Statement of Expert Evidence: Urban Design
Draft Planning Scheme Amendment GC81:
Fishermans Bend Planning Review Panel
Prepared by Simon Joseph McPherson
Instructed by City of Port Phillip and Maddocks
26 March 2018
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1.0 Introduction

1.1 Process and involvement

(1) This Statement has been prepared by Simon Joseph McPherson, Director of Global South Pty Ltd, a new urban design consultancy based in Melbourne, which works collaboratively on a range of projects, but is effectively a sole practice.

(2) There are no other contributors to this Statement.

(3) My business address is The Workery, Suite 3, 8 Riddell Parade, Elsternwick 3185. My home address is 24C Foam Street, Elwood 3184.

1.2 Qualifications and experience to prepare this Statement

1.2.1 Qualifications and registrations

(4) My academic qualifications are as follows:
  - Executive Masters (MSc) in Cities, inaugural programme (September 2016 - completed February 2018, awaiting final assessment), London School of Economics and Political Sciences (LSE Cities), UK;
  - Master of Science (MSc): Built Environment - Urban Design (Distinction), The Bartlett School, University College London, 2005-06, UK;
  - Bachelor of Architecture (BArch) (First Class Honours), The University of Melbourne, 1996-97;
  - Bachelor of Planning and Design (BPD) (Architecture), The University of Melbourne, 1992-94.

(5) My professional registrations and memberships are as follows:
  - Registered Architect, Architects Registration Board of Victoria: individual registration number 15838;
  - Australian Institute of Architects: full member.

(6) I am engaged on the following professional organisations:
  - Member, Victorian Design Review Panel;
  - Member, Design Review Panel for South Australia;
  - Global Advisor, United Nations Global Compact – Cities Programme;
  - Member, Built Environment Task Force, Smart Cities Council – Australia/New Zealand;
  - Member (AIA representative), National Urban Design Protocol Advisory Board.

1.2.2 Experience

Professional experience

(7) I hold over 15 years of professional experience in urban design, including:
  - Urban Designer, Victorian State Government (2002-2007, including study leave);
  - Director, SJB Urban (2007-2016);
  - Director, Global South (2016-present).
(8) I hold approximately 5 years of prior experience in architectural practice, in Australia and the UK.

Project experience

(9) My urban design experience includes the following projects:

- **Policy and guidelines:**
  - Contributor (State Government employee), Design Guidelines for Higher Density Residential Development, Activity Centre Design Guidelines;
  - Lead consultant, Urban Design Guidelines, Bowden, SA (SJB Urban, 2015);

- **Urban Design Advice:**
  - Eden/Haven/Sanctuary on the River, Abbotsford, for HAMPTON (complete), (SJB Urban, 2010). *High-density, mid-rise (9-11 storeys) permeable courtyard development, winner UDIA President’s Award, High-Density Housing Award (National, Victoria), Masterplanned Development Award (Victoria)*;
  - Richmond Plaza redevelopment, for Coles (SJB Urban, 2014);
  - Grocon FCAD redevelopment, Footscray Station Precinct (SJB Urban, 2011);

- **Independent reviews:**
  - Various independent review of permit applications, for Councils including Yarra, Port Phillip, Brimbank, Manningham and Casey.

- **Strategic plans, structure plans and Urban Design Frameworks:**
  - 1160 Sayers Road, Tarneit, Structure Plan for Wyndham City Council (landowner) (SJB Urban 2014-15). *Innovative, integrated plan for high-density, walkable precinct in greenfield setting*;
  - Footscray Station Precinct Planning and Urban Design Framework (SJB Urban, 2008-09). Winner, PIA Transport Planning Award 2008;
  - Brighton Toyota Site UDF, for LEFTA Corporation;
  - Frankston Transit Interchange Precinct UDF and Master Plan, for DPCD (SJB Urban 2009-2012);
  - Wise Foundation ‘Wellness Village’ UDF, Mulgrave, for landowners (SJB Urban, 2015-16);

- **Master Plans and Concept Designs**
  - Caulfield Village Master Plan, for Beck Property / Probuild (SJB Urban, 2012);
  - Greensborough Activity Centre Concept Master Plan, for Banyule City Council (2017);
  - 433 Smith Street Master Plan, for Places Victoria (SJB Urban, 2015);
  - Master Plan, Binks Ford Site, Footscray, for Places Victoria (SJB Urban, 2012);
  - Caulfield-Dandenong corridor concept/feasibility studies, for VicTrack (SJB Urban, 2015).

Experience in Fishermans Bend

(10) I have been involved in the following projects and engagements in Fishermans Bend:

- Fishermans Bend Community Infrastructure Plan, July 2013: lead consultant (SJB Urban, engaged by Places Victoria);
Gravity Apartments, Montague Street (complete): urban design advice, urban context report (SJB Urban, 2013, engaged by developer/project manager);

Carlins Site proposal, Buckhurst Street (approved, not constructed): limited urban design review/advice, urban context report (SJB Urban, 2013, engaged by project manager);

91-95 Montague Street (neighbouring Gravity Apartments): limited design advice, Victorian Design Review Panel participation (SJB Urban, 2015, engaged by developer) (current live permit application submitted for alternative scheme, without my involvement);


Experience preparing expert evidence

(11) I have presented evidence at VCAT and Planning Panels Victoria on numerous occasions, predominantly as Director of SJB Urban.

1.3 Instructions

(12) I was engaged by City of Port Phillip on 30 January 2018 to prepare this Statement. My instructions are summarised below. In preparing this Statement, I have:

o Visited the subject area on multiple occasions;

o Reviewed a range of documents as follows:
  - Fishermans Bend Vision, September 2016;
  - Fishermans Bend Urban Design Strategy (Hodyl & Co.), September 2017;
  - Fishermans Bend Framework (Draft for Consultation);
  - Planning Scheme Amendment documents (track changes versions): Clauses 21.01, 21.02, 21.03, 21.04, 21.05, 21.06, and the amended versions (issued February 2018) of Clauses 22.15, 37.04 (CCZ1), 43.02 (DDO30) and 45.09;
  - Fact Sheets (various);
  - Submission 153 (City of Port Phillip), December 2017, and updated maps received 23 March 2018;
  - Submissions relating to built form and urban design, as instructed by City of Port Phillip officers: 63, 90, 121, 131, 143, 149, 157, 167, 169, 172, 173, 180, 185, 203, 206, 215, 217, 220, 222, 242;
  - Expert Urban Design Evidence – Leanne Hodyl (prepared on behalf of DELWP), February 2018, and Addenda 1 (5 March), 2 (9 March), 3 (9 March) and 4 (13 March 2018);
  - Fishermans Bend Community Infrastructure Plan (2017);
  - Fishermans Bend Public Space Strategy (Planisphere), April 2017;
  - Fishermans Bend Ministerial Advisory Committee: Innovation, Evidence and Outcomes Forum: Final Report (I was one of 61 invited participants in this forum);

o Met with Council officers and Maddocks on several occasions, to be instructed, briefed on the Amendment, background, submissions and Council’s 3D modelling work.
(13) My instructions are as follows, and relate to the area of Fishermans Bend within the City of Port Phillip (so excluding Lorimer):

- Review the Amendment documentation and supporting material;
- Preparation of built form / urban design expert evidence, addressing the following matters:
  - How the proposed Amendment GC81 and its supporting material proposes to manage the built form and the future urban design of Fishermans Bend;
  - Whether the controls deliver the following relevant ‘Priority Outcomes’ and ‘What the Framework must deliver’ sections outlined in Council’s endorsed submission:
    - Priority Outcome 1.1 – Housing choice to support a diverse, family friendly community;
    - Priority Outcome 3.1 – A urban structure that reinforces place and creates diverse, mixed use neighbourhoods;
    - Priority Outcome 6.3 – A landscaped solution to flooding and water management;
  - The extent to which Amendment GC81 and the draft Framework are likely to achieve the approved Vision for Fishermans Bend;
  - The submissions made by Council relating to design controls and built form objectives;
  - Review of, and comment on up to 20 public submissions from other stakeholders as they relate to built form / urban design;
  - Make any recommendations for changes (if required) to Amendment GC81.

(14) I am not instructed to consider the proposed planning controls in the context of, or in comparison to, current or previous controls, or to consider the planning process for Fishermans Bend to date.

1.4 Preface

(15) While Fishermans Bend constitutes a defined, distinct locality with clear boundaries, it is not a single site or under a centralised control. It is identified as an area for significant change, and is in the early stages of a major transformation.

(16) It is clear that a substantial planning effort has taken place to establish a strong and forward-looking vision, and mechanisms and controls towards achieving this vision. This vision seeks a regenerated urban precinct which is optimised in terms of liveability, accessibility, diversity and prosperity, by integrating and managing infrastructure, development and a mix of land uses.

(17) The fragmented, predominantly private land ownership conditions present key challenges for implementation of urban renewal in Fishermans Bend.

(18) The private sector, landowners and developers will be central in delivering the vision for Fishermans Bend, predominantly through construction of new residential and commercial redevelopment, along with (potentially) community facilities, other infrastructure and open space. Therefore, the planning framework must be sufficiently attractive to commercial investment, while also strongly aligned to a defined and supported vision, and reliable process for achieving it.

(19) Therefore, an effective balance of clear intent and defined outcomes, effective controls, and a strong system for implementation and facilitation of high-quality development and innovation, is required.
(20) I commence this Statement from this understanding of the context.

1.5 Summary of opinions

1.5.1 Draft Framework
(21) I support the following key aspects of the Draft Framework, noting I am not instructed to carry out a full critical review:

- Identification of key streets and civic spines, and built form management to protect amenity in these locations;
- Demarcation of a network of linear green spaces, to connect larger parks and open spaces;
- Distribution of community infrastructure within a series of centralised hubs which support walkable access and definition of distinct neighbourhoods;
- Planning for high-capacity public transport to support sustainable development, noting clarity of implementation potential/timing is required;

1.5.2 FAR and FAU provisions
(22) I support the use of FAR and FAU provisions to manage and contain development outcomes, provide for flexibility and a range of potential built form outcomes, and incentivise the provision of public benefits, in line with the vision and preferred character for each area.

(23) I see several significant issues with the methodology and assumptions applied to determine the specific controls, resulting in substantial uncertainty around potential development outcomes.

(24) The proposed density controls require revision, to reflect the potential for FAU beyond the ‘base’ floor space extent, and could become a mechanism to limit the extent of FAU that is allowable in each Precinct.

1.5.3 Built form controls
I have recommended several minor changes to the built form controls, as follows:

- Apply consistent 8-storey control to area of Montague South, west of Montague Street;
- Lower the proposed 24-storey area in Wirraway core to 14-16 storeys;
- Confirm the general 8-storey height provision in Wirraway non-core (rather than 6-storeys as suggested by the Framework);
- Increase the central area of Wirraway non-core, between Plummer Street and Woodboard Road to 10 storeys;
- Change the mandatory 4-storey controls for the southern interfaces, to discretionary, with mandatory 4-storey frontage and minimum 10m upper level setbacks.
- Increase the discretionary 4-storey area of Wirraway, to 6-storeys;

1.5.4 Process matters
(25) I support a regular monitoring and response process, to manage development outcomes in line with infrastructure provision and other considerations over time.
(26) I recommend an integrated, Precinct-wide approach to flood protection and water management, which can avoid the need for raised floor levels, which are detrimental to good urban design outcomes.

(27) I recommend greater attention to design quality in the controls, and development of a Design Code or similar, to establish design quality expectations, as well as application of a Design Review Panel process.

(28) I consider the further development of the Framework into a Master Plan, which is robust yet flexible and responsive, to clearly define the built form parameters and outcomes, although I acknowledge the process challenges this idea presents.

(29) Creating a benchmark urban renewal precinct and cohesive, mixed-use community, will require strong design control, comprehensive integration across site boundaries and precincts, while providing opportunities for innovation and negotiation.

(30) Therefore an ongoing ‘hands on’ approach to design, monitoring, management, negotiation and delivery is recommended as Fishermans Bend evolves over the long term.
2.0 Review of the Vision and strategic intent

2.1 The context for cities and urban development

(31) Amendment GC81 reflects a substantial shift in the approach to planning and development control in Fishermans Bend, introducing a range of new planning mechanisms for this area, derived from an extensive process of integrated planning for land use and infrastructure.

(32) As Australia’s largest urban renewal project, in a prominent location adjoining Melbourne’s CBD, with extensive planned/proposed transport infrastructure and substantial development potential, and in the context of the Vision outlined above, I consider it important to consider the planning directions in the context of international urban development directions and best practice urban renewal projects.

2.1.1 Compact city planning/development model

(33) Many social, economic and environmental challenges are increasingly linked to the physical development of cities. A broadly accepted view has emerged that effective government intervention is required to directly address the physical shaping of cities and urban environments through steering urban development - rather than merely relying on indirect measures.

(34) The ‘compact city’ is an influential framework for development internationally, and a spatial interpretation of sustainable development. This parallel between compact urban design and sustainability outcomes is foundational for consideration of planning for Fishermans Bend. It is reinforced by the Better Growth, Better Climate paper by the New Climate Economy Global Commission (2014) which proposed that developing denser, smarter cities is the best way to save energy and minimise the human footprint on the planet and global resources, by reducing travel times for people, goods and food.

(35) The principle of co-location of activities at neighbourhood level to reduce travel requirement is essential to the direction towards ‘accessibility’ alongside ‘movement/mobility’ – connecting locations while at the same time creating places.

(36) Implementing compact, connected urban development typically includes a focus on urban regeneration, revitalisation of urban cores, promotion of public and non-motorised transport, extensive environmental controls and high standards of urban management. It aims to increase residential populations and densities, and intensify activities in pursuit of global sustainability benefits derived from the concentration of urban functions.

(37) The 2016 United Nations New Urban Agenda, the globally adopted strategy for urban development, contains four key commitments relating to urban compactness.

__________________________

3 Ibid, p.20
4 Ibid, p.32
(38) Compact city principles have been guiding principles for London’s most prominent urban regeneration efforts, particularly Kings Cross and the Olympic Village (see below).

