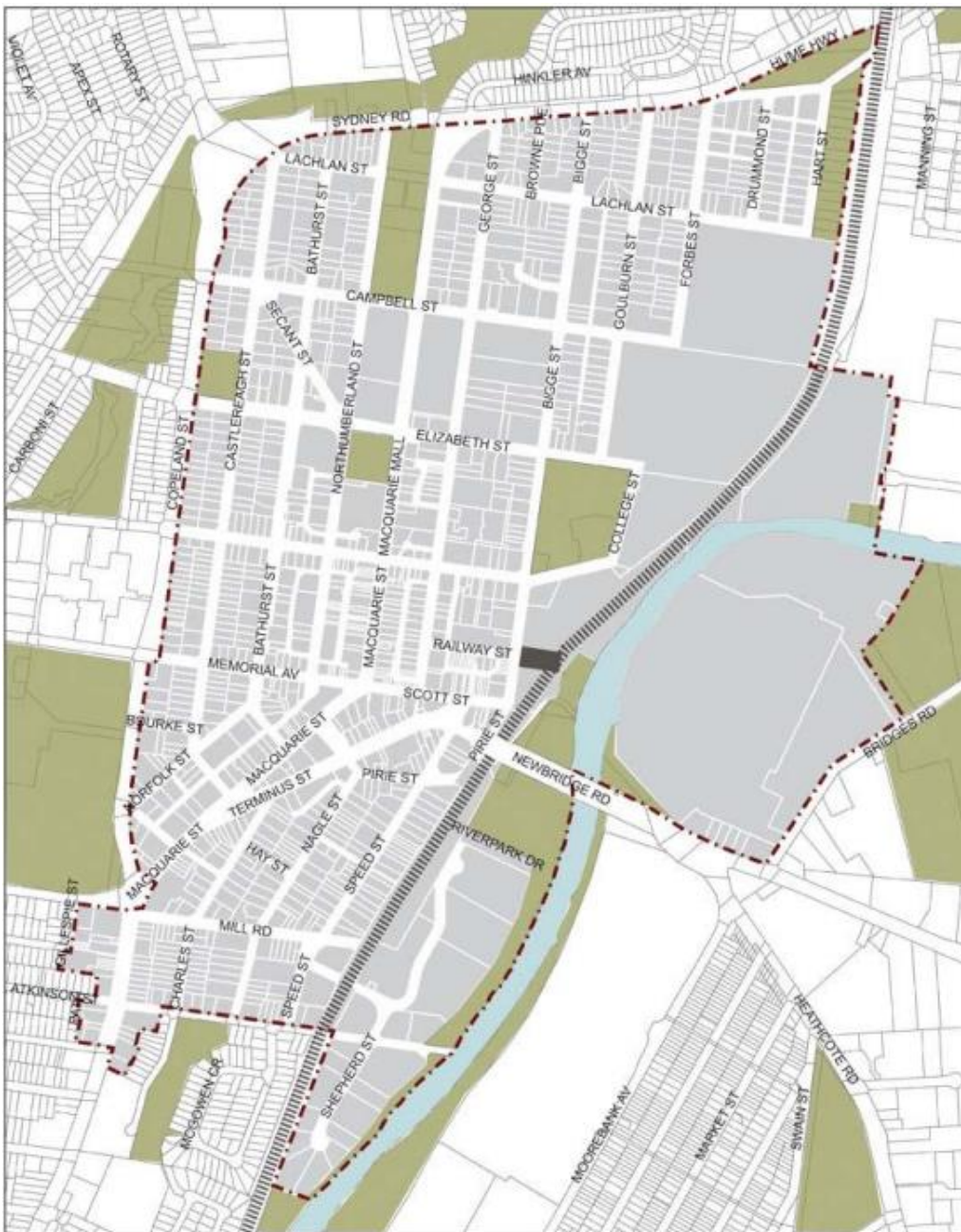


Figure 18 Liverpool city centre

Clause 7.1 states that ‘before granting consent for development on land in the Liverpool city centre, the consent authority must be satisfied that the proposed development is consistent with such of the following objectives for the redevelopment of the city centre as are relevant to that development:

- (a) to preserve the existing street layout and reinforce the street character through consistent building alignments,
- (b) to allow sunlight to reach buildings and areas of high pedestrian activity,
- (c) to reduce the potential for pedestrian and traffic conflicts on the Hume Highway,
- (d) to improve the quality of public spaces in the city centre,
- (e) to reinforce Liverpool railway station and interchange as a major passenger transport facility, including by the visual enhancement of the surrounding environment and the development of a public plaza at the station entry,
- (f) to enhance the natural river foreshore and places of heritage significance,
- (g) to provide direct, convenient and safe pedestrian links between the city centre (west of the rail line) and the Georges River foreshore.

