

Submission to:
Casey Planning Scheme Amendment C228
Minta City Proposal

Design Statement of
Dean LANDY

CONTENTS PAGE

- 1. Name and address**
- 2. Qualifications and experience**
- 3. Introduction and Scope**
 - 3.1. *Role in preparation of the submission to Amendment C228*
 - 3.2. *Instructions to prepare this statement*
 - 3.3. *Other contributors to this statement*
 - 3.4. *Statement of relationship to Minta City Proposal Report*
- 4. Responding to the design brief**
 - 4.1. *Responding to the 'Project Vision'*
 - 4.2. *Responding to the 'Place Vision'*
 - 4.3. *Responding to challenges of current PSP structure Plan in Amendment C228*
 - 4.4. *Evidence for concept design*
 - 4.5. *Key understandings of the design brief*
 - 4.6. *Best Practice*
- 5. Design Evidence and Explanation**
 - 5.1. *Site Context*
 - 5.1.1. Macro Conditions
 - 5.1.2. Micro Conditions
 - 5.1.3. Opportunities and Constraints
 - 5.2. *Design Response – Concept Masterplan*
 - 5.2.1. Urban design rationale
 - 5.2.1.1. Integrate a wide mix of uses
 - 5.2.1.2. Establish the urban grid
 - 5.2.1.3. Integrate the blue and green network
 - 5.2.1.4. Consolidated and compact quarters
 - 5.2.1.5. Define and activate the public spaces
 - 5.2.1.6. Multi-modal transportation
 - 5.2.2. Urban Core Precinct
 - 5.2.2.1. Design Principles
 - 5.2.2.1.1. Urban Boulevard and character streets
 - 5.2.2.1.2. Compact and walkable blocks
 - 5.2.2.1.3. Small urban green spaces
 - 5