(39) Criticism of the compact city model has included:

- Negative side effects, including increased urban heat island effect, congestion and overcrowding, reduced access to nature and loss of open space;
- Higher densities being less popular with urban residents;
- Regulatory mechanisms that distort market forces leading to negative side effects such as increased house prices and lower housing quality;
- Regulatory constraints on ‘vertical development’ that have a regressive impact on housing supply, affordability and housing equity.

2.1.2 Urban renewal directions

(40) The widely recognised urban issues of housing affordability and increasing social disparity in cities has occurred in parallel to a shift towards building at higher densities on brownfield sites. However, “the quality of apartments has been widely criticised” internationally, and apartments are “predominantly bought by investors for renting to young professionals, while those on higher incomes still prefer older houses in established neighbourhoods. There are major doubts over whether new developments in housing renewal areas will ever work out as planned”.

(41) “Radical new mechanisms are needed both to upgrade existing neighbourhoods and to build sustainable neighbourhoods where people will really want to live”.

(42) The key for integrated land-use and transport planning is to concentrate residences, work areas and amenities to produce the shortest possible trip distances. Other essential ingredients are identified as follows:

- Fully integrate transport and land use planning;
- Policies must be multi-modal and include both incentives and disincentives;
- Establish clear, long-term goals, and pursue them consistently. Benchmark against competing and comparable cities;
- Continuity is vital, with ability to change tack as circumstances change;
- Recharge urban economies to create good new jobs to replace old ones that are being lost;
- Build enough good-quality housing to meet demands from all kinds of households, large and small, rich and poor;
- Create sustainable neighbourhoods with homes, jobs, shops, schools and services within easy reach on foot or by bicycle, connected to the rest of the city by good-quality public transport:
  - Build high-quality transport systems, in advance of development, to ensure that new housing areas are connected to jobs, shops, schools and services from the start.

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8 Ibid, p.50
9 Rode, loc cit, pp.21-23
11 Ibid, p. 33
12 Ibid, p. 48
13 Ibid, pp. 270-310
- Create places where people want to live, and where they feel good about living.
- Ensure release of sufficient housing land, in parcels of sufficient size and with already-developed master plans, at a fair price, for immediate development:
  - Strong city planning departments with real planning powers and a willingness to take a positive lead, particularly in developing overall master plans as a framework for development or regeneration of specific areas;
  - Willingness/eagerness on the part of these agencies to engage with the private sector... in the subsequent detailed development process... from a position of strength through control of the master planning process”.
- Create new forms of housing tenure to supplement and provide an alternative to those already available.

2.1.3 Key considerations for Amendment GC81

The above very concise review of current literature providing a background reference for the Fishermans Bend Framework and proposed policy settings, confirms:
- The consensus regarding the benefits of more compact, integrated urban development and infrastructure planning/delivery;
- Importance of optimising density;
- The potential of compact, higher density development to support a range of social, environmental and economic benefits;
- The need to manage potential negative consequences through careful design, monitoring and management;
- The need for strong leadership, regulation and direction in achieving these goals;
- Importance of clear long-term vision, and master plans to guide implementation, which embed flexibility to respond to changes over time;
- The importance of integrated transport which is delivered early, alongside good conditions for walking and cycling.

The draft Framework and Urban Design Strategy illustrate a comprehensive approach to planning and guiding urban development and infrastructure provision. Key facets of the approach are strongly aligned to best practice planning for urban renewal, including:
- Defining a clear vision, and distinct character for each Precinct, with further distinction between central (core) locations and other (non-core) areas;
- Encouraging higher-density, mixed-use development throughout, while controlling density to support liveability outcomes;
- Encouraging diversity of built form, prevailing land-use, and development type across the area, creating distinct Precincts;
- Integration of transport planning with development provisions, although the early confirmation and delivery of public transport infrastructure, as well as cycling infrastructure, would be of significant benefit in attracting development and establishing sustainable transport habits;
- Establishing an integrated open space network;
- Expanding the network of streets and lanes to enhance walkability;
- Establishing clear built form parameters to provide varied urban outcomes, enhance streetscapes and ensure sunlight to key streets and open spaces;
- Guiding a genuine mix of land uses, with varying proportions across the area.
2.2 Vision for Fishermans Bend

2.2.1 Summary of the Vision

(45) The lead vision statement reflects strong aspirations and a forward-looking approach to guiding redevelopment in Fishermans Bend: “A thriving place that is a leading example for environmental sustainability, liveability, connectivity, diversity and innovation.”

(46) The Vision (preface section, THE VISION, page C) supports a “benchmark for sustainable and resilient urban transformation”, and sets significant targets (p.7) for:

- Open space: within 200m of all residents and workers;
- Sustainable transport: for 80% of trips;
- Housing: diverse and affordable.

(47) Through “good planning and design”, Fishermans Bend will support a “range of medium and higher density built form”, to influence positive change in the design and sustainability of higher density apartment developments.

(48) The Vision introduces eight (8) Sustainability Goals, as follows:

- Inclusive and healthy: all ages/backgrounds, families, community services providing opportunities for connected and healthy lives;
- Prosperous: employment/education opportunities, commercial and creative industries;
- Low carbon: energy efficiency
- Water sensitive: minimising water use, water recycling, WSUD, stormwater detention within buildings;
- Climate adept: resilience to extreme weather, lower heat island effect;
- Connected and liveable: integrated transport, walkable, activity centres;
- Low-waste: management, recycling;
- Biodiverse: Spaces and buildings create habitat, green links.

(49) The 10 Strategic Directions are also relevant to urban design and built form, directly or indirectly:

1. The creation of 21st century jobs
2. The timely provision of infrastructure
3. A place that is easy to get around
4. A vibrant mix of uses and activities
5. Distinctive and unique neighbourhoods
6. Diverse communities
7. A high quality built environment
8. A sustainable and resilient place
9. Manage industrial legacy and ground conditions
10. Strong partnerships, effective governance and civic leadership.

(50) In seeking to develop “thriving place that is a leading example for environmental sustainability, liveability, connectivity, diversity and innovation”, and a “benchmark for sustainable and resilient urban transformation”, demonstrating “new benchmarks for urban renewal”, the vision is clearly bold and aspirational. I consider it adequately clear in setting the direction for planning and implementation, and a providing the reference for assessing this Amendment.

2.2.2 Vision and built form intent, by Precinct

(51) The vision for Fishermans Bend seeks the following urban design and built form outcomes:
A series of diverse, walkable, higher-density neighbourhoods;
Safe, welcoming and vibrant places for all people;
Leafy streets, intimate laneways and great public spaces framing contemporary architecture;
A network of boulevards and green links connecting neighbourhoods and public spaces;
A series of distinctive places that reflect Melbourne’s past and define its future.

The descriptions of the Vision for Fishermans Bend and for each Precinct are indicative only, and so cannot fully articulate the qualities and potential distinction between different precincts. These qualities will evolve over time as the Precincts develop. My interpretation of the potential urban design outcomes is also informed by the 3D modelling in Addenda 3 to Ms Hodyl’s evidence, and the proposed built form controls applicable to each Precinct, which are discussed further below.

Sandridge:

Vision:

- Premium office and commercial location; professional services and creative businesses;
- High quality vibrant streets and public spaces;
- Fennel-Plummer Street boulevard;
- Architecturally diverse towers, extending Melbourne’s skyline towards Port Phillip Bay;
- Buildings designed to provide an attractive street-level experience, and protect public spaces from overshadowing;
- Lower scale closer to Garden City and Port Melbourne;
- Wide footpaths, cycle routes and tree-lined streets encourage healthy, active transport;
- A series of networked public spaces;
- North Port Oval is a key civic/community anchor;
- Exemplar of sustainable and resilient mixed-use development.

Preferred building typologies (Urban Design Strategy):

- Core: High density mixed-use, significant jobs growth, tower developments supported;
- Non-core: Diverse built form and character, 6-24 storeys. Williamstown Road interface – 4-storey mandatory height, but with reduced depth.

Interpretation from an urban design and built form perspective:

Core:
- Encouraging taller built form, urban intensity;
- Vertical emphasis, significant scale and visual strength;
- Busy, dynamic street and spaces;
- Layered activity, vibrant;
- High-quality streetscapes, active building interfaces across street wall levels;
- Contemporary, international, commercial character.

Non-core:
- High-amenity streetscapes, defined frontages;
- Complex, varied built form;
- Transition down in scale in scale to the west;
- ‘Urban’ character public spaces;
- More spacious, open setting, but with intensive residential-focused use, and active streets.
  - Relative comparison in Melbourne: CBD, Docklands central area.

Montague:
(56) Vision:
  - Two neighbourhoods, each with its own character and identity;
    - North:
      - Strong mixed-use focus, careful design for human scale at street level;
      - Community services co-located within mixed-use developments;
      - Normanby Road is a vibrant boulevard;
    - South:
      - Range of building types;
      - Network of gritty streets and laneways, strong pedestrian focus;
      - Vibrant and eclectic character, myriad (smaller) businesses;
      - Heritage and character buildings are adapted for high amenity housing and commercial opportunities;
      - Lower scale residential and commercial along City Road and Boundary Street to support integration;
      - Ferrars Street provides a pleasant walking and cycling route;
      - Open space near corner Buckhurst and Ferrars Streets is a key landscape asset;
      - Buckhurst Street green spine is the heart of Montague, connecting community hubs, with activated public realm, as a cosmopolitan retail/dining destination;
      - Diverse and family-friendly community.

(57) Preferred building typologies (Urban Design Strategy):
  - Tower developments supported, but reduced heights (Montague North);
  - Heights reduced to increase sunlight to streets, particularly Normanby Road as a high-quality civic spine;
  - Montague South heights limited to maximise amenity of Buckhurst Street local centres, and transition towards lower scale of South Melbourne;
  - Generally, 8-storey heights in non-core areas, with 4-storeys at interface.

(58) Interpretation from an urban design and built form perspective
  - North (Core):
    - Newer, more extensive redevelopment, more contemporary character;
    - Mixed-use, contemporary, higher scale;
    - Strong commercial character, bold built form, wide streets;
  - Relative comparison in Melbourne: Docklands, Southbank (southern area);
  - South (Core):
    - ‘Urban’ character/texture, mix of old and new;
    - Creative environment, diverse visual qualities;
    - Complex network of varied streets and lanes;
    - Mid-rise, robust, diverse, building on existing fabric;
    - Transition down in scale to southern interface;
  - South (non-core)
    - Prevailing mid-rise focus, diverse forms, materials, textures;
    - Walkable streets and lanes, ‘urban’ character, robust built form qualities.
Wirraway:

(59) Vision:

- Family-friendly neighbourhood;
- Small parks, plazas and playgrounds linked by leafy streets lined with different types of shops, businesses and homes;
- Diverse housing, including small-medium scale apartment buildings, with some higher-rise developments;
- Intimate-scale green spaces within residential developments;
- Contemporary architecture, sensitive cultural/industrial references;
- JL Murphy Reserve is a major focus, with best practice stormwater management;
- Thriving arts scene with small galleries and cultural facilities;
- Service industries, R&D hubs support real employment diversity;
- Many small businesses;
- Plummer and Salmon Streets are important public transport routes;
- Attractive and engaging experience along Plummer Street Boulevard; through specialty retail, cafes and community facilities;
- Local Centre: higher densities, with slender commercial buildings within a generally lower-rise skyline;
- A place for people of all ages.

(60) Preferred building typologies (Urban Design Strategy):

- Taller buildings supported in the activity core, but ensuring that the southern side of Plummer Street is not overshadowed;
- Generally 6-storey limit in non-core areas, with 4-storeys at southern interface.

(61) Interpretation from an urban design and built form perspective

- Core:
  - Mid-rise focus, limited vertical scale;
  - Linear main street boulevard as activity focus;
  - Broad building forms defining street blocks, some vertical extension of built form above consistent ‘base’.

- Non-core:
  - Lower, more intimate scale – streets, spaces, buildings;
  - Buildings in more open, landscaped settings, but with urban edges;
  - Defined streets, buildings framing street edges, enclosing courtyards
  - Creative business and arts opportunities suggest defined streets and active frontages;
  - Varied green spaces as contiguous network.

- Relative comparison in Melbourne: Fitzroy, Carlton, North Melbourne.
2.3 Benchmark reference projects

(62) My instruction is the consideration of urban design and built form. Therefore while other measures such as sustainability performance, infrastructure provision and economic activity will contribute to this vision, my focus is on the urban design and built form qualities and characteristics that contribute to benchmark urban renewal, and thriving, liveable, diverse, innovative urban places.

(63) It is valid in this context to consider other recognised benchmark examples of urban renewal internationally, as well as literature on these projects, to inform my review of the proposed vision and goals, as well as comparison of built form and public realm outcomes with density and FAR figures.

(64) While these projects have arisen in different contexts and circumstances, they generally share key aspects with Fishermans Bend, including an inner-urban regeneration focus, transport integration, mixed land uses and relatively high densities. They generally encompass a “range of medium and higher density built form”, to reflect “positive design and sustainability outcomes in higher density apartment developments”, in line with the Fishermans Bend Vision.

(65) The Fishermans Bend Vision seeks for it to be “celebrated as an exemplar of sustainable and resilient urban transformation”. The projects outlined below are widely recognised as benchmark projects in this regard.

(66) Images of these projects are provided at Appendix 1.

2.3.1 Kings Cross, London

(67) London is experiencing many of the growth pressures in parallel with Melbourne - housing access and affordability, managing development, increasing house prices, social and amenity challenges, increasing inequality - but at a more advanced level, and from a larger population base, as it approaches a population of 10 million.

(68) The ongoing redevelopment of former rail/industrial land at Kings Cross in central London is characterised by mid-rise built form and a high-quality public realm. The location enjoys unparalleled transport accessibility, at local, regional and international scales, and has benefitted from substantial transport investment in recent years. Kings Cross is one of the most accessible and connected locations in Europe.

(69) I have gained exposure to this project through my recent studies in London, including multiple visits, a guided tour and meetings/presentations with the developer.

