Urban Design Report

Lot 1, Governor Macquarie Drive Warwick Farm Sydney

Prepared for Warwick Farm Village Pty Ltd

Issued 27 June 2018

Level 2, 490 Crown Stre Surry Hills NSW 2010 Australia T. 61 2 9380 9911 architects@sjb.com.au sjb.com.au



We create amazing places

At SJB we believe that the future of the city is in generating a rich urban experience through the delivery of density and activity, facilitated by land uses, at various scales, designed for everyone.

Version: 01 Prepared by: LW, GS Checked by: JK

Contact Details:

SJB Urban Level 2, 490 Crown Street Surry Hills NSW 2010 Australia

T. 61 2 9380 9911 architects@sjb.com.au sjb.com.au

SJB Architecture (NSW) Pty Ltd ABN 20 310 373 425 ACN 081 094 724 Adam Haddow 7188 John Pradel 7004



Contents

1	Intro	oduction	4
	1.1	Report Purpose	4
	1.2	Urban Design Excellence	5
	1.3	Metropolitan and Strategic Planning	6
	1.4	Strategic Context	7
	1.5	Urban Context	8
	1.6	The Site	9
	1.7	Current Development Controls	10
2	Analysis		11
	2.1	Character and Place	11
	2.2	Movement and Access	12
	2.3	Built Form and Land use	13
	2.4	Landscape and Open Space	14
	2.5	Constraints	15
	2.6	Opportunities	16
3	Visio	on & Principles	17
	3.1	Site Vision	17
	3.2	Principles	18

4	Cond	cept Masterplan	19	Executive
	4.1	Concept	19	South We major gro
	4.2	Design Process 1	20	identified proximity
	4.3	Design Process 2	21	Liverpool
	4.4	Design Process 3	22	accommo character
	4.5	Illustrative Masterplan	23	The scale
	4.6	Massing 1	24	regional s upgrades
	4.7	Indicative Basement Plan L-1	25	infrastruct means the
	4.8	Indicative Ground Plan - L00	26	a precede Farm.
	4.9	Indicative Plan - L02 & L03	27	
	4.10	Indicative Plan - L05	28	This strate available f
	4.11	Indicative Tower Plan - L07	29	is located of Liverpo
	4.12	Indicative Sections	30	a medium provides t
	4.13	Public Benefit	31	and amen open spa
	4.14	Visualisation 1	32	communit
	4.15	Visualisation 2	33	outdoor g
5	Built	Form Analysis	34	The mixed generating outdoor d
	5.1	Shadow Analysis	34	proposal o responsiv
	5.2	Solar Insolation	35	domain in and Great
6	Cond	clusion	36	
	6.1	Past Planning Proposal Comparison	36	
	6.2	Assessment and Recommendation	37	

ve Summary

Vest Sydney and especially Liverpool is experiencing rowth with many of the existing industrial areas being d for regeneration and redevelopment. The close ty of the site to Warwick Farm Train Station, The ol CBD and major parklands make it a prime site to modate growth and help deliver the desired future er of Liverpool.

le of change being proposed for Liverpool has significance and in many instances relies on major es to the road, movement, environmental and services icture. The size, location and proximity to transport the development could be a catalyst can serve as dent for the future quality and character of Warwick

ategically located and highly visible land holding is e for redevelopment immediately. The subject site ed next to Warwick Farm Train Station north east bool city centre. The redevelopment of this site into im-density, transport oriented residential precinct is the opportunity to provide high quality public domain enities including upgraded existing and new public baces, new street links, increased tree canopy and nity facilities such as bike paths, playgrounds and gyms.

ed use development also introduces employment ing uses, a commercial supermarket anchor and an dining and retail space. Essentially, this planning al outlines a strategically consistent, feasible, site sive design which could underpin significant public improvements for local residents of Warwick Farm eater Liverpool.

1.1 Report Purpose

The purpose of this Urban Design Report is to analyse and test the development capacity of the site in relation to the changing strategic context, planning controls and future vision for Warwick Farm and Greater Liverpool. SJB has been appointed by Warwick Farm Village Pty Ltd to undertake this comprehensive study which is explained in the process diagram to the right.

The study proposes and tests a scheme that can achieve the design requirements of SEPP65 and the Apartment Design Guidelines (ADG) as well as create a successful place which responds to its context and enhances the local area for all residents.