4.3. Key Planning Controls

The key planning controls relevant to the proposed development are set out in Table 1 below.

Table 4 Key Planning Controls

Legislation, Plan, Policy	Key Development Standard / Control
SEPP 55	This Policy requires Council's to consider potential site contamination in the assessment of DAs.
SEPP 65 and Apartment Design Guide	This Policy aims to raise the design quality of residential flat development across the state through the application of a series of design principles. An explanation of the design, based on the achievement of the design quality principles, is to accompany a DA.
BASIX SEPP 2004	All residential development is to comply with BASIX in relation to water, energy. BASIX certificates to accompany a DA.
Liverpool LEP 2008	
Height of Buildings (Clause 4.3)	Maximum 35m
FSR (Clause 4.4 2B)	$(2 + X):1$ $X = (\text{the number of square metres of the site} - 1000)/1500$ $(2483 - 1000)/1500 = 0.99$ $(2 + 0.99):1 = 2.99:1$
Floor Space Map	2:1
Maximum	2.99:1
Lot Size (Clause 4.1)	Minimum 1,000m ²

Building separation in Liverpool city centre (Clause 7.4)	<p>(2) Development consent must not be granted to development for the purposes of a building on land in Liverpool city centre unless the separation distance from neighbouring buildings and between separate towers, or other separate raised parts, of the same building is at least:</p> <p>(a) 9 metres for parts of buildings between 12 metres and 25 metres above ground level (finished) on land in Zone R4 High Density Residential, and</p> <p>(b) 12 metres for parts of buildings between 25 metres and 35 metres above ground level (finished) on land in Zone R4 High Density Residential, and</p> <p>(c) 18 metres for parts of buildings above 35 metres on land in Zone R4 High Density Residential</p>
Design excellence in Liverpool City Centre (Clause 7.5)	<p>(2) Development consent must not be granted to development involving the construction of a new building or external alterations to an existing building in the Liverpool city centre unless the consent authority considers that the development exhibits design excellence.</p>
Liverpool DCP 2008	<p>Proposed development to address controls set out in Parts 1 and 4 (including street alignment and setbacks, car parking, landscaping, overshadowing, CPTED, water and energy management etc.).</p>

5. Environmental and Planning Assessment

The following is our assessment of the environmental effects of the proposed development as described in the preceding sections of this report. The assessment includes only those matters under section 79C(1) of the Act that are relevant to the proposal.

The key planning issues associated with the proposed development are as follows:

- Compliance with Planning Framework;
- Built Environment;
- Energy Efficiency;
- Safety and Security;
- Access and Parking;
- Social and Economic Impacts;
- Heritage;
- Views;
- Overshadowing;
- Site Suitability;
- Public Interest; and
- Streetscape and the Public Domain.

5.1. Compliance with Planning Framework

An assessment of the proposed development against the provisions of the relevant statutory planning instruments and controls as set out in Section 4.3 is included at **Appendix F**. In summary, the proposed development complies with the majority of the relevant planning controls outlined in section 4 of this report in that it:

- does not cause any material environmental impacts to adjoining properties or the public domain in terms of overshadowing, privacy, access to daylight and ventilation;
- does not result in any unacceptable visual impact or view loss;
- achieves appropriate massing and spaces between buildings;
- exhibits design excellence;
- has acceptable impacts on adjoining properties; and
- is consistent with the desired future character of the area which encourages contemporary buildings in a higher density setting.

Liverpool Local Environmental Plan 2008

The proposed development complies with the objectives of the R4 High Density Residential zone and the permissible uses. However, the proposed development exceeds the maximum permissible height of 35m and the floor space ratio of 2.99:1 as prescribed by Liverpool LEP 2008 (refer to **Table 1**). Given the site's location within the residential area of Liverpool city centre and within walking distance to the Liverpool train station and Warwick Farm train station and other community facilities, the site is well placed to provide a higher form of residential development. As demonstrated throughout this SEE, the proposed development will not result in any significant adverse environmental impacts to future surrounding development, in particular residential uses. The proposed density of the development, with an FSR of 3.32:1 and height of 39.1m is considered appropriate for the site as outlined within the Clause 4.6 variations prepared by APP included at **Appendix I**.