(70) As context for the yields and density shown below, the Master Plan includes 17 residential buildings, and 22 office buildings. The strict planning control formed by identified view corridors to St Paul’s Cathedral from elevated points to the north meant that most buildings were restricted to around 50m in height. However, the precinct was planned on ‘human city’ principles and is being delivered as a highly sought after residential and commercial location, with leading architects, high-end living and companies including Google and Facebook establishing headquarters there. The precinct has proven very successful in creating a new place and destination for events, gatherings and social activity in London.

(71) Parallels with / relevance for Fishermans Bend:

(72) Differences to Fishermans Bend:
  o High-level transport infrastructure/accessibility in place;
  o No higher-rise development;
  o Single developer.

2.3.2 East Village, Olympic Park, London

(73) This regeneration project was established by/for the 2012 Olympics, and construction continues today. It comprises a residential-focused precinct of mainly mid-rise buildings, as well as the adjacent Stratford City ‘International Quarter’ of higher-scale buildings with a commercial focus.

(74) I have gained exposure to this project through my recent studies in London, including multiple visits, a guided tour and a lecture/presentation by the Development Corporation.

(75) The plan reflects a ‘village garden-type district” reflecting the qualities of Victorian west London. Each of the 67 blocks is between 8-12 storeys in height, with lower levels comprising 2-3-storey townhouses and 1-3-storey shops and offices. Housing ranges from Studio to 5-bedroom, with a mix of low-cost and private apartments12.

(76) Parallels with / relevance for Fishermans Bend:
  o Prevailing mid-rise scale, perimeter block typology, with some higher buildings;
  o Defined cluster of higher built form and commercial focus;
  o Mid-rise building height proportional to street width;
  o Aspirational vision/principles established at outset, though consultative process;
  o Delivered by the private sector, multiple developers, long-term implementation (ongoing);
  o Diverse housing;
  o New school, sports facilities, open space and other community infrastructure being delivered.

(77) Differences to Fishermans Bend:
  o Established through major Olympics investment;
  o High-level transport infrastructure/accessibility implemented in parallel (Stratford International Station, high speed connection);
  o Delivered through independent implementation body (London Legacy Development Corporation).

2.3.3 HafenCity, Hamburg13

(78) This waterfront regeneration project on former ports land in a central location is considered a benchmark of sustainable urban development. High ecological standards have been applied throughout.

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(79) I have not visited this project, but have gained limited exposure to it through my recent studies in London.

(80) The whole area is raised 8-9m above sea level, except the promenades and quays.

(81) The project is based on a flexible masterplan which is continually updated and refined as part of an ongoing development process.

(82) It comprises various districts with distinct identities. The western and central HafenCity are more intensively urban in character, with the three eastern neighbourhoods focused on living and leisure, creativity and culture, and business and housing respectively.

(83) HafenCity has attracted some 10 billion Euros ($AU16 billion approximately, at today’s conversion) in private investment, with 3 billion Euros ($AU4.8 billion) in public investment.

(84) Parallels with / relevance for Fishermans Bend:
   - Prevailing lower-mid-rise scale;
   - Precinct-wide integrated flood protection (see discussion below);
   - Inner-urban location, adjoining CBD;
   - High sustainability aspiration and targets;
   - Distinct neighbourhoods/character areas informing built form and land use.

(85) Differences to Fishermans Bend:
   - Smaller city, presumably lower growth rate;
   - Single governing body.

2.3.4 Hammarby Sjostad, Stockholm 14

(86) This project is a large, former industrial waterfront site, 5km from the city centre, with relatively high-density apartment housing built next to open park or water spaces, all centred on a single spine road and tramway. It is “extraordinarily attractive to affluent middle-class households with young children, for the communal atmosphere and easy access to jobs and services.” 15

(87) I have not visited this project, but have gained limited exposure to it through my recent studies in London.

(88) The precinct was designed on “compact green city” principles, with an urban density comparable to the city centre. A key focus is the application of ‘closed loop’ sustainability principles encompassing district heat, waste and water recycling. It incorporated technical innovations through a rigorous masterplan, and drove innovation by harnessing competition between developers 16.

(89) The land was originally privately owned, but bought back by the city government, then sold or apportioned to developers. Stockholm is a smaller city than Melbourne (2.3 million in metropolitan area), and presumably has lower growth rates currently.

(90) Parallels with / relevance for Fishermans Bend:


15 Peter Hall, loc cit, p. 280-1.

2.3.5 Wembley Park, London

(92) This large redevelopment project adjacent to Wembley Stadium is approximately halfway through its 20-year implementation.

(93) I have gained extensive exposure to this project through my recent studies in London, including multiple visits, guided tours, lectures/presentations by the developer, and a 4-month engagement and investigation project for the developer.

(94) It is being delivered by a single developer, and all housing will be retained by the developer, for institutional rent through a centralised rental company, owned by the developer.

(95) The built form is predominantly mid-rise (4-10 levels), with provision for greater height to approximately 20 levels in defined locations, with a prevalence of perimeter block-type buildings, and a grid-based street network.

(96) Parallels with / relevance for Fishermans Bend:
   - Prevailing upper-mid-rise scale, with some high-rise;
   - Master Plan seeking diversity and integration with established diverse surrounding neighbourhoods;
   - Long-term implementation.

(97) Differences to Fishermans Bend:
   - Greater separation from central city (21km from City of London)
   - High-level public transport in place (Underground and buses);
   - Existing major events facilities (stadium and arena);
   - Single developer and landholding;
   - Innovative tenure model (build-to-rent).

2.3.6 IJburg, Amsterdam

(98) I have visited this project during its development, in approximately 2004.

(99) It is a recent housing-focused development on re-claimed land in Amsterdam’s harbour, which effectively expands the central city area.

(100) Parallels with / relevance for Fishermans Bend:
   - Prevailing mid-rise scale;
   - Inner-urban waterfront location;

(101) Differences to Fishermans Bend:
   - New land created with dedicated Master Plan;
   - Distinct cultural context regarding transport and housing.

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Wembley Masterplan – Supplementary Planning Document, June 2009
2.3.7 Canary Wharf, London

(102) I have visited this precinct on multiple occasions, including during my recent studies in London.

(103) It was delivered by a single developer and is recognised for predominantly commercial office uses and relatively tall buildings. I understand that Europe’s tallest residential tower is currently under construction at Canary Wharf, at approximately 235m.

(104) Parallels with / relevance for Fishermans Bend:
   - Prevailing high-rise scale, with some mid-rise;
   - New public transport infrastructure (Underground Jubilee line extension and new Station) was essential to the development.

(105) Differences to Fishermans Bend:
   - Predominantly commercial focus, but with residential uses developing recently;
   - Greater separation from city centre;
   - Single developer/landholding;
   - The area was initially declared an Enterprise Zone, which I understand provided relaxed planning controls and other incentives to private sector investment and development.

2.3.8 Paddington, London

(106) I have visited this precinct on multiple occasions, including during my recent studies in London.

(107) It is characterised by recent commercial development, supported by Paddington Station and the Heathrow Airport Express train, as well as Underground trains.

(108) It is situated on a junction of two major canals, and its public realm benefits from this interface.

(109) Built form scale is predominantly mid-rise, up to approximately 12 levels.

(110) Parallels with / relevance for Fishermans Bend:
   - Prevailing upper-mid-rise scale;
   - Commercial focus in central area;
   - Surrounding established residential neighbourhoods.

(111) Differences to Fishermans Bend:
   - High-level public transport infrastructure in place;
   - Existing amenity provided by canal frontages;

2.3.9 Potsdamer Platz, Berlin

(112) I have visited this precinct on multiple occasions, including during my recent studies in London. It was fully re-built after Germany’s reunification, including a new train station.

(113) The built form is predominantly mid-rise with a mix of residential, commercial and entertainment functions, with distinct high-rise building forms at the major intersection.

(114) Parallels with / relevance for Fishermans Bend:
   - Mix of mid-rise and high-rise buildings;
   - Precinct-wide integrated water management;
   - Inner-urban location, adjoining CBD;
   - High sustainability aspiration and targets.
(115) Differences to Fishermans Bend:
   o Significantly smaller area;
   o Supported by new train station built in parallel to redevelopment.

2.3.10 Battery Park City, New York

(116) I have not visited this project.

(117) The master plan was implemented over 30 years, and encompasses a “return” to a “streets-and-blocks” approach centred on attractive public spaces. It contains a range of building heights, including buildings of 22, 32 and 43 levels\(^a\).

(118) The master plan was developed to be both innovative and appealing to developers. It includes a central commercial hub, with residential buildings extending to the north and south along boulevards. 30% of the site was reserved for public space. It enjoys a 2.4km long waterfront.

(119) Criticism includes a lack of diversity (it is primarily inhabited by upper-income residents), and uninspired architectural design. Further, it is reported that “the block-wide parcel sizes can make even the low-rise buildings seem over-scaled”, and the area lacks the dynamism of places that have developed over time\(^a\).

(120) Parallels with / relevance for Fishermans Bend:
   o Range of building heights;
   o Central commercial ‘core’ or hub;
   o Large development blocks (noting Fishermans Bend encompasses a range of block sizes);
   o Multiple developers;
   o Long-term implementation through a master plan;
   o Extension of central area of a large and growing city.

(121) Differences to Fishermans Bend:
   o Direct waterfront setting;
   o Reclaimed land, with planned block/parcel structure for master plan purpose.

2.3.11 Comparative tables

(122) Table 1 (below) sets out comparative size, yield and density figures for the above projects, alongside Fishermans Bend, for the purposes of comparing density and Floor Area Ratio figures with potential built form and urban design outcomes. Table 2 provides additional comparisons of Plot Ratio (Floor Area Ratio) between some of the abovementioned developments.

(123) I assume the site area figures in these tables reflect gross development areas (so including streets and local open spaces), because they are based on analysis of development outcomes. However, I acknowledge that comparisons of densities and other development data between international projects can be affected by varied measurement methods and assumptions, and so these comparisons are provided for indicative purposes only.

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\(^b\) Ibid.
Table 1: Comparative data for identified benchmark projects (various sources as referenced above and below). Images at Appendix 1.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Land area (ha)</td>
<td>248</td>
<td>12</td>
<td>27</td>
<td>455</td>
<td>25.7</td>
<td>130 (developed area)</td>
<td>34.4</td>
</tr>
<tr>
<td>Residents</td>
<td>80,000</td>
<td>12,000</td>
<td>5,636*</td>
<td>36,000*</td>
<td>4000*</td>
<td>24,000</td>
<td>20,000**</td>
</tr>
<tr>
<td>Dwellings</td>
<td>36,900</td>
<td>7,000</td>
<td>2,818 (+2000 market homes) – first stage</td>
<td>18,000</td>
<td>2,000</td>
<td>11,000</td>
<td>7,000</td>
</tr>
<tr>
<td>Affordable housing</td>
<td>6%</td>
<td>1,500-2000 (21%-29%)</td>
<td>1,379 (49%)</td>
<td>30%</td>
<td>40%</td>
<td>Benchmark 40% (60% social rent, 40% shared ownership); Stage 1: 1,400 out of 3,727 (37.5%)</td>
<td></td>
</tr>
<tr>
<td>Resident density (ppl/ha)</td>
<td>323</td>
<td>55</td>
<td>209*</td>
<td>79*</td>
<td>156*</td>
<td>150</td>
<td>581*</td>
</tr>
<tr>
<td>Dwelling density (dw/ha)</td>
<td>149</td>
<td>110</td>
<td>104</td>
<td>74 (average, as published); 40 (as calculated)</td>
<td>78</td>
<td>85</td>
<td>203</td>
</tr>
<tr>
<td>Jobs</td>
<td>40,000</td>
<td>44,958</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10,000</td>
<td>8,640</td>
</tr>
<tr>
<td>Jobs density (jobs/ha)</td>
<td>167/ha</td>
<td>354/ha</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>67/ha</td>
<td>251/ha</td>
</tr>
</tbody>
</table>


21 David McManus, London Olympics Village: Architecture, at [https://www.e-architect.co.uk/london/london-olympics-village](https://www.e-architect.co.uk/london/london-olympics-village)


23 Vanessa Rutgers, Amsterdam IJBURG – urban guest in nature, 2015, at [https://issuu.com/blogwerk/docs/ijburg_a4-final.20mb](https://issuu.com/blogwerk/docs/ijburg_a4-final.20mb)


26 Quintain, Wembley Park at [http://www.quintain.co.uk/wembley-park](http://www.quintain.co.uk/wembley-park)

27 Wembley Masterplan – Supplementary Planning Document, June 2009

28 Quintain, Wembley Park Masterplan, at [http://www.quintain.co.uk/wembley-park/masterplan](http://www.quintain.co.uk/wembley-park/masterplan)
## FAR

<table>
<thead>
<tr>
<th></th>
<th>2.1-8.1</th>
<th>3.7-6.1</th>
<th>-</th>
<th>-</th>
<th>3.1:1</th>
<th>1.2-2.3 across entire TOD district(^*)</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Land use mix</strong></td>
<td>-</td>
<td>-</td>
<td>Nearly 1000 3-4-bed homes (35%)</td>
<td>30% social housing, 40% medium range, 30% high-end, 100,000 sq. m office, 30,000 sq. m retail, 80,000 sq. m community facilities</td>
<td>Approx. 10% retail/restaurant; 20% arts/education/leisure; 14.2ha public realm</td>
<td>-</td>
<td>Extensive retail, comm, ent’ment</td>
</tr>
</tbody>
</table>

\(^*\) = Estimated, based on assumed average 2 persons per dwelling.