The report provides a concept masterplan forthe site, which is the basis of a planning proposal. The scheme has been designed in accordance with a suite of design and planning documents including:

- · Greater Sydney Region Plan (GSC) 2018
- · Western Sydney District Plan (GSC) 2018
- Georges River Precinct Plan 2016
- Liverpool Local Environmental Plan 2008
- Liverpool Development Control Plan 2008
- Draft Better Placed Urban Design Guide (GANSW) 2018

The concept master plan supports the planning proposal to amend the current site FSR of 0.75:1 to a proposed FSR of 3:1 with a maximum building height up to 50 metres.

This Urban Design Report has been undertaken based on the following spatial and strategic reasons:

- $\cdot\,$ The site is situated at the gateway of the Liverpool CBD
- The site is located within close proximity to Warwick Farm Railway Station
- The proposal will supply additional dwellings addressing the pressure for housing in the area
- The proposal will contribute to increased public benefit including site linkages, public open space and commercial spaces
- The proposed controls facilitate a unique built form, establishing the trend for design excellence in the area



Iterative Design Process

1

1.2 Urban Design Excellence

The Government Architect NSW (GANSW) has produced a series of policies which outline objectives and expectations in relation to design, creating good places and green infrastructure. The themes and principles in these documents are important design assessment criteria and have been broadly considered throughout the design process. The policy documents include :

- · Better Placed, An integrated design policy for the built environment of New South Wales
- · Draft Urban Design Guide, A Better Placed design guide for the built environment
- Draft Greener Places, Establishing an Urban Green Infrastructure policy for New South Wales

The capacity of the site to improve the surrounding public domain and enhance the quality of life for the wider community are key considerations in the achievement of design excellence. Key principles from the Draft Urban Design Guide which have informed the design include:

Better Fit - contextual, local and of its place $\mathbf{\overline{\mathbf{N}}}$ Better performance œ Better for community Better for people * Better working Better value Better look and feel



Better Placed, An integrated design policy for the built environment of New South Wales, GANSW



Draft Urban Design Guide, A Better Placed design guide for the built environment, GANSW

SJB



Draft Greener Places, Establishing an Urban Green Infrastructure policy for New South Wales, GANSW

1.3 Metropolitan and Strategic Planning

The Greater Sydney Region Plan establishes the vision for a metropolitan region consisting of the western parkland city, central river city and eastern harbour city anchored by Penrith, Parramatta and the Sydney CBD respectively. The plan designates Liverpool as part of the Western Parkland City Metropolitan Cluster.

The Western City District Plan also illustrates Liverpool as a Metropolitan Cluster and at the intersection of the Upper Georges River, a train line and a city serving transport corridor. The plan identifies Liverpool as an area which has high housing demand and specifies a 0-5 year housing supply target of 8,250 dwellings. It states Liverpool should support the Badgerys Creek Aerotropolis and should have a 2036 baseline target of 36,000 jobs. It will be part of a 'Collaboration Area' in addition to the following actions (42);

a. protect and develop the commercial core

- b. improve and coordinate transport and other infrastructure to support jobs growth
- c. develop smart jobs around the health and education precinct
- d. build on the centre's administrative and civic role

e. improve public domain including tree-lined, comfortable open spaces and outdoor dining

- f. improve connectivity and links to the Georges River and prioritise pedestrian, cycle and public transport facilities
- g. encourage a vibrant mix of uses, new lifestyle and entertainment uses to activate streets and grow the night-time economy

h. capitalise on the Western Sydney Airport and Western Sydney City Deal initiatives.





1.4 Strategic Context

The Draft South West District Plan places significant emphasis on Liverpool's status as a Strategic Centre, which benefits from existing and proposed employment, education, health and retail services and accessibility to Liverpool Train Station. Liverpool has further advantage being situated in the vicinity of future large-scale industry and transport projects including the proposed Western Sydney Airport and the Moorebank Intermodal Facility. The population of Liverpool is projected to continue growing which will exacerbate the current undersupply of housing.

The site is located at Lot 1, Governor Macquarie Drive, Warwick Farm is north east of the Liverpool CBD and is adjacent to Warwick Farm Train Station and the Hume Highway offering excellent public transport and road access.