Liverpool Development Control Plan 2008

The proposed development complies with the relevant provisions of Liverpool DCP including the provisions relating to Liverpool city centre.

5.2. Built Environment

The redevelopment of the site is consistent with Council's vision for the high density residential and is compatible with existing and future land uses surrounding the site. The redevelopment of the site will significantly improve the vitality and amenity of the area and the site itself. The existing developments on the site, at one and two storeys, are vastly out of context with adjoining and surrounding larger scale residential development.

The proposal has been designed to respond to the urban design parameters determined by the existing built context, site conditions and relevant planning controls. It is considered that the redevelopment of the site and the proposal's high quality urban and architectural design will significantly improve the visual character of the site and may act as a positive catalyst for other quality redevelopment in the area.

5.3. Energy Efficiency

The proposed residential development has been assessed against the compulsory requirements of BASIX (refer to BASIX Certificate, prepared by Chapman Environmental Services Pty Ltd (included at **Appendix G**). In summary, the proposed development achieves:

- 40% reduction in mains supply for water use (target is 40%);
- 21% reduction in energy/greenhouse gas emissions (target is 20%); and
- A 'pass' in terms of thermal comfort (target is a 'pass').

In addition to the requirements of BASIX the proposed development has also been assessed to have an average NatHERS star rating of 4.4.

5.4. Safety and Security

The proposed development optimises safety and security both internal to the development and for the public domain, in that it:

- provides clear sightlines within the street and public domain areas. Building entries are obvious and clearly defined and will be appropriately lit;
- promotes casual surveillance the existing streets and minimises crime risk by providing balconies and windows to habitable rooms which face the street;
- includes appropriate lighting at street level in all public areas (subject to appropriate conditions);
- all areas at ground level will have clear delineation between public and private spaces.

5.5. Noise

As the site is located in Liverpool City Centre it is considered that there would be no unacceptable noise impacts as a result of the proposed development.

In addition, Section 5.5 of Part 4 of Liverpool DCP 2008 states that an acoustic report is required for all noise affected locations, as identified in Figure 19 below. The site located at 24-26 George Street is not identified as a noise affected location.