- = Data not available

\(^\text{**}} = This figure is understood to include significant student housing which is being provided at Wembley Park

**Table 2:** Comparative plot ratio and building height measures for benchmark projects\(^{30}\)

<table>
<thead>
<tr>
<th><strong>Site area (ha)</strong></th>
<th><strong>Site coverage</strong></th>
<th><strong>Mean no. of storeys</strong></th>
<th><strong>Plot ratio</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kings Cross, London</strong></td>
<td>25.7ha</td>
<td>45%</td>
<td>8.9</td>
</tr>
<tr>
<td><strong>Canary Wharf, London</strong></td>
<td>34.8ha</td>
<td>35%</td>
<td>19.0</td>
</tr>
<tr>
<td><strong>Paddington, London</strong></td>
<td>18.2ha</td>
<td>32%</td>
<td>11.3</td>
</tr>
<tr>
<td><strong>Potsdamer Platz, Berlin</strong></td>
<td>10.4ha</td>
<td>50%</td>
<td>11.3</td>
</tr>
<tr>
<td><strong>Battery Park City, New York</strong></td>
<td>37.0ha</td>
<td>39%</td>
<td>16.5</td>
</tr>
</tbody>
</table>


These international examples demonstrate the general range of average Plot Ratio (FAR) figures across inner-city redevelopment areas which display a range of medium-rise and high-rise built form (in line with the vision for Fishermans Bend - refer images at Appendix 1). These locations may be aligned with the vision for different parts of Fishermans Bend, as follows:

- Kings Cross is strongly transport-oriented with a defined arts/cultural focus, and may be likened to the vision for Wirraway core;
- Canary Wharf is recognised for tall buildings and is a “premium” commercial centre, in line with the vision for Sandridge Core Area, with an average of 19 storeys;
- Paddington is a mixed mid-rise commercial precinct with attractive public realm and excellent transport access, and may be aligned to the vision for Montague;
- Potsdamer Platz is unique but integrates entertainment functions, public realm and mixed built form, in relation to the vision for Montague or Sandridge;
- Battery Park City may be likened to the vision for Lorimer, or for Wirraway Core, as a waterfront urban development with significant open space.

It is therefore pertinent to compare example FARs more specifically to Fishermans Bend Precincts, as follows:

<table>
<thead>
<tr>
<th>FAR</th>
<th>Example aligned with vision:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wirraway Core</td>
<td>3.1</td>
</tr>
<tr>
<td>Wirraway Non-Core</td>
<td>1.6</td>
</tr>
<tr>
<td>Sandridge Core</td>
<td>6.1</td>
</tr>
<tr>
<td>Sandridge Non-Core</td>
<td>2.5</td>
</tr>
<tr>
<td>Montague Core</td>
<td>4.6</td>
</tr>
<tr>
<td>Montague Non-Core</td>
<td>2.3</td>
</tr>
<tr>
<td>Lorimer Core</td>
<td>4.0</td>
</tr>
</tbody>
</table>

The specifics of FAR measurements in relation to on-site open space and streets, for example, may vary, as noted above. For example, the Fishermans Bend FARs apply to developable sites and do not include existing streets or open spaces, but it is not clear whether the above project FARs include or exclude streets. However, I consider the above indicative analysis a useful reference in considering the proposed FARs for Fishermans Bend.

Fishermans Bend FARs reflect a range, spanning from well below these international project averages, to well above them. The average FAR in Fishermans Bend is identified as 3.4:1 in the Urban Design Strategy (based on 80,000 residents and 40,000 jobs), which is relatively modest by the above comparisons. However, the Precinct-specific FARs appear to generally align with relevant international examples, at this indicative level of analysis.

Comparison of FAR in other locations

In considering the appropriateness of the proposed FAR controls from an urban design perspective, I have not carried out built form testing of the proposed FARs or alternative FARs in preparing this Statement. I am informed by comparisons of FAR controls in...
other cities, and by 3D modelling in Ms Hodyl’s evidence, and investigative 3D model analysis carried out by City of Port Phillip officers, which I have been briefed on, but have not received. The following comparison to other locations extends the consideration of international project FARs set out above.

(130) The *Melbourne Central City Built Form Review – Comparative Planning Controls Report* (April 2016) references allowable FARs in comparable city locations, which range from 6:1 to 16:1. Australian/New Zealand cities referenced are:

- Sydney Central City: 8:1 mandatory
- Perth: Citi Place and St Georges Precinct: 6:1 mandatory
- Auckland downtown: 9:1 mandatory

(131) These cities also provide for Allowable Floor Area Uplift as follows:

- Sydney Central City: mandatory for each available item, no maximum stated;
- Perth: Citi Place and St Georges Precinct: mandatory up to 20% or 50%;
- Auckland downtown: mandatory up to 4:1.

(132) Ms Hodyl’s evidence compares the proposed base FARs with other Australian locations (Figure 5), demonstrating that they are “higher than most other central city precincts” (p.31).

(133) Based on these comparisons, and the international references above, I consider the proposed Fishermans Bend base FARs to be reasonable in comparison to other relevant central city locations and urban renewal projects.

(134) Based on this indicative analysis, and pending further consideration of the FAU potential and built form implications, and the proposed built form controls:

- I am comfortable that the FARs as proposed generally align to the built form vision for Fishermans Bend;
- There is scope for additional floor space based on FAR comparisons, and this opportunity is provided through the FAU provisions;
- Analysis of 3D built form testing, below, provides further context for consideration of the FARs.
3.0 Review of the built form controls

3.1 Floor Area Ratio

3.1.1 Investigation of the basis of the FAR controls

Basis of population projections

(135) Technical Fact Sheet 5 points out that the residential population projection of 80,000 people for Fishermans Bend provides a density comparable to the projected densities of the Hoddle grid and Southbank, and “takes into account” proposed infrastructure provision. This projection results in an average residential density of 323 residents/gross hectare, which I derive to equate to 149 dwellings per hectare average, based on 22.17 people per dwelling. The distributed densities by Precinct, in Clause 22.15, range from 131 to 311 dwellings per hectare.

(136) Ms Hodyl’s evidence confirms that the 80,000 population originally derives from the first Draft Vision in 2013, and has informed planning work since then. This figure has direct implications for built form outcomes, as explained below.

(137) It is very difficult to assess the suitability of this figure for Fishermans Bend, because the physical manifestation of it is uncertain, the number may well be exceeded, as discussed below, and the built form outcome will result from other land uses as well as residential.

(138) In the discussion of ‘compact’ urban form, density is an essential consideration, and determines the balance between ‘making the most’ of land, infrastructure and resources, while maintaining amenity, functionality and liveability. Establishing appropriate density is therefore a central challenge for urban renewal.

(139) The New (Draft) London Plan (Policy D6) moves away from recommending specific density figures based on locational characteristics, and instead requires new development to “optimise density”, making the most efficient use of land, using a design-led and evidence-based approach to determine the capacity of the site, considering the context, connectivity and accessibility, and capacity of surrounding infrastructure. This Policy states that:

- The density of development proposals should be based on, and linked to, the provision of future planned levels of infrastructure rather than existing levels;
- The ability to support proposed densities through encouraging active travel should be taken into account;
- Where there is currently insufficient capacity of existing infrastructure to support proposed densities... ensure that sufficient capacity will exist at the appropriate time;
- In exceptional circumstances, development (may be) contingent on the provision of the necessary infrastructure and public transport services.
- Higher density developments are subject to higher design quality scrutiny.

(140) This approach reinforces the connection between development density and infrastructure capacity, and works to both encourage higher density where the site/location can accommodate it, while also restricting development where infrastructure capacity is limited, or until it can be enhanced.

(141) While I support this principle, which seeks optimisation of land use and efficiency, and requires the demonstration of the alignment of development with context and infrastructure, it derives from a different context to Fishermans Bend, in which I...
understand (through my recent studies) that the limited availability of land is placing significant pressure on housing supply. Adoption of a similar approach would presumably require clarity on the timing and form of planned public transport infrastructure.

(142) The projected average density for Fishermans Bend of 323 people/hectare allows comparisons as follows:

- Comparable with Southbank, Melbourne (308 people/hectare, projected to 2036), and Southbank is clearly developed to quite high density, with many tall residential towers;
- Significantly higher than Docklands, which contains a variety of residential building types, including townhouses, but also extensive employment/commercial space;
- Comparable with the CBD, which has much higher employment levels, and excellent public transport access;
- The Southbank Structure Plan Background Report (AECOM, 2009) compares densities in a range of places, including:
  - Coin Street, London Southbank: 200 people/ha;
  - Borneo Sporenbourg, Amsterdam: 200 people/ha;
  - Battery Park, New York: 240 people/ha;
  - Eixample, Barcelona: 351 people/ha.
- The average density across London of new housing approvals in 2015/16 was 154 dwellings/ha (estimated 308 ppl/ha), while the highest average was in Tower Hamlets LGA at 488 dw/ha (estimated 976 ppl/ha), which includes Canary Wharf and part of the Queen Elizabeth Olympic Park.

(143) If the ultimate population in Fishermans Bend reached 150,000, as has been identified as a potential in Ms Hodyl's evidence, the average density of residents would be 605 ppl/ha. The Urban Design Strategy identifies the imperative to keep residential densities below 500 people per hectare (p.43).

(144) The above international comparisons are provided to indicate the types of built form which align with the Fishermans Bend Vision, and the corresponding densities and Floor Area Ratios as available, to inform consideration of the appropriateness of these settings for Fishermans Bend.

(145) I consider the density and FAR provisions for Fishermans Bend to be reasonable and appropriate in this context, given that they span the range of average FARs of the comparison projects, and support a range of built form outcomes, based on these comparisons. The built form implications are explored further below.

(146) These comparisons do not provide a basis for reliably determining the appropriateness of the projected residential population for Fishermans Bend, or for assessing whether this projection reflects ‘optimising’ the land available.

(147) I recognise that planning for open space and community infrastructure is aligned to this projected population. I am not aware of whether the potential public transport infrastructure is also aligned to this projection, or if it could accommodate a higher population (noting that the population may eventually exceed the projected 80,000).

(148) I accept that a residential population of 80,000 reflects an appropriate balance of urban intensification and infrastructure provision, based on the extensive background work to this Amendment. I will further consider the built form manifestation of this basis later in this Statement.
The proposed population density is relatively high based on the indicative comparisons to international projects above, although Wembley Park, for example, reflects a higher density, but in a different context, like all the other comparison projects.

I also acknowledge that some locations and sites can accommodate higher densities than those proposed, even at mid-rise scale, with successful urban design outcomes.

As an example, I provided urban design advisory inputs to the Eden, Haven and Sanctuary development in Abbotsford (405 dw/ha, 9-11 levels, 67% site coverage, as shown in the Urban Design Strategy p.61), which I consider a successful outcome, with significant public realm/open space between buildings. I am not aware of the housing type mix for this project, but would presume the proportion of 3-bedroom units is relatively low. The residents density is presumably in the order of 600 ppl/ha.

In principle, it is my opinion that the urban renewal opportunity at Fishermans Bend should be optimised, by accommodating as many people and jobs as possible, while maintaining liveability, accessibility and service provision standards, and a high quality, amenable built environment and public realm.

I will return to the matter of the population target later, in my review of the built form controls and potential built form outcomes that result from the proposed FARs.

Method for deriving FARs

The projected residential population, along with several assumptions, forms the basis for determining the proposed Floor Area Ratio controls, as follows:

- The 80,000 projected population is used to calculate a total number of dwellings – 36,900 at 2.17 people per dwelling;
- This total is reduced by 90% of the number of dwellings already approved or delivered (assuming 90% of approved dwellings will be delivered);
- This number of dwellings, with an average dwelling size (floor area) based on identified proportions of 1/2/3/4 bedroom units, and assumed average size of these units, generates a total floor area (Gross Floor Area) requirement. I understand the relative proportions of apartment types/sizes is based on DELWP demographic projections;
- The Gross Floor Area calculation includes 25% non-sellable space added on (for corridors etc), which equates to 80% building efficiency (e.g. 100sqm dwelling + 25% = 125sq.m, 100sq.m of which is sellable, or 80%). I consider this a reasonable assumption, but buildings can be more efficient than this;
- Commercial floor space is also included, based on accommodating the projected 40,000 jobs;
- The combined Gross Floor Area for residential and job targets is distributed across the developable sites (excluding those with current permits), based on:
  - Distribution of population between Precincts, and between core and non-core areas, informed by the Vision for each precinct;
  - Assumption that 75% of all land will be developed by 2050, so FARs or floor space allocation to 75% of developable land is increased to meet the population targets by 2050, to allow for the assumed 25% of land that will not be developed (by 2050);
- This spatial allocation of floor space is used to calculate the FARs, by Precinct and Core/Non-Core areas.
3.1.2 Assessment of the method for determining FARs

(155) There are several acknowledged assumptions applied here, which warrant further consideration of the built form implications of other potential outcomes:

- If more than 75% of sites are developed by 2050, or if ultimately more than 75% or even 100% of sites are developed at some point beyond 2050;
- If more than 90% of current approvals are delivered;
- If the assumed (preferred) mix of different apartment sizes was not delivered, creating a smaller average size, allowing for more dwellings within the total floor space;
- If greater efficiency than 80% can be achieved in buildings, potentially allowing developments to accommodate more dwellings with the FAR.

(156) As Ms Hodyl’s evidence confirms, the FARs are directly aligned with the population target, but do not limit growth to this number, because the other 25% of developable land provides extra capacity. Ms Hodyl’s evidence notes that with the FAU provisions for affordable housing (discussed below), up to 150,000 residents may be accommodated (if affordable housing provision is ‘capped’ at the target of 2,214 (6% of 36,900) – almost double the projection. This could increase significantly further through FAU for community infrastructure and public open space. Ms Hodyl also confirms that the population target of 80,000 is aligned with infrastructure planning for this area.

(157) This potential variation in the ultimate population may result in significant variation in built form outcomes, relative to that accommodated by the proposed FRA settings, through increased development floor space. This also has potential negative consequences for infrastructure provision.

(158) While the method applied is logical and deterministic, the number of compounding variables serve to undermine the methodology, and by extension, potentially the built form framework and infrastructure planning. If the assumptions are incorrect and development occurs more rapidly and extensively, the built form outcomes may divert significantly from that envisaged in the vision.