Key

1.5 Urban Context

Liverpool City Centre is experiencing significant growth resulting in medium density development clustering around the edge of the city centre. This has established legible gateways to the city when viewed from the railway line, city centre, Hume Highway and other major surrounding streets

The site is at one of these thresholds to the city centre on the Hume Highway and railway overpass therefore offering the potential to strengthen this definitive built form relationship with consistent and appropriate massing. Furthermore, the Georges River Precinct Plan will establish multiple clusters of tall buildings in the south east of the city offering the potential to balance this future development in the north east of the city.



Indicative section through gateway building clusters around Liverpool City Centre



Key



1.6 The Site

These photographs show the current condition of the site and its surrounding context.

- 1. Warwick Farm Railway Station has a large overpass connecting Liverpool CBD east of the railway to the suburb of Warwick Farm in the west. The streetscape connection between the site and the train station is poorly designed and maintained.
- 2. View towards the railway station along Warwick Street with double sided street parking with no footpath and a badly maintained drainage channel.
- 3. View of the pleasantly landscaped intersection of Warwick Street and the Hume Highway. This is the gateway corner to Liverpool City Centre.
- Looking south west at the intersection of Warwick Street and Hume Highway overpass which is the main vehicular and cycling path to Liverpool City Centre. It also shows the sliver of open space with mature vegetation buffering the site from the Highway.
- 5. The built form of Bull Street is set back from the street and has mature vegetation. These street blocks have significant horse stabling facilities.
- 6. Governor Macquarie Drive has one walled footpath on the eastern edge and screening trees on the eastern edge. It is traffic dominated and an unpleasant place for pedestrians.
- 7. Brick suburban housing looking south on Manning St
- 8. Sparse vegetation throughout the centre of the site looking north east.
- 9. View of social housing rear courtyards and the site beyond from the pedestrian railway station overpass.





















(9)

1.7 Current Development Controls



Urban Design Report

Height of
buildings map - sheet HOB-014
Maximum Building Height (m)
8.5
M 12
0 15
P 18
R 21
S 24
T 28
U 30
V 35
X 45
AB 80
AC 100
State Environmental Planning Policies
SSP SEPP (State Significant Precincts) 2005
SGC SEPP (Sydney Regional Growth Centres) 2006
WSP SEPP (Western Sydney Parklands) 2009

0 15

Flood planning area map - sheet FLD-014 Z Rood planning area Flood prone land

2.1 Character and Place

- 1. Large car and housing showrooms with large asphalt spaces for carparking which are unpleasant for pedestrians.
- 2. Retail mall with internalised asphalt car parking and scattered planting. These car oriented spaces encourage pedestrians to move indoors.
- 3. Cabramatta Creek is a long riparian corridor with flanking parklands and many sporting pitches for a variety of sports. It is a valuable community asset for local residents and an important landscape for remnant local ecology.
- 4. Land directly to the south of the site has large horse stables and other associated equine facilities interspersed with detached suburban houses.
- 5. Industrial warehouses with large floorplates occupy the majority of each plot. Onsite carparks are used by employees who drive to these premises. Some streets have large mature vegetation making it a pleasant environment for pedestrians.
- 6. Warwick Farm Racecourse is a functioning horse racecourse and is undergoing a renovation. It is a major destination for people from around the region.
- 7. Liverpool hospital adjoins the CBD and has large interconnected buildings with relatively poorly landscaped spaces in-between.
- 8. Typical detached suburban houses with large street setbacks and mature trees.
- 9. New blocks of medium density apartments between 8 and 15 storeys with renovated streets, public amenities and landscapes.



SJB



Urban Design Report











1

(6)







2.2 Movement and Access

Warwick Farm Railway Station is located approximately 100m west of the site. The train station is serviced by the Cumberland, Bankstown and Airport, Inner West and South railway lines. A pedestrian overpass at Warwick Farm Railway Station links the site to Liverpool Hospital (14 mins walk) and Liverpool CBD (17 mins walk). The site is serviced by a bus stop on The Hume Highway and the 904 bus route which connects the site to Liverpool CBD and Fairfield.

It is a 25 minute drive to Parramatta via the Hume Highway and a 50 minute drive to the Sydney CBD via the M1 and M5. Governor Macquarie Drive caters for significant traffic flow making Manning Street and Munday Street the most suitable site access points.