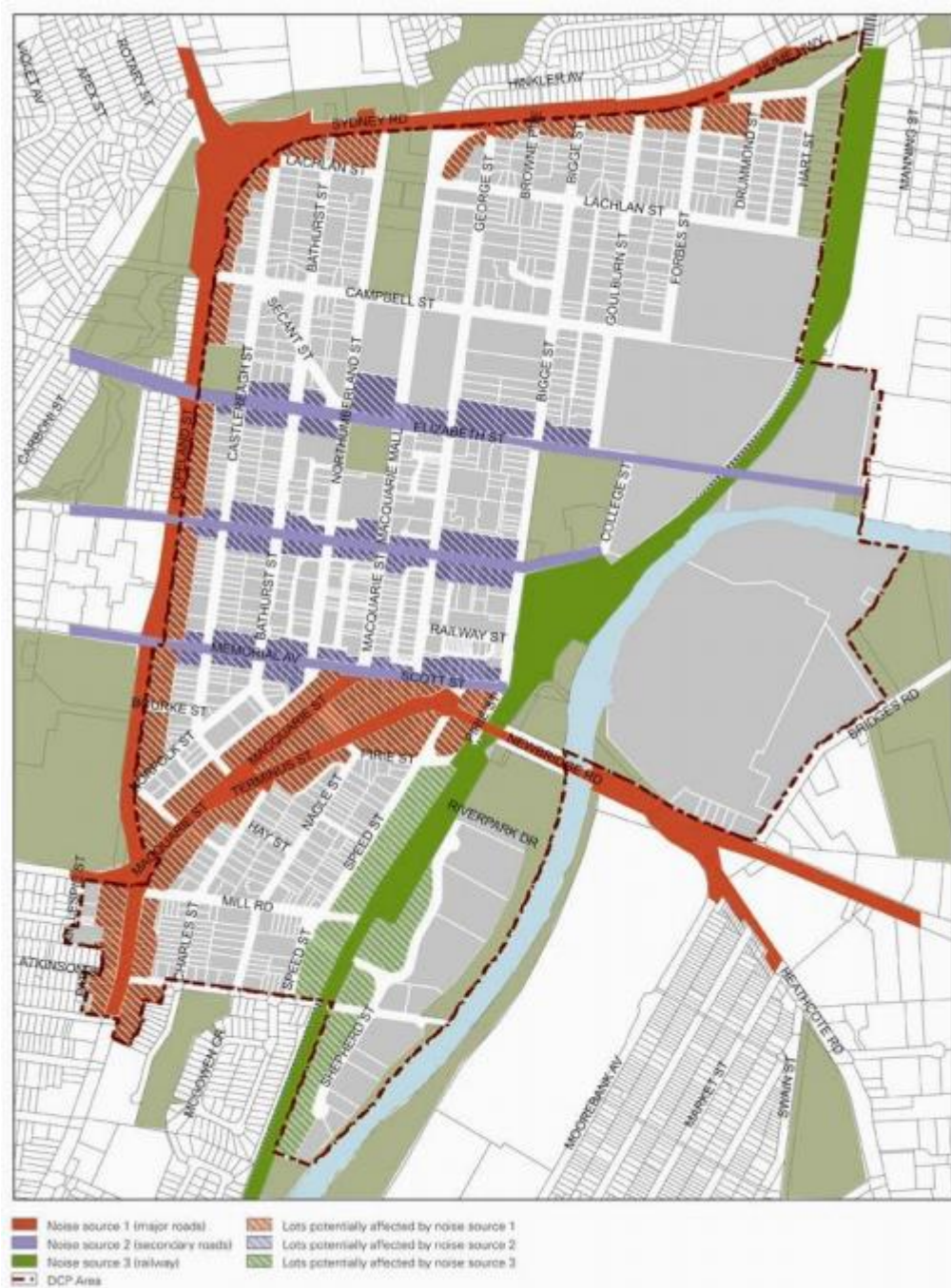


Figure 19 Noise sources and lots potentially affected by noise sources.

5.6. Access and Parking

5.6.1 Access

Vehicular access to the site is via a double driveway accessed from George Street, which leads to two levels of secure basement parking. Pedestrian access to both buildings is provided from George Street.

5.6.2 Parking Implications

The proposed development makes provision for a total of 108 off-street car parking spaces (including 11 disabled spaces and 9 visitor spaces), 41 bicycle spaces and 6 motorcycle spaces, thereby satisfying all aspects of Council's off-street parking requirement. The geometric design layout of the proposed car parking facilities have been designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 1 - Off-Street Car Parking AS2890.1* and *Parking Facilities Part 6 - Off-Street Parking for People with Disabilities AS2890.6* in respect of parking bay dimensions, ramp gradients and aisle widths. It is therefore concluded that the proposed development will not have any unacceptable parking or loading implications.

5.7. Social and Economic Impacts

In relation to social impacts, the proposed development:

- provides activation of George Street through the introduction of larger scale residential uses;
- allows for greater casual surveillance of internal and external spaces on the site promoting safety;
- provides a mix of apartment types to suit a range of people including 9 adaptable apartments;
- All apartments benefit from good levels of natural ventilation; and
- promotes state government initiatives in relation to urban consolidation by increasing residential density in close proximity to required services and facilities, in particular public transport.

In relation to employment, the proposed development will:

- increase employment opportunities during the construction phase and once completed;
- increase the demand for local employment opportunities from the 96 households located in the proposed development; and
- during construction and once completed generate additional economic activity both locally and outside of the area.

The proposed development will have an overall positive social and economic impact on the existing local community.

5.8. Heritage

George Street is an item of local environmental heritage. As well as George Street, Lachlan Street to the north, Campbell Street to the South and Bigge Street to the east, are all listed as local heritage items under Liverpool Local Environmental Plan (LLEP) 2008. All streets in the area bounded by the Hume Highway, Copeland Street, Memorial Avenue, Scott Street, Georges River and Main Southern Railway Line (excluding Tindall Avenue and service ways) are of local heritage.

5.9. Views

There are no iconic, highly valued or significant views across the site from surrounding properties or the public domain. The visual impact of the proposed development will be reasonable as the buildings and landscaping are consistent in scale and form with existing development in the locality.

5.10. Vegetation

There is no significant vegetation located on the site.