(159) There is an inherent and supportable logic in establishing the required floor space, distributing this appropriately according to the preferred character of each precinct, and utilising this total to inform the built form controls, in providing for, and limiting development to, the projected population. However the ‘openness’ of the actual outcome appears to challenge the logic of the approach. This assessment is extended after consideration of the FAU provisions, below.

3.1.3 Assessment of proposed FARs

(160) Before considering the built form implications further, it is necessary to consider the appropriateness of the FAR provisions themselves, through consideration of the potential built form outcomes that result. My consideration of the FAR provisions is based on comparison with FAR controls for other relevant locations, and consideration of 3D modelling work by Ms Hodyl.

(161) In assessing the FAR controls, I accept the distribution of population by Precinct and core/non-core areas as proposed, and the allocation of people per household rates by Precinct, which reflect a clear logic of larger households in Wirraway, and smaller in Lorimer.

(162) The Urban Design Strategy affirms that densities which are too high can result in congestion, overcrowding, compromised liveability and a poor quality public realm. I
support this assertion, but cannot place a definitive maximum density or total development potential reflecting a suitable threshold of liveability.

(163) The proposed FARs are mandatory (CCZ1), as shown in Table 3, below, unless:
- In core areas, additional floor space is non-residential (so, commercial is unlimited in core areas);
- In core and non-core areas, a public benefit is provided, and the Uplift is calculated in agreement with the Responsible Authority.

Table 4: Proposed FAR provisions

<table>
<thead>
<tr>
<th></th>
<th>Core max. FAR (mand.)</th>
<th>Core max. FAR (rec’d Hodyl evidence)</th>
<th>Core min. non-resi (disc./preferred, within total FAR)</th>
<th>Non-resi. proportion of total (disc.)</th>
<th>Non-core max. FAR (mand.) (Hodyl evidence)</th>
<th>Non-core max. resi. (UD Strategy/Hodyl evidence)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wirraway</td>
<td>4.1 : 1</td>
<td>4.1 : 1</td>
<td>1.9 : 1</td>
<td>46%</td>
<td>2.1 : 1</td>
<td>2.0 : 1</td>
</tr>
<tr>
<td>Sandridge</td>
<td>8.1 : 1</td>
<td>7.4 : 1</td>
<td>3.7 : 1</td>
<td>46%</td>
<td>3.3 : 1</td>
<td>2.2 : 1</td>
</tr>
<tr>
<td>Montague</td>
<td>6.1 : 1</td>
<td>6.3 : 1</td>
<td>1.6 : 1</td>
<td>26%</td>
<td>3.0 : 1</td>
<td>2.8 : 1</td>
</tr>
</tbody>
</table>

(164) I support the following outcomes indicated by the above Table:
- A wide range of FARs across the area, to support built form variation and distinction between Precincts/neighborhoods;
- Significant differentiation between core and non-core area FARs, supporting built form distinction and a clearly lower-scale built form in non-core areas (reinforced by the unlimited additional non-residential FAR in core areas);
- Significant proportion of non-residential floor space in core areas, noting this is a discretionary provision. I note that Ms Hodyl has recommended that this be made mandatory.

(165) I understand that the intention of the Amendment is for the minimum non-residential FAR in core areas to be provided within the maximum total FAR, because the overall FARs have been calculated including commercial floor space, as set out in the Urban Design Strategy (p.75).

(166) The potential for development to utilise FAU to extend beyond the base FAR provisions, and the potential for additional commercial floor space in core areas above the FAR provision, means that the base FARs are not a strict limitation to potential built form outcomes.

(167) There is also potential for development in core areas to provide less than the preferred minimum commercial floor space, or to provide commercial floor space outside the FAR envelope, thereby increasing the potential built form mass, in addition to any further FAU floor space achieved through public benefits. I support the initiative to embed a significant component of commercial development in core areas, towards achieving the Vision.

(168) I acknowledge the potential building design complexities of achieving this balance, and support the provision of flexibility as provided in Clause 22.15-3. However, I note that the potential for future conversion of residential to commercial is limited, if apartments are individually owned.
The implications of the height and setback provisions on built form outcomes is therefore an essential consideration, given the potential variation allowed by the FAR/FAU provisions. This is explored further below.

3.2 Review of individual site testing (Hodyl evidence)

I will utilise this review of Ms Hodyl’s 3D modelling to consider the potential built form outcomes for the three Precincts within City of Port Phillip, to inform my assessment of the FARs.

The notes below reference the 3d model testing in Ms Hodyl’s evidence, as a guide to consideration of the appropriateness of the FAR controls in a range of locations. I have assumed that these models reflect:

- The maximum allowable ‘base’ FAR (but this is not stated);
- Reasonable building footprints in terms of ‘buildability’;
- Built form arrangements which comply with the proposed controls (setbacks, building separation), noting internal layouts have not been designed and these would inform setbacks and building separation;
- The extent of required car parking (presumably above-ground) has not been calculated or configured in the built form massing.

I acknowledge that these are simple massing models, and do not reflect the design complexities of car parking provision, internal access for different uses, services and other building design matters, or the mix of uses and other formal/visual qualities. My assessments of these models do not fully address the site context and interfaces. Nonetheless, the models provide a useful indication of the development potential facilitated by the proposed FARs, and therefore the alignment of the built form potential with the vision for each precinct.

The massing indicated by this testing illustrates one of many potential built form outcomes for each site. It is not practicable to definitively assess from these studies whether the massing reflects the ‘optimal’ density, or maximum acceptable built form, or whether the site could accommodate more (or less) development floor space.

3.2.1 Sandridge

Modelling review: 277-281 Ingles Street

Sandridge core; 7.4:1 (minimum commercial 3.7:1 – revised asper Ms Hodyl’s evidence); Unlimited height;

- Model indicates substantial development potential, reflecting an intensive, high-rise outcome above a podium base, commensurate with a central city-like location;
- Without understanding the specifics of this simplistic model such as building footprint sizes and tower separation, it reflects strong verticality and significant height, but lacks formal cohesion;
- I consider this a reasonable, acceptable urban design outcome, based on the limited information available;
- The scale is quite dramatic, but its impact is reduced by podium setbacks and space between buildings;
- Potential FAU opportunity could be significant, both in height and bulk of buildings (noting the overshadowing requirement). FAU is not shown in the illustration, but could comprise additional commercial and residential floor space;
There is potential for additional floor space while retaining an acceptable built form outcome in this unlimited height, core area setting. This could be achieved through FAU provisions.

Alignment with the Precinct vision:

I consider these aspects of the modelled form to be in alignment with the Vision for Sandridge Core:

- Dramatic vertical form, multiple tall buildings;
- Higher-rise emphasis, above continuous podium/base;
- Slender towers and formal variation for architectural diversity;
- Intensive development, significant height.

Modelling review: 501 Williamstown Road

Sandridge non-core; 3.3:1; 4 storeys / 8 storeys;

- Model illustrates medium-scale courtyard/perimeter block development, which I consider appropriate in this interface setting;
- Modelling suggests limited potential for FAU, because the FAR built form is already at the height limit, and presumably the buildings cannot be widened significantly;
- Scale, layout and open space proximity reflects a potentially highly liveable location/development;
- Scale in the image is somewhat deceiving, in considering the 12m green link relative to the 30m high frontage building, but 8 levels are indicated by feint lines on the frontage;
- It is unclear whether commercial space is considered ‘habitable’ in a mixed-use setting in terms of building separation, but the space between the southern residential and commercial buildings appears to be less than the minimum proposed 12m separation;
- I consider the built form shown to be effective and appropriate for the location.

Alignment with the Precinct vision:

I consider these aspects of the modelled form to be in alignment with the Vision for Montague Core:

- Transition down in scale towards the south;
- Perimeter block building type, with enclosed courtyard, and buildings defining the street frontages;
- Moderate mid-rise scale at 8 storeys, with lower height to southern interface;
- Buildings in open space setting adjacent to North Port Oval, but with defined ‘urban’ character.

3.2.2 Montague

Modelling review: 123 Montague Street

Montague Core; 6.1:1 (as per Amendment, but Ms Hodyl’s evidence recommends 6.3:1); 12 storeys;

- I understand that the provision of new open space as required by the Framework effectively ‘pushes up’ the building scale to achieve the FAR;
- Ms Hodyl recommends height increase to 18 storeys to accommodate FAR. The model appears to show 17 rather than 18 storeys;
- I presume this change would apply between Buckhurst and Thistlethwaite Streets, either for the full block length, or as far east as the existing through-laneway;
While I consider this height acceptable in the context of a core area, on a major road, the transition across Thistlethwaite Street, from 8 storeys to 18 storeys, is significant, and a more incremental transition would be preferable;

Therefore, I would recommend a more modest height of approximately 14-15 storeys in this location (despite the constraint on achieving the FAR);

The wide building forms may cast significant shadows across Thistlethwaite Street at this height (but I have not tested this);

The distance from Montague Street to the open space is 100m – I do not consider the intermediate through-link to be essential, but I support the break-up of the potentially long building form, in achieving the preferred character of ‘gritty streets and laneways’;

This model indicates that the FAR for this area is appropriate and provides significant development potential.

(180) Alignment with the Precinct vision:

I consider these aspects of the modelled form to be in alignment with the Vision for Montague Core:

• Robust building form with moderate vertical scale;
• Transition down in scale towards the south;
• Contribution to network of laneways.

Modelling review: 235-243 Normanby Road

Montague Core; 6.3:1 (revised as per Ms Hodyl’s evidence); 20 storeys;

• The modelling demonstrates potential for a mid-rise perimeter block-type development with single tower form up to 20 levels;
• The model demonstrates potential for significant height within the FAR, and I support the approach of a solid base to the site boundaries, at approximately 4-6 storeys, with punctuated taller form(s) above.
• I would consider a more predominantly mid-rise solution to be more appropriate, perhaps with elevated courtyard. The courtyard shown appears quite narrow and deep.
• I consider the FAR to provide adequate development potential on the site, from an urban design viewpoint.

(182) Alignment with the Precinct vision:

I consider these aspects of the modelled form to be in alignment with the Vision for Montague Core:

• Strong vertical form, combined with defined base and enclosed courtyard;
• Robust building form;
• Recessive profile to address solar access to Normanby Road;
• Potential for integrated mix of uses in various building components;
• Potential for diverse architectural expression in building components.

3.2.3 Wirraway

Modelling review: 50 Salmon Street

Wirraway Core, 4.1:1, 12 storeys (noted as Unlimited, presumably in error);

• The built form indicated, as allowed by the FAR, appears appropriate given the requirement to avoid overshadowing to Plummer Street’s southern side (11am-2pm, equinox) and
I consider the FAR of 4.1:1 to provide for sufficient development potential on this site, from an urban design viewpoint;

- FAU provisions and potential for additional commercial space would result in a larger built form, subject to overshadowing constraints;
- Subject to overshadowing testing, I would recommend a higher podium (6 storeys) and lower tower form, given the width of the adjoining streets.

Alignment with the Precinct vision:

- I consider these aspects of the modelled form to be in alignment with the Vision for Wirraway Core:
  - Robust building base, with varied upper level forms;
  - Scale and setbacks to retina solar access to Plummer Street
  - Potential for distinct uses in podium and upper form.

Modelling review: 291 Williamstown Road and 1-9 Smith Street

Wirraway Non-core; 2.1:1, 4 storey (mandatory at Williamstown Road) (noted as 6 storeys in the model image, with FAU extending to 6 storeys):

- I note that this is the only modelling study which incorporates Floor Area Uplift in the modelling;
- I agree with the submitter that a 4-storey height limit along Williamstown Road is restrictive, and could be discretionary, with a mandatory 4-storey street wall and upper level setback (as discussed further below), given the width of this road (approximately 30m), its heavy traffic load and the open space opposite;
- While 4-storey courtyard development is potentially highly amenable and family-friendly, it appears that this site could accommodate a larger development, up to 6-8 storeys, given the site depth of approximately 100m. I note the discretionary height control to the northern part of the site allows for increased height, as shown by the FAU component of the model.

Alignment with the Precinct vision:

- I consider this form to be in alignment with the Vision for Wirraway non-core as follows, noting that my recommendation for a higher built form potential can still support the vision:
  - The lower-scale built form, defining the street frontages and enclosing an internal courtyard;
  - The form reflects a transition down in scale to the southern interface;
  - The built form scale and siting contributes to wide and open streetscapes.

Discussion

The modelling discussed above indicates that generally the proposed FARs support achievement of the vision for each Precinct and Core/Non-core area, while reinforcing the limitations of this assessment, based on limited modelling of a small selection of sites.

The potential for significant variation of built form outcomes through FAU provisions, but generally not shown in this modelling, suggests the potential for built form which may work against the vision and preferred character for each Precinct.

Broader precinct modelling in Addenda 3 to Ms Hodyl’s evidence illustrates the types of built form outcomes facilitated by the FAR controls, and suggested by the vision for each precinct.
However, the limited modelling in Addenda 2 to Ms Hodyl’s evidence of FAU potential on selected sites, including Figures 15 and 16, illustrates the significant potential for FAU to drive substantially larger built form outcomes, in both Core and Non-core areas.

While this example is for Sandridge, and building height provisions in other Precincts would be expected to limit the extent of FAU take-up, this modelling, in my opinion, reinforces the need for further built form testing, and potentially for a mechanism to limit the extent of FAU.

**Recommendations**

While supporting the method and level of FARs, the provisions allow for significant potential variation in built form, beyond the base FARs. I would recommend further testing to fully understand what potential built forms might be achieved on various sites, and how these relate to the vision for each Precinct and area. That is, the potential outcomes under the FAR provisions, will in many or most cases not reflect the actual built form potential.

### 3.3 Floor Area Uplift (FAU)

The proposed controls allow for a Floor Area Uplift provision, for development to exceed the applicable FAR, in exchange for provision of a community benefit, to incentivise the provision of affordable housing, community infrastructure and/or public open space.