Key

2.3 Built Form and Land use

The landuse of east of the rail line is a combination of light industry, Warwick Farm Racecourse, associated equine stabling facilities and a sewerage treatment plant. Suburban detached houses, educational zones lie to the north of the city centre while the CBD consists mainly of low and medium density apartments, the hospital and retail streets.

The site is currently zoned B5 business development which would not capitalise on its proximity to the train station or complement the adjacent residential landuse.





2.4 Landscape and Open Space

The site is adjacent to public open spaces (RE1) including Berryman Reserve and Hart Park which have public amenities such as seating spaces, picnic facilities, playgrounds and a community garden. Rosedale Oval is 400m south west of the site and can host sporting events such as rugby, AFL and cricket.

Land to the south of Hume Highway is categorised as flood prone land in the LEP, although the site has relatively little change in topography which less than 2m of level difference. Warwick Farm Recreation Reserve to the north of the site has an extensive network of riparian open spaces which have dog areas, sporting pitches and walking paths which connect to the broader Georges River open space network.





Site boundary

2.5 Constraints

- Poor connection to Warwick Farm Train Station with indirect line-of-sight.
- Significant traffic noise from Hume highway especially westbound up the railway overpass bridge.
- Noise from trains stopping at Warwick Farm Train Station.
- Major road intersection of Hume Highway and Governor Macquarie Drive at northern corner of the site.
- Minor intersections at on boundary and south eastern corner of the site.
- The site has limited potential for access points from Warwick Street and Governor Macquarie Drive, therefore making Munday Street the most logical street to extend the street grid.
- · Flood egress point northwards onto Warwick Street.
- Potential overshadowing of stable buildings south of Munday Street for part of the day.
- Probable Maximum Flood Level (PMF) needs to be considered as development sits within Flood Zone.





2.6 Opportunities

- Proximity to Warwick Farm Train Station which is approximately 100m walk from the site.
- The site is prominent in views from major road intersections surrounding the site.
- Gateway building opportunities on site corners which are prominent in views of the site and Liverpool skyline from adjacent roads which lead to Liverpool CBD.
- Existing street grid to the south can be extended northwards into the site to define the new street grid.
- Sloped open space with mature trees to the north of the site creates green buffer to Hume Highway.
- Mature trees on the streets defining the eastern and southern site boundaries creates green streets.
- · Good solar access throughout the day.
- \cdot 904 bus stop connects the site to Liverpool CBD and Fairfield.
- Potential corner location for retail and community facilities to cater for new and existing residents.
- Potential to shield buildings from road and continue green interface along northern edge of the site.

Key





Vision & Principles

3.1 Site Vision







Vision & Principles

3.2 Principles



Place

- To position streets, open spaces and built form to align with adjacent site context
- Masterplan must provide street permeability especially by creating pedestrian oriented streets
- Integration of mixed uses, public facilities and active community spaces to support a walkable neighbourhood
- Articulation of building masses to minimise scale disparities and create enclosure for open spaces and streets
- Spaces should be designed to accommodate informal and active recreation to improve social experience of the place and encourage passive surveillance
- To appropriately address and respond to street corners and intersections to establish overall character of the place
- Utilisation of materials, details and public art that is inspired by the existing and desired future local character



Landscape

- Landscaping should reinforce the urban grid of Warwick Farm and establish strong green east-west connection through the precinct
- Connections should be established where possible to create a network of open spaces for pedestrians
- Quality and quantity of new open spaces should be appropriate to cater for the impact of new residents on the existing surrounding open space
- Permanent and temporary public art, street furniture and landscape should be flexible and facilitate a range of activities at different times of day
- Materials should encourage tactile engagement with streets and spaces and be accessible for all members of the public



Movement

- The precinct should create a direct and legible pedestrian link to Warwick Farm Train Station
- Streets should be efficiently laid out to ensure reasonable walking distances from dwellings to transport and shops
- Pedestrian links and cycle routes should be visually interesting to encourage physical activity and active transport network
- Street design and detailing should slow down vehicular movement within site and promote cycling and walking.
- Streets should be shaded with a variety of evergreen and deciduous trees and landscaped in accordance to water sensitive urban design principles
- Location of commercial and retail spaces should complement movement flows to encourage ground floor activity and create visual interest
- Details and materials of footpaths, cycling routes, crossovers and entry thresholds must be suitable for all weather and user legibility