5.11. Overshadowing

Shadow diagrams for 9am, 12 noon and 3pm on June 22 and December 21 are provided in the set of architectural drawings prepared by Algorry Zappia and Associates, included at **Appendix B**. The proposed overshadowing impacts are as follows:

June 22

- Overshadowing extends predominantly over the properties located to the south of the subject site, at No. 28A George Street and No. 10-12 Tindall Avenue, from 9am to 3pm.
- At 9am overshadowing the majority of the overshadowing impacts would occur at the properties located at 28A George Street and 10-12 Tindall Avenue. However, the frontages of properties at 17, 19 and 21 George Street would also be affected as well as part of the street itself.
- Overshadowing from 10am – 12pm would continue to affect the residences at No. 28A George Street and 10-12 Tindall Avenue; however any overshadowing impact at this time to properties on the western side of George Street has been removed.
- By 1pm the shadow has tracked further south east so that the properties at 28A George Street and 10-12 Tindall Avenue are only moderately affected by overshadowing as well as part of the front of No.3 Tindall Avenue.
- From 2pm-3pm the majority of the developments at No. 10-12 and No.3 Tindall Avenue are covered in shadow, whereas No. 28A George Street is no longer overshadowed.

21 December

The extent of the overshadowing will most likely be contained to the residential properties located at 28A George Street and Tindall Avenue, to the south of the site. Considering the development precedent that has been set for the surrounding area, with the predominant form of residence being a residential flat building, the proposed overshadowing will result in negligible amenity impacts to surrounding properties.

Recent redevelopment has resulted in more dense and taller building forms occupying the majority of the surrounding area. Specifically, a height limit of 35m has been set for the area, confirming the preference for larger scale development. The only smaller property which would be affected is No.1 Tindall Avenue, which is currently occupied by a two storey residence. However, given the recent uplift the area has experienced, it can be assumed that at some point in the future this site will be redeveloped in order to accommodate larger scale residential development. Taking into account the existing context of the area, the extent of the proposed overshadowing is not considered to be unreasonable.

5.12. Site Suitability

Having regard to the characteristics of the site and its location, the site is considered suitable for the development of the nature proposed in that:

- it is of a sufficient size and dimension to accommodate the proposal;
- it has excellent access to existing and planned public transport opportunities;
- existing utility services are available to service the demand generated by the proposal; and
- it does not contain any natural features that would impede the development.

5.13. Public Interest

The public interest is best served by the orderly and economic use of land for permissible purposes in a form which is cognisant of and does not impact unreasonably on development on surrounding land, and which satisfies a market demand for more affordable housing within Western Sydney, within proximity to where residents work.

5.14. Streetscape and Public Domain

The proposed development will result in considerable improvements to the streetscape in terms of aesthetics, amenity and activity.

5.14.1. George Street

The proposal addresses George Street and in doing so will improve the character of this street. It will also improve opportunities for casual surveillance, by providing balconies and living rooms which overlook the street, thereby creating a more active street edge.

In summary, the proposed development:

- provides high quality and durable finishes which positively contribute to the residential character and visual amenity of the locality;
- has a high level of architectural design which will make a positive contribution to the residential amenity for future occupants in terms of solar access, natural ventilation, visual and acoustic privacy, overlooking, overshadowing, outlook and views;
- has been designed to physically and architecturally address all the street frontage with a similar orientation to that of surrounding development; and will shield car parking from view.

6. Conclusion

The proposed development at 24-26 George Street, Liverpool is permissible with development consent within the R4 High Density Residential zone under Liverpool Local Environmental Plan 2008 and complies with the objectives under of the R4 zone.

The proposed development of two towers consisting of 8 and 11 storeys accommodating 96 units of residential accommodation as well as two levels of basement parking is considered to be in keeping with other residential flat developments surrounding the site and would result in a more consistent streetscape along George Street. The proposed development would also be in line with Liverpool Council's vision for higher density living within Liverpool city centre.

The proposed development departs from the maximum height and FSR standards in Liverpool LEP 2008. Separate reports have been included at Appendix J, justifying the departure from the height and FSR standards in accordance with the provisions of clause 4.6 of Liverpool LEP 2008.

The proposed development is assessed to have planning merit in the following respects:

- Overall, the height, scale and bulk of the proposed development is consistent with existing developments along George Street and the surrounding area;
- The developments which currently exist on the site are out of keeping with the character of the locality. The proposed development will improve the streetscape and increase passive surveillance;
- There will be no unreasonable impact to adjoining properties in terms of solar access, visual and acoustic privacy or views primarily due to adequate separation distances between the proposed development and adjoining residences.
- pedestrian and vehicle access and car parking is provided in accordance with relevant standards, and the traffic generation is relatively minor with no unacceptable implications for the road network;
- the site is suitable for the proposed development in terms of its size, access, existing infrastructure and absence of any significant environmental constraint.

In light of the merits of the proposal and the absence of any significant adverse environmental effects, the DA is considered worthy of Council's support. We therefore have no hesitation in recommending that the application be approved subject to Council's standard conditions.