#### 3.3.1 Review of the application of FAU provisions

The proposed mechanisms for establishing the potential additional floor area through FAU are set out in the Framework as follows:

- For every one affordable housing unit delivered, eight additional private dwellings may be constructed. Technical Fact Sheet 5 confirms that floor area for the affordable housing itself is not included in the FAR;
- For every 100 sq.m of community infrastructure delivered, the equivalent value of additional residential floor area can be developed:
  - The definition of “equivalent value” is unclear, i.e. is it the construction cost of the community infrastructure, or associated land value, assessed at a particular time, and the sale value, construction cost or some other value measure for the residential floor space?
- For every 26 sq.m of public open space delivered, the equivalent value of additional residential floor area can be developed:
  - The definition of “equivalent value” is unclear, i.e. is it the land value of the open space, assessed at a particular time, and the sale value, construction cost or some other value measure for the residential floor space?

The GC81 explanatory note How to calculate Floor Area Uplifts and Public Benefits in Fishermans Bend applies the FAU as follows:

- Affordable housing: eight additional dwellings to each affordable housing unit:
  - While affordable housing is not defined in this context, it is required to be “gifted” to a registered affordable housing association;
- Open space: one additional dwelling to the equivalent value of the public open space;
- Community infrastructure: one additional dwelling to the equivalent value of the community infrastructure.

(196) Clause 22.15 requires the Responsible Authority to consider proposed Floor Area Uplift and public benefits on a case-by-case basis, including calculation of the quality and value of the FAU, but does not explain how this should be done.

(197) Clause 37.04 (CCZ1) requires that the public benefit and floor area uplift are calculated and specified in a manner agreed to and approved by the responsible authority.

(198) CCZ1 also states that in core areas, additional floor space for non-residential uses may be developed (above the FAR), without an associated public benefit, so encouraging additional commercial space in core areas.

(199) It is my understanding that the extent of additional floor space that may be leveraged through the FAU provisions is limited only by the applicable building height (predominantly discretionary) and setback provisions, as well as overshadowing controls in some locations. That is, there is not a specific ‘cap’ on additional FAR through the FAU mechanisms, and in core areas, additional non-residential floor space is also unlimited.

(200) This presents potentially significant implications for built form outcomes, which will be considered further through assessment of the built form controls, below.

3.3.2 Monitoring and management

(201) The Framework commits to an evaluation methodology to measure the progression of achieving the Fishermans Bend targets, with regular monitoring intervals to track progress.

(202) While I support the recommendation to establish ongoing monitoring and evaluation processes to respond to progress in growth, density, population, employment and other factors, as also suggested in Ms Hodyl’s evidence (page 27), it is unclear how this would affect or alter the delivery of FAU outcomes, or how this would be controlled.

3.3.3 Assessment of the FAU provisions

(203) I support the application of FAU provisions as a mechanism to incentivise the provision of more diverse and affordable housing, open space and community infrastructure, if it is well thought-out and effectively applied.

(204) I consider the FAU mechanism to be appropriate to Fishermans Bend, in combination with the FAR which serves to contain development, given the challenges for state or local governments to provide these facilities independently in Fishermans Bend, because of limited public landholdings.

(205) However, the uncapped FAU provision is problematic in my opinion, because of the uncertain built form/development extent this potentially facilitates. Consideration of the potential built form controls as ‘limits’ to development, is therefore necessary.

3.3.4 Implications for built form

(206) The ‘open’ nature of the potential for additional floor space (and so development massing) above the FAR, especially in core areas, combined with discretionary height controls, presents significant potential variation in built form outcomes from the FAR controls.
It is difficult to speculate reliably on these built form potentials, but the imperative to increase floor space may lead to buildings exceeding the FAR limits, resulting in:

- Wider, bulkier building forms (but within the setback and separation limits);
- Taller buildings, and potential exceedance of the discretionary height controls;
- Prevalence of podium/tower typologies, because the mandatory street wall and setback provisions tend to lead to this.

While some variation in built form outcomes is not necessarily problematic, an appropriate development outcome would rely on reasonable adherence to the height controls, noting my assessment of the height and setback controls is provided below.

The mandatory setback provisions provide a degree of ‘protection’ to the public realm in terms of built form massing in relation to streetscapes and neighbouring buildings, and mandatory overshadowing controls also limit massing where open spaces are affected. However, the potential combined extent of development facilitated by the FAU provision requires further testing, in my opinion, in order to ensure that built form outcomes remain in alignment with the vision.

Recommendations

While affordable housing, community infrastructure and open space planning are clearly beyond my expertise, it represents a significant built form and urban design implication in this case. Therefore I recommend:

- Analysis of the potential extent of additional development floor space, built form massing and residential population that could be achieved, if the supply of affordable housing is not ‘capped’ or stopped at a point in time;
- Consideration of an FAR limit or other form of limit to additional residential floor space (FAU) leveraged through affordable housing provision, to avoid the risk of significant development and population above the identified targets. For example, consider limiting the provision of affordable housing to a set proportion of total private housing being developed.
- Consider other mechanisms to drive housing diversity and affordable housing of various types, in association with the FAU incentive;
- Establish mechanisms to enable other forms of affordable housing, including, for example, institutional rent, rent controls or shared ownership;
- Implement a monitoring and response system, with clear mechanisms for ensuring the alignment of growth and development, affordable housing, community infrastructure and other infrastructure provision.

3.4 Dwelling density and dwelling size

3.4.1 Review of density controls

The CCZ1 application requirements include explanation of proposed density with reference to the Local Policy, Clause 22.15 (Table 2), which provides maximum densities for core and non-core areas are set by the Local Policy.

These are derived from the Urban Design Strategy, Table 13 (page 82). The densities by precinct and core/non-core areas are based on future Gross Developable Areas. I understand this to mean that the densities are directly aligned with the FARs, which are also based on GDA, and assumed dwelling sizes and inclusion of non-residential space:

The origin of the FAR provisions is:
o No. of dwellings (population / household size) x Average dwelling sizes + 25% NSA = Total residential floor area.
o Total floor area / GDA = Average FAR, which is then distributed across the area according the precinct character and core/non-core areas.

The origin of the proposed density controls is:
o Total GDA / Total No. of dwellings (at assumed floor areas) = Average densities.

Therefore:
o Dwelling size is pivotal to determining the FAR;
o The density controls are precisely aligned to the FAR provisions.

Further:
o The Urban Design Strategy (page 98) states that “in general, the proposed FAR controls easily fit within the designated built form control, and that “in all instances, the built form envelope/controls are the overriding control over development outcomes, before FAR is considered”.

(214) However, I understand that the FAU can occur above the proposed density controls (That is, FAU is not limited by the preferred densities), thereby reinforcing the risk of significantly expanded residential development, through uncapped FAU, given that the base FAR can generally easily fit within the built form envelope.

(215) Technical Fact Sheet 5 explains that the application of maximum densities is intended to avoid developments providing excessive numbers of small dwellings, to accommodate more dwellings within the permissible FAR. Clause 22.15 states that the densities support achieving the overall population targets.

(216) However, if the density limits are based on GFA this would then significantly restrict any FAU potential, because the FARs have been configured to meet the population targets. Further, if the average dwelling sizes are not achieved, the density controls (if applied) would potentially prevent even the FAR being achieved, because the maximum number of dwellings would occupy less than the FAR allowance.

(217) I note that Ms Hodyl has recommended removing the maximum density provisions in the Local Policy, for reasons of overlap with the FAR density controls and preferred dwelling type mix provisions.

(218) Clause 22.15 encourages developments of more than 300 dwellings to provide 20%-30% of 3-bedroom dwellings (depending on Precinct, but not core/non-core). The Urban Design Strategy threshold (recommended by Ms Hodyl) is developments of more than 100 dwellings or sites greater than 3,000sq.m.

(219) Maximum densities can potentially provide a mechanism for limiting the extent of FAU in developments. However they would need to be adjusted to reflect a reasonable level above what could be achieved within the FAR allowances, based on reasonable assumptions about average dwelling sizes and mix.

(220) In my view, it is not vital to apply maximum densities in order to achieve the vision, if the FAR and FAU potentials can be effectively managed, and a diverse mix of housing types and sizes can be achieved through the other provisions.

(221) If maximum densities are not applied, and FUA is not otherwise capped, this presents a potential risk that substantial amounts of additional floor space and residential units could be delivered, if the FAU provision is sufficiently enticing from a commercial perspective. Potential built form implications of this potential include:
o Taller buildings and/or wider buildings;
o Greater numbers of tower buildings;
o Greater prevalence of podium/tower building types, driven by:
  • Mandatory street wall and setback provisions, and discretionary height
    provisions, and areas of unlimited height potential;
  • Likelihood of above-ground car parking, which generally occupies podium
    space.

(222) The average dwelling sizes are established in Tables A.1 and A.3 of the Urban Design
Strategy, as follows:

Table 5: Preferred apartment sizes and percentages by type

<table>
<thead>
<tr>
<th></th>
<th>1-bedroom</th>
<th>2-bedroom</th>
<th>3-bedroom</th>
<th>4+-bedroom</th>
<th>Encourage 3-beds where more than 100dw. (or 300dw.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ap’t size</td>
<td>50sq.m</td>
<td>70sq.m</td>
<td>110sq.m</td>
<td>130sq.m</td>
<td></td>
</tr>
<tr>
<td>Montague</td>
<td>22%</td>
<td>50%</td>
<td>27%</td>
<td>1%</td>
<td>25%</td>
</tr>
<tr>
<td>Wirraway</td>
<td>17%</td>
<td>48%</td>
<td>34%</td>
<td>1%</td>
<td>30%</td>
</tr>
<tr>
<td>Sandridge</td>
<td>26%</td>
<td>52%</td>
<td>21%</td>
<td>1%</td>
<td>20%</td>
</tr>
</tbody>
</table>

(223) As this table shows, the encouraged proportion of larger apartments, applicable to
larger developments only in the controls, is approximate to that assumed in calculating
the overall GFA, and therefore the FARs (and densities), for all developments.

(224) Assuming this aspiration for housing diversity and larger apartments is not achieved, the
overall density will increase, because more dwellings will fit within the FAR
(notwithstanding the FAU), because apartments will be generally smaller in area, and
there will be a greater proportion of smaller (1 and 2-bedroom) apartments. If FARs are
generally achieved, this is expected to lead to higher dwelling densities, through
generally smaller average apartment sizes than proposed in the analysis.

(225) I support the principle of adaptable housing, which can be modified over time to suit
changing needs. However, I see Recommendation 20 in the Urban Design Strategy,
and in DDO30 (p.11), to enable 1- or 2-bedroom apartments to be combined into larger
3 or 4 bedroom apartments, as only applicable at the time of purchase, unless the
building is retained under a single ownership as ‘build to rent’.

(226) I consider the above areas for 1- and 2-bedroom units to be reasonable based on my
experience, but the 3 and 4-bedroom unit areas appear overly large, with 3-bedroom
units 40sq.m larger than 2-bedroom units.

(227) The Better Apartment Design Standards do not provide recommended apartment floor
areas, but suggest minimum bedroom sizes (9-10sq.m) and minimum living area sizes
(12sq.m for 2- or more bedroom units).

(228) The NSW Apartment Design Guide (Part 4, p.89) specifies minimum internal areas as
follows:
Table 6: NSW recommended apartment sizes

<table>
<thead>
<tr>
<th>Type</th>
<th>Area (sq.m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studio</td>
<td>35</td>
</tr>
<tr>
<td>1-bedroom</td>
<td>50</td>
</tr>
<tr>
<td>2-bedroom</td>
<td>70</td>
</tr>
<tr>
<td>3-bedroom</td>
<td>90</td>
</tr>
</tbody>
</table>

(229) This Guide notes that these are based on single-bathroom units, and additional bathrooms add 5sq.m to the total, while a fourth or additional bedrooms add 12sq.m each. A 3-bedroom unit minimum area would therefore be 90-95sq.m, and a 4-bedroom 102-107sq.m – significantly less than the assumptions for Fishermans Bend.

3.4.2 Assessment of density provisions

(230) I understand that the proposed maximum densities are based on GFA and assumed (aspirational) dwelling mix and average dwelling sizes, and so are aligned with the FAR controls, as noted above.

(231) I am supportive of maximum densities (dwellings per hectare) in this context, for limiting the extent of potential dwelling numbers that could be leveraged through FAU provisions – effectively becoming a cap on FAU potential.

(232) I consider that the density (dwellings per hectare) controls in Clause 22.15 should be revised, because as currently proposed they would restrict or prevent FAU take up, being aligned to the FAR provisions, in my understanding. The revised densities should reflect an appropriate extent of additional development yield that could be accommodated within Fishermans Bend.

(233) Further, the density controls as currently set may also restrict achieving even the FAR, if the average dwelling size is smaller than expected, because the achievable number of dwellings on a site would occupy less floor space than the current density provisions and FARs assume.

Recommendations:

(234) Review maximum densities to reflect FAU potential and potential variation in apartment mix and size. This may be achieved through more detailed site testing, for example.
3.5 Height limits

3.5.1 Assessment of building height framework

(235) Building height limits (preferred/discretionary predominantly) and setback controls are a key aspect of this Amendment. The following assessment of the preferred heights builds on the built form intent derived from the Vision and Urban Design Strategy, as set out above.

General

(236) I support the generally clear logic in the principles of distribution of building heights in the Framework, including:

- Concentration of most intense scale in central Sandridge Core and to both sides of the Freeway, within a defined area at the geographic centre of Fishermans Bend, and around the primary future transport node;
- Focus of higher building scale along main east-west transport corridor and around future proposed rail nodes;
- More controlled high-rise potential extending east into Montague,
- Limited opportunity for higher built form in the central Core area of Wirraway, noting that I recommend lowering of the 24-storey height, below;
- Gradation down in height towards southern interfaces, at generally 8 storeys (6 storeys in Wirraway), then 4-storeys at the interface to neighbouring residential areas;
- Significant variation in preferred heights across the area;
- Substantial areas for both mid-rise built form (approximately 6-12 storeys), and high-rise.

(237) These directions address the vision for density, diversity and walkability, and creating welcoming and vibrant places, with a range of characteristics.

(238) I understand and observe that the heights recommended by the Urban Design Strategy and Framework have largely been carried through to the proposed DDO30.