Land Use

- Land use should create vibrant streets and active public spaces whilst mitigating potential negative impacts such as noise impacts, visual amenity and barrier effects.
- Compact commercial frontages must face public spaces to promote activity and create fine grain relationships to street edges
- Proposed landuses should address the needs and requirements of the surrounding neighbourhood as well as allow for mixed use programs and activities in the public realm
- Distinction between the residential and commercial areas of the precinct is acceptable if this transition is reflected in the design of the built form and public domain
- Servicing and entrances for dwellings and commercial spaces should be appropriately highlighted or screened and complement the streetscape

Urban Structure Urban Grain Density & Landuse

Height & Massing Streetscape, Landscape & Public Realm Facade & Interface Detail and Material







Built Form

- Must respond to scale, density as well as existing and desired future character of surrounding context
- Building setbacks and podiums should to minimise visual bulk where possible and create fine grain street frontages on streets which experience significant movement
- Built form should allow for flexibility and variety to adapt to alternate uses over time
- · Massing should be carefully designed to ensure solar access in accordance with the Apartment Design Guidelines as well as ensure privacy and amenity of dwellings is not compromised
- Built form and facade articulation especially on upper levels should responds to local microclimate conditions for dwellings and the public domain
- Built form must complement the public realm through building articulation, facade detailing and interface with the street
- Built form should clearly deliniate public spaces, internal communal spaces and private spaces and ensure dwellings provide passive surveillance where appropriate

4.1 Concept

Civic plaza with outdoor retail and dining
Urban park with community facilities
Buffer park with significant vegetation
Active park with community facilities
Water parks with water detention capability
Internal street
Pedestrian crossovers with traffic calming elements
Internal communal courtyards
Supermarket
Supermarket servicing
Green buffer to Gov. Macquarie Drive
Re-landscaped park

Key

Ū	Warwick Farm Train Station
\bigcirc	Pedestrian crossover
	Civic plaza
*	Height
	Residential mass
	Commercial mass
	Retail frontage
\rightarrow	Green link
	Internal street
	Site boundary





4.2 Design Process 1



1. Connect existing street grid into the site to establish internal street and emergency flood egress route

2. Establish masses and divide site into residential area and mixed use with commercial/retail area with supermarket anchoring the western end

Key

Emergency flood egress Internal street Site boundary





4.3 Design Process 2



3. Create strong internal green link from Warwick Farm Train Station through the site towards Warwick Farm Racecourse

4. Carve a series of connected public spaces with different characters and public facilities along the northern boundary edge and establish two internal communal courtyards







4.4 Design Process 3



5. Establish podia to define streets and courtyards and stagger towers to minimise overshadowing

6. Setback buildings to respond to green link and public domain and program buildings and spaces with public facilities







4.5 Illustrative Masterplan



4.6 Massing 1







4.7 Indicative Basement Plan L-1







25

4.8 Indicative Ground Plan - L00





4.9 Indicative Plan - L02 & L03





Urban Design Report

4.10 Indicative Plan - L05





Urban Design Report

4.11 Indicative Tower Plan - L07





4.12 Indicative Sections









4.13 Public Benefit

Outlined below are the proposed public benefits which will create an inclusive and diverse place and improve the amenity of the area for all local residents. A key priority for the masterplan is the establishment of a set of connected plazas and parks programmed with public amenities which integrate with the surrounding street grid and Warwick Farm Train Station.

- 1. Green through-site link from Warwick Farm Train Station to Warwick Farm racecourse with shared pedestrian and cycle path.
- 2. Re-landscaped public open space to the north of the site for visual and acoustic screening of heavy vehicular traffic on the Hume Highway and overpass.
- 3. North-south through site links based on the existing street grid of the area connect residents and workers to the south of the site to the retail areas and parks to the north.
- 4. Potential for community hub facing the civic plaza which would cater for a range of needs in a disadvantaged community.
- 5. Series of connected public open spaces with different public amenities including playgrounds, public art, outdoor gym, WSUD swales, ponds, running paths and pedestrian crossovers.



4.14 Visualisation 1





4.15 Visualisation 2





View of the Active Park and Green link looking west

Built Form Analysis

5.1 Shadow Analysis

The shadow analysis demonstrates the movement of shadows on the 21st of June (winter solstice). Thin, fast moving shadows affect buildings to the south of the site. However significant areas of direct sunlight between them ensure only short periods of overshadowing. The string of connected open spaces on the northern boundary of the site receive continuous solar access throughout the day, as well as the civic plaza between 11am and 2pm.



9am





2pm



3pm

1pm





Built Form Analysis

5.2 Solar Insolation



View from south east

The solar insolation analysis illustrates the number of hours of sunlight received by the massing facade. It demonstrates the majority of all proposed buildings receive more than two hours of direct sunlight therefore exceeding the SEPP65 requirement for 70% of apartment living rooms receiving 2 hours of sunlight between 11am and 2pm. View from north west

Hours of sunlight received

6.00<=	4.00	2.00
5.75	3.75	1.75
5.50	3.50	1.50
5.25	3.25	1.25
5.00	3.00	1.00
4.75	2.75	0.75
4.50	2.50	0.50
4.25	2.25	0.25

Conclusion

6.1 Past Planning Proposal Comparison

This comparison highlights the difference between the plan, massing, heights and public domain design of the past planning proposal relative to the current proposed massing. The current proposed massing clearly defines public domain and internal courtyards with perimeter blocks to create streets as opposed to past massing which creates tall towers at site extremities with no ground plane podia to define streets. The current plan positions a variety of public spaces which are not overshadowed by towers as opposed to centrally located open spaces surrounded by towers between 20 and 25 storeys.

The current proposed massing tower heights are limited to 15 storeys with an average building height of 8 storeys compared to the past planning proposal with a tallest tower height of 28 storeys and an average building height of 16 storeys. Therefore the current proposed towers have significantly less visual, micro-climatic and overshadowing impact than the previously proposed towers.







Proposed massing

Current Planning Proposal

Site area (m²)	29,308
FSR	3:1
Open space (m²)	7,000
Open space (%)	23.8%
Tallest tower height	15
Average building height	8.5

Past (amended) Planning Proposal

Site area (m²)	29,308
FSR	3.5:1
Open space (m²)	6,617
Open space (%)	22.5%
Tallest tower height	28
Average tower height	16



Past (amended) planning proposal massing





Conclusion

6.2 Assessment and Recommendation

This comprehensive urban design report has surveyed the strategic, spatial and planning context for the site, analysed the surrounds, illustrated a unique vision and concept for the place and proposed a site specific built form underpinned by detailed testing. At all stages of the design process the principles of Government Architect 'Better Placed' have been considered as well as the technical requirements of SEPP 65 and the Apartment Design Guide (ADG). The report concludes a change of landuse has spatial and strategic merit because of the following:

- The potential for the site to establish the desired future character and accommodate projected growth of Greater Liverpool
- The close proximity to Liverpool City Centre and to Warwick Farm Train Station
- The potential of the site to create a legible and definitive gateway to the Liverpool City Centre and match other pockets of medium density development
- The mixed use proposal ensures employment generating services alongside residential dwellings thus providing jobs and local commercial opportunities for Warwick Farm
- The potential of a supermarket near public transport to cater for current and new residents in the area
- Public benefits including improved connectivity between Warwick Farm Railway Station and the racecourse, green link, footpaths, public art, retail and commercial activities for the nearby community.

In summary this Urban Design Report advocates for planning controls which would allow the key elements of the masterplan including:

- · B4 and R4 zoning
- 50m maximum height of buildings
- FSR of 3:1
- Minimum lot size of 1000m²
- · Approximately 830 dwellings

Overall, this masterplan offers a responsive built form which feasibly underpins significant public domain improvements which would benefit all local residents in Warwick farm and Greater Liverpool.



G

Proposed minimum lot size map





Proposed zoning map

R3

SJB Urban

sjb.com.au

_

We create spaces people love SJB is passionate about the possibilities of architecture, nteriors, urban design and planning. _et's collaborate.

Level 2, 490 Crown Stree Surry Hills NSW 2010 Australia T. 61 2 9380 9911 architects@sjb.com.au sjb.com.au