Figure 1: Proposed built form strategy, from the Urban Design Strategy (p.89)
Wirraway

(239) I do not support heights up to 24 storeys in Wirraway core, because I do not see the need for building height of this extent, given the vision for a more mid-rise, intimate, residential and arts-focussed precinct.

(240) The future potential of a train station within Wirraway core warrants more intensive development, to optimise the value of this transport facility, and potentially to capture some of the land value uplift which may result.

(241) However, as demonstrated by the reference projects above, significant intensity of development, and densities, can be achieved at mid-rise scale, within a compact, tightly configured spatial/built form framework, with intimate streets and spaces between buildings.

(242) Further, the transition between a 24-storey area, and the 8-12 storey surrounds, is quite substantial.

(243) Therefore I would recommend lowering this height to approximately 14-16 storeys, reflecting a clearer commitment to mid-rise scale in this Precinct.

(244) I support the general provision for 8 storeys across Wirraway (the Framework recommends 6-storeys in Wirraway), noting that the discretionary controls may provide for mid-rise development of 10-12 storeys, which I consider appropriate.

(245) I would consider the potential expansion of the mid-rise 10-storey area to the north acceptable also, to as far as Woolboard Road (approximately 275m from Plummer Street), to achieve a greater intensity of mid-rise development around the proposed transport corridor. I note that this Non-core area has a proposed FAR of 2.1:1, so significant FAU would presumably be required to reach this scale, unless the FAR was revised.

(246) I would consider a higher FAR appropriate in this location which is within a short walk of a proposed tram corridor and proposed future train station, based on my consideration that more substantial built form is appropriate in this location.

(247) This revision would potentially generate a higher local population, which would need to be addressed through infrastructure planning and provision.

(248) I recommend changing the mandatory 4-storey control for the southern interface of Sandridge and Wirraway facing Williamstown Road, to discretionary, with mandatory 4-storey frontage and minimum 10m upper level setbacks;

(249) I recommend increasing the discretionary 4-storey area south of Tarver Street, between Prohasky Street and JL Murphy Reserve, to 6-storeys, because this area is approximately 55m from Williamston Road, so sufficiently separated from the sensitive residential interface, and is within approximately 180m of the Plummer Street proposed transport corridor.

Montague

(250) I am predominantly satisfied with the height provisions in Montague, which provide for extensive mid-rise areas in Montague South (8-12 storeys), with moderate high-rise (20 storeys) predominantly in Montague North, but also located centrally within the South.

(251) As discussed further below, I do not support the incongruous allocation of increased heights to specific sites in Montague South, west of Montague Street, and would recommend consistent application of the 8-storey discretionary provision in this area.
(252) The mandatory 4-storey condition for the relatively fine-grain blocks fronting City Road should, in my opinion, be discretionary, with a mandatory frontage height of 4 storeys and mandatory upper level setback of 10m.

(253) I also recommend a discretionary 4-storey height control along Boundary Street, with a mandatory frontage height of 4 storeys and mandatory upper level setback of 10m.

Sandridge

(254) Sandridge includes an extensive area of unlimited height potential, but I understand that in most cases, the actual height achievable is restricted by other factors such as overshadowing to open spaces.

(255) I am also satisfied with the transition to tower/hybrid built form types in the northern parts of Sandridge, which extend to approximately 550m from the intersection of Plummer and Fennel Streets. The transition to the south occurs quite rapidly, with potential for 20 storeys approximately 130m from Williamstown Road, grading down to 8 storeys then 4 storeys.

(256) The 4-storey mandatory interface to Williamstown Road appears to be approximately 50m deep. As in Montague, I am comfortable with limiting the frontage to this 4-storey scale, in response to the low-scale residential context to the south. However, given the width (30m approximately) and traffic load of Williamstown Road, and the existing interface to industrial buildings, I would recommend that this control should be discretionary, with a mandatory frontage height of 4 storeys and mandatory upper level setback of 10m. This interface needs to balance a sensitive transition/interface, with clear demarcation of a different urban condition north of Williamston Road.

![Figure 2: Proposed height limits, from the Urban Design Strategy](image)

Recommendations

(257) Apply consistent 8-storey control to area of Montague South, west of Montague Street;

(258) Lower the proposed 24-storey area in Wirraway core to approximately 14-16 storeys;

Global South Pty Ltd
PO Box 565 Elwood VIC 3184
ACN 123 980 781
ABN 81 123 980 781

M. +61 (0)448 201 344
T. +61 3 8669 1766
E. simon.mcpherson@globalsouth.net.au

www.globalsouth.net.au
(259) Confirm the general 8-storey height provision in Wirraway non-core (rather than 6-storeys as suggested by the Framework and Urban Design Strategy);

(260) Increase the central area of Wirraway non-core, between Plummer Street and Woodboard Road to 10 storeys, between Prohasky Street to the west, and the proposed street approximately mid-way through JL Murphy Reserve, to the east;

(261) Change the mandatory 4-storey control for the southern interface of Montague facing City Road and Boundary Street, to discretionary, with mandatory 4-storey frontage and minimum 10m upper level setbacks.

(262) Change the mandatory 4-storey control for the southern interface of Sandridge and Wirraway facing Williamstown Road, to discretionary, with mandatory 4-storey frontage and minimum 10m upper level setbacks;

(263) Increase the discretionary 4-storey area south of Tarver Street, between Prohasky Street and JL Murphy Reserve, to 6-storeys.

3.6 Street wall heights and upper level setbacks

3.6.1 Street wall height

(264) The proposed provisions set out in DDO30 (amended February 2018) are as follows:

<table>
<thead>
<tr>
<th>Street width</th>
<th>Street wall height (mandatory maximum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12m or less</td>
<td>15.4m (4 storeys)</td>
</tr>
<tr>
<td>Greater than 12m</td>
<td>23m (6 storeys)</td>
</tr>
<tr>
<td>Greater than 22m</td>
<td>30m (8 storeys), if building height 38m (10 storey) or less</td>
</tr>
</tbody>
</table>

(265) The street wall plays an important mediating function between the public realm and higher-scale built form. A ratio of 1:1 provides a balance of streetscape definition and openness to sky, and is an appropriate principle for urban streets, while allowing variation from this basis.

(266) I support the 4-storey street wall height on streets up to 12m wide, delivering a streetscape width to height ratio of approximately 1:1.3, but would recommend discretion up to 6-storeys where the remainder of the building form or podium is 6-storeys in response to other street frontages. Narrow streets and lanes could generate proportions of approximately 1:4 (on 6m wide lanes for 6-storey frontages, for example), generating relatively deep vertical proportions in the streetscape. The preferred width of new laneways is not specified to my knowledge, but laneways are defined as road reserves less than 9m wide. I am comfortable with these deep proportions in urban areas.

(267) I support a 6-storey street wall height to wider streets. This also generates a balanced proportion of approximately 1:1 for streets of 22m wide.

(268) The potential for 8-storey street walls on wide streets, if the overall building height is limited to 10 storeys, raises the question of whether this street wall height is appropriate in other cases on wide streets (with taller buildings). I accept the logic that the visual impact of a higher street wall may be limited because the overall building height is limited. However, an alternative logic is that a higher street wall can shield more of the taller form, as viewed from the street, while a lower street wall makes the tower more...
visible. Therefore, I support street walls up to 8 storeys on streets greater that 22m in width, regardless of overall height, to allow variation in the street wall condition along streetscapes.

(269) There is also benefit in facilitating some variation in street walls along streetscapes, rather than all buildings having the same street wall/podium line.

(270) I also note that the proposed height controls show a relatively limited extent of 10-storey height limit, suggesting that relatively few buildings are likely to be between 8 and 10 storeys in height. However, the extent of 8-storey height limit is more extensive, and I assume that some buildings in these areas may exceed the discretionary height to extend up to 10 storeys.

(271) Therefore, I would recommend that on streets greater than 22m wide, a discretionary/preferred street wall height of 6 storeys be established, with a mandatory maximum of 8 storeys.

3.6.2 Height to side or rear boundaries

(272) In line with the front setback provisions, heights to side and rear boundaries are set at 23m (6 storeys), or 30m if the street wall is 30m. I support this approach.

(273) Given my recommendation for allowing up to 8-storey street wall height to wide streets, I would accept this height extending to rear and side boundaries.

(274) I understand that where a 4-storey street wall height is required on a rear or side boundary which fronts a narrow street (less than 12m) as a secondary frontage, the building/podium is required to step down to 4 storeys. I would recommend discretion in this case, allowing continuation of the primary street frontage height to the secondary frontage. While this may result in some parts of laneways being quite deep and vertically proportioned, I consider this acceptable in more intensive urban areas.

3.6.3 Setbacks above street wall

(275) The proposed provisions set out in DDO30 are as follows:

Table 8: Proposed setbacks above street wall

<table>
<thead>
<tr>
<th>Building height</th>
<th>Preferred front setback</th>
<th>Mandatory minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 30m (8 storeys)</td>
<td>5m</td>
<td>3m</td>
</tr>
<tr>
<td>30-68m (8-20 storeys)</td>
<td>10m</td>
<td>5m</td>
</tr>
<tr>
<td>Above 68m (20+ storeys)</td>
<td>N/A</td>
<td>10m</td>
</tr>
</tbody>
</table>

(276) I support the principle of increasing setbacks with greater height, to reduce the visual presence of taller buildings as viewed from the streetscape.

(277) I support setbacks of 3-5m for lower-height buildings, but recommend extending this provision to buildings up to 10 storeys / 38m in height, to encompass the 10-storey built form areas, and because I consider this setback adequate for upper level forms of up to approximately 4 levels, above a 6-storey frontage.

(278) I support setbacks of 5-10m for buildings up to 20 storeys, assuming that most proposals would seek to achieve the minimum 5m front setback.

(279) I support greater setbacks for buildings above 20 storeys, to clearly separate towers from the streetscape built form, and create more open streetscapes. I would consider
that in some cases, a reduced setback of minimum 7m would be acceptable, but do not consider this a necessary change to the proposed controls.

(280) Given the significant proposed area for 24-storey discretionary height, I would recommend that 24 storeys be the threshold for providing a mandatory minimum front setback with discretionary maximum, rather than 20 storeys. I consider 5m to be an acceptable minimum setback for buildings up to 24 storeys.

3.6.4 Side and rear setbacks (if not built on boundary)

(281) The proposed provisions set out in DDO30 are as follows. They are specified as applying to buildings not built on the boundary, but I take this to mean upper level setbacks, whether the building podium is built to the boundary or not (assuming that in most cases the podium would be built to boundary).

(282) I also understand this to suggest potential for buildings to be built on a side or rear boundary (including at upper levels), allowing for direct abutment to adjoining development. The drafting would benefit from clarification in this case.

(283) These provisions address building separation, which is a key consideration for an emerging redevelopment area, because it addresses internal amenity, skyline outcomes, access to sunlight and views from the public realm, and equitable development.

Table 9: Proposed building setback/separation provisions

<table>
<thead>
<tr>
<th>Building height</th>
<th>With habitable room window or balcony (mandatory)</th>
<th>Without (mandatory, except at Freeway/tram corridor interface)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 23m (6 storeys)</td>
<td>6m setback from boundary (for 12m building separation)</td>
<td>3m setback from boundary (for 6m building separation)</td>
</tr>
<tr>
<td>23-30m (7-8 storeys)</td>
<td>9m setback (18m separation)</td>
<td>5m setback (6m separation)</td>
</tr>
<tr>
<td>30m-68m (9-20 storeys, for parts of buildings above 23m, on boundary or not)</td>
<td>10m setback (20m separation)</td>
<td>5m setback (10m separation)</td>
</tr>
<tr>
<td>Above 68m (20+ storeys)</td>
<td>10m setback (20m separation)</td>
<td>10m setback (20m separation)</td>
</tr>
</tbody>
</table>

(284) For reference, these provisions are less stringent than those in the NSW Apartment Design Guide, which is often considered a benchmark for residential design standards. The NSW Guide (Part 2, p.37) specifies minimum separation distances as follows:

Table 10: Building separation guidance: NSW Apartment Design Guide

<table>
<thead>
<tr>
<th>Building height</th>
<th>With habitable room window or balcony (mandatory)</th>
<th>Without (between non-habitable rooms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 4 storeys</td>
<td>12m separation</td>
<td>6m separation</td>
</tr>
<tr>
<td>5-8 storeys</td>
<td>18m separation</td>
<td>9m separation</td>
</tr>
<tr>
<td>9 storeys and above</td>
<td>24m separation</td>
<td>12m separation</td>
</tr>
</tbody>
</table>
(285) I am aware that other apartment projects in Melbourne have achieved lower separation distances. In some cases, I have considered smaller separation distances than the proposed provisions to be acceptable. However, I am supportive of the provisions for setbacks and building separation, and do not consider them excessive. These provisions will support high levels of amenity for building occupants and public realm users. I am also supportive of mandatory setback provisions, to provide certainty of outcomes, in the context of built form flexibility provided by the FAR and FAU provisions.

(286) As discussed above, it may be clearer to identify 24-storeys as the threshold for the different controls, rather than 20, given the extent of 24-storey preferred height areas in the Framework.

(287) Given the presence of many large sites in Fishermans Bend, further guidance should be provided regarding building offset distances, or staggering of tower positions, in terms of the extent of these separations if buildings are partially or indirectly facing one another.

(288) Assessment of the potential amenity impacts on dwellings facing the Freeway is beyond my expertise, including identifying appropriate setbacks to address these impacts. I acknowledge that the potential for reduced setbacks to the Freeway respond to the lack of sensitive streetscape, but the residential amenity should also be considered and addressed in the controls.
4.0 Other matters

4.1 Review of the Framework in context of City of Port Phillip’s recommended spatial changes

I am instructed to review City of Port Phillip’s Submission to Amendment GC81, in relation to recommended spatial changes to the Framework. I refer to the updated map attachments to the Submission received in March 2018. I have not aligned these recommendations to specific land ownership, current permit applications or approvals, or other submissions in assessing these recommendations.

Submission item 1.1 (Framework Figure 15):

(289) I support the proposal to establish hubs of related community infrastructure within mixed-use developments, in accessible, activity centre locations.

(290) Specific locations for these hubs have not been identified, but a series of investigation areas are identified in the Framework. These areas are generally quite large. While I understand this approach affords a larger number of property owners the opportunity to leverage FAU through provision of the Community Hub, I would recommend a more specific preferred location which is aligned with public transport access, walkability and potential co-location with other activity centre functions.

(291) Community Hubs will play an important role in defining neighbourhoods, so their location close to the centre of Precincts or neighbourhoods is important.

(292) I support the following recommendations, accepting that the infrastructure proposed is as required for the target population:

- More specific preferred locations for community infrastructure, based on urban structure, access, prominence and use;
- Location of Sports and Recreation Hub within Prohasky Open Space, at end of Plummer Street, to:
  - avoid the complexities of integration in urban development;
  - define a more specific location (as opposed to a large investigation area); and
  - activate the open space.
- Location of Education and Community Hub (Primary School) close to local linear park, activity centre and larger open space;
- Civic and cultural hub as a prominent ‘landmark’ building on Plummer Street corridor (but could also be in a different location);
- Creation of new open space and a landmark civic building at the intersection of Fennell and Plummer Streets, to support urban legibility and a sense of civic importance at a major movement point;
- Health and Wellbeing Hub in Sandridge Core, supporting recreational activity in the most intensive land use/development area;
- Location of secondary school in north-east corner of JL Murphy Reserve;
- Co-location of Montage Sports and Recreation Hub with North Park;
- Co-location of Montague Art and Cultural Hub with the existing school.

(293) These aspects require further consideration in my opinion:

- Location of Sandridge Sport and Recreation Hub and Education and Community Hub (Primary and Secondary) adjacent to North Port Oval. While this location could be successful in creating an ‘urban’ civic hub, there may be opportunity to integrate
sporting facilities within the Oval complex, and to ensure this important interface/transition site provides an appropriate, high-quality mixed-use outcome

- Sport and Recreation Hubs as standalone facilities, due to difficulties of integrating within mixed-use development. The Community Infrastructure Plan (2017) states that indoor multipurpose courts will be the primary facility in these hubs, which require large structural spans which limits development above, there may be potential for different forms, or integration of these within developments on larger sites.

Submission item 1.2 (Framework Figure 11):

(294) I support the inclusion of full street blocks in Core and Non-Core areas as proposed, for greater clarity, noting I have not investigated land ownership or subdivision patterns on the relevant blocks.

(295) I have not sufficiently investigated the proposed Core areas west of Montague Street, or relevant permit approvals, but acknowledge that this designation appears fragmented, and would support a more contiguous non-core area in this location west of Montague Street.

Submission item 1.3 (Framework Figure 13):

(296) I accept or support the following recommendations, noting that a retail assessment is underway, and retail planning is beyond my expertise:

- Concentration of retail as primary frontage to central part of Wirraway Core, delivering a retail strip of approximately 700m in length, which is substantial for this centre.
- Identification of Bertie Street as a retail-focussed north-south connection through Sandridge;
- Concentration of retail in central part of Sandridge, by changing east and west parts of Fennell Street to secondary (retail/commercial frontage);
- Removal of active frontage to Montague North Park – an active residential frontage is suitable in this location;
- Normanby Road as secondary (retail/commercial) corridor, given its width and traffic load;
- Removal of secondary active frontage from Sandridge non-core, while allowing limited retail/commercial frontage amongst primarily residential frontages;
- Montague Street as continuous secondary frontage. The heavy traffic load is an additional impediment to those noted, for retail activity.

Submission item 1.4 (Framework Figure 17):

(297) I support the following key recommendations regarding Public Open Space:

- Consolidation of open space to northern side of Fennel/Plummer Street intersection, which I understand comprises a full landholding;
- Consolidation of smaller spaces to form 1ha Sandridge North Park, given the network of other smaller and linear open spaces nearby;
- Expansion of Montague North Park, given the limited potential and amenity impacts to the narrow northern part of this site;
- Potential consolidation of government-owned sites to provide larger open space.

(298) These aspects require further consideration in my opinion:

- Sandridge Station entries: While this is a matter of detailed design for future Stations, entrances within public space can help to demarcate the transport
function and support greater natural light access to station interiors, as demonstrated in many contemporary Metro systems (see also images in Appendix 1 of Canary Wharf and Potsdamer Platz).

(299) Other opinions relevant to public open space in the draft Framework are as follows:

- The use of 3D modelling, and identification of built form controls to protect important streets and spaces, is considered an effective approach in the context of wider flexibility in built form afforded by the FAR and FAU mechanisms and varied height provisions.
- Mandatory street wall heights and upper level setbacks also provide certainty in relation to public realm outcomes.
- The network of new public open spaces proposed, along with linear green spaces along streets, and new streets and lanes, are a highly valuable and essential aspect of the Framework.

Submission item 1.5 (Framework Figure 12):

(300) I support the following key recommendations for building heights:

- Reduction of discretionary heights in Wirraway Core from 24 to 15 storeys, as I have recommended above;
- Reduction of heights in Montague Core east of Whiteman Street, to avoid overshadowing to South Melbourne streets protected by other mandatory overshadowing controls;
- Montague Core west of Montague Street: These higher ‘core’ sites are fragmented and not cohesive with the surrounds, and heights should align with the prevailing 8 storey surrounds.

(301) I do not support the following recommendations:

- Montague Core east of Montague Street: I acknowledge that taller buildings can affect the ‘intimacy’ of key streetscapes, but I am comfortable with heights up to 12 and 20 storeys, given the clear street wall and setback parameters, and with managed overshadowing to the south side of Buckhurst Street.

Submission items 1.6, 1.7, 1.8 and 1.9:

(302) The subject matter in these maps is beyond my expertise.

4.2 Water/flood management

(303) The Framework recommends preparation of a strategy to holistically manage drainage to mitigate the impacts of storms and sea level rise (Strategy 5.1.4, p.61), and to make water visible in the public realm through water sensitive urban design (5.1.5), but also to retain design controls to raise habitable floor levels to avoid flooding (5.1.6). While flood management is a technical field beyond my expertise, the increasing risk to coastal urban areas is apparent.

(304) Requirements for raised floors are set out in the Local Policy Clause 22.15, including to integrate level changes into building design, locating ramps internally where possible, and raiding floor levels up to 1.2m above street level.

(305) My observations of Gravity Tower suggest an internal level change of approximately 1.7-1.8m (9 stair risers). This level change appears abrupt and significant in height, and restricts engagement of the ground floor with the streetscape. This is exacerbated by
the wind amelioration devices at the ground floor frontage. The ground floor tenancy is vacant.

Figure 3: Gravity Tower main entrance, taken from outside the glass doors.

Figure 4: Gravity Tower ground floor tenancy (from Gladstone Street) with internal stair to approximately 1.7-1.8m in height.

Figure 5: Gravity Tower ground floor tenancy (from Montague Street) with internal stairs to approximately 1.7-1.8m in height.

Figure 6: Gravity Tower ground floor frontage to Gladstone Street, with wind amelioration devices (vertical perforated pipes).

(306) Significantly raised ground floor levels affect the public realm interface and streetscape conditions, including potential for accessibility, visual interest, activation and passive surveillance, and the visual/perceived accessibility or openness of tenancies to the public realm. Significant level difference at ground floor can also demand significant internal and external space for ramps and stairs, and can affect the retail potential of ground floor tenancies.

(307) Location of ground floor spaces at ground level is an important urban design outcome, especially in activity centres and retail areas. Residential spaces can be set above street level, up to approximately 1.2m, to balance privacy/separation and visual connections with the streetscape.

(308) I have briefly reviewed the Fishermans Bend Integrated and Innovative Water Management report (Ramboll, p.13), which proposes a robust levee with network...
detention and conveyance system which would preclude the need for raised floor levels. This system would comprise rainwater tanks, “blue lanes” and “green streets” to enhance the public realm (and manage flooding in the public realm, which raised floors do not achieve).

(309) I support the development of an holistic, precinct-wide drainage strategy which may avoid the need to raise ground floor levels above street level, and that incorporates water in the public realm, to enhance visual and physical amenity.

### 4.3 Implementation considerations

(310) It is beyond my area of expertise and experience to comment on the effectiveness of a planning framework and controls in delivering the vision over the long term. However, the circumstances lead me to consider other/associated potential approaches to delivering the vision.

(311) The unique and unparalleled urban renewal opportunity presented by Fishermans Bend, and the distinctive outcomes sought, suggest that a more ‘hands on’ master planning approach to implementation may be warranted and beneficial. This would be more in line with how projects such as London’s East Village, Kings Cross, Stratford City and Wembley Park have been delivered, while each project has unique circumstances and methods.

(312) Developing the Framework into a robust yet flexible Master Plan, which indicates more specifically the preferred built form and public realm outcomes across the area, and implementing this through an independent responsible body, which has a clear stewardship role for facilitating and guiding private sector development along with delivery of infrastructure, may provide the basis for greater control and optimisation of the land and infrastructure. This approach can potentially provide a more solid base for working in partnership with property owners and developers, negotiating outcomes, monitoring progress and adapting to changing circumstances, as well as responding to localised, site-specific opportunities and constraints.

(313) Of course, some of the abovementioned international projects have been delivered by a single developer, some through a Development Corporation/Agency, and the distinct circumstances of Fishermans Bend require a specific approach, given its size and land ownership conditions.

(314) This high-level suggestion is made in the context of this Amendment which is comprehensive, rigorous and deterministic, but also highly open in terms of potential outcomes.

(315) The Framework commits to regular monitoring through an approach to be developed, and City of Port Phillip’s submission suggests 5-yearly reviews, to address these risks. I would expect that successful implementation of the Framework or Master Plan will require a substantial ongoing effort to ensure this outcome.

(316) While monitoring clearly has an important role, in my opinion this could be expanded to implementation and facilitation, towards achieving the Vision for Fishermans Bend.
4.4 Design quality

(317) The importance of good design is not adequately addressed in the Amendment, in my opinion. Clause 22.15 provides some Design Excellence policies, and design excellence is a Decision Guideline under DDO30. Other references such as the Better Apartment Design Standards will also play a role.

(318) I would recommend development of a design policy or design code or similar, to guide development outcomes alongside the planning provisions.

(319) I am aware that some development proposals in Fishermans Bend have been considered by the Victorian Design Review Panel, and I would support continuation of this process for all developments.
5.0 Conclusions

In conclusion, my urban design/built form assessment of Amendment GC81 has identified the following:

- The application of FAR controls provides an appropriate method for guiding built form outcomes, while facilitating flexibility of design responses. The FARs as proposed are generally appropriate and aligned to the Vision for each Precinct, based on comparative analysis and limited built form testing;
- The application of FAU provisions provides an appropriate mechanism to incentivise public benefits, while providing additional development potential;
- Clear controls for street frontages, setbacks and building spacing, and sunlight to key streets and spaces, provide an effective foundation for appropriate urban design outcomes;
- Some aspects of the preferred heights and mandatory street wall and setback provisions should be revised, as identified above;
- The controls provide a significant degree of uncertainty of built form outcomes, through the potential variation provided by FAU provisions and additional commercial floor space opportunities;
- There is potential for a range of negative urban design outcomes, including an extent of development which exceeds the preferred built form vision;
- The Amendment as proposed lacks a clear mechanism to address the potential population over-run, and associated built form implications, in terms of infrastructure provision and other liveability impacts;
- Some aspects of the vision are closely aligned to public transport infrastructure, the timing and implementation of which is uncertain, in my understanding.

In this context, it is challenging to reliably assess the urban design outcomes that this Amendment will deliver. By extension, the Amendment as currently proposed does not provide certainty in delivering the vision for benchmark urban renewal.

In my opinion, development of a comprehensive Master Plan and ongoing implementation process, which is flexible, responsive and negotiated, yet led by a strong and clear vision and objectives, may provide a more reliable, controlled and responsive approach to planning and development in Fishermans Bend, than a planning framework and development controls. A Master Plan may apply to specific locations, Precincts or areas, and would clearly establish preferred built form and development parameters, in coordination with infrastructure and other factors.

I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel.

Simon Joseph McPherson
Director, Global South Pty Ltd
6.0 Appendix 1: Benchmark project images

6.1 Kings Cross, London

(Image source: Google)
Master Plan aerial view. Image source: Archdaily
6.2 East Village, Olympic Park, London
Taller buildings also feature

Taller built form with commercial focus, in the Stratford City International Quarter, with mid-rise housing focus at right. (Image source: Buildington)
6.3 HafenCity, Hamburg

(Image source: hafencity.de)  (Image source: German-Architects)

(Image source: Google)
(Image source: Urban blue-green grids)

Master Plan 3d model view (Image source: www.wes-la.de)
6.4 Hammarby Sjostad, Stockholm

Aerial view (image source: Pinterest)

Image source: Envac

Image source: Archdaily
Image source: Pinterest
6.5 Wembley Park, London

Render illustration of completed development (image source: Quintain)
Internal courtyard of perimeter block development, with view out to adjacent buildings.

Master Plan, January 2017 (source: Quintain)
6.6 IJburg, Amsterdam

(Image source: Gemeente Amsterdam)

(Image source: Collectief Makellars)

(Image source: de Brug)
6.7 Canary Wharf, London

Plaza space with Underground Station entrance at right (Image source: Clarendon serviced apartments)
6.8 Paddington, London

(Image source: ESI Building Design)

(Image source: agefotostock)
6.9 Potsdamer Platz, Berlin

Plaza space with Train Station entrance at left (Image source: Beisheim Center)
6.10 Battery Park City, New York

(Image source: BatteryPark.tv)

(Image source: EEK Architects)

(Image source: Perkins Eastman)

Global South Pty Ltd
PO Box 565 Elwood VIC 3184
ACN 123 980 781
ABN 81123980781
M. +61 (0)448 201 344
T. +61 3 8669 1766
E. simon.mcpherson@globalsouth.net.au

www.globalsouth.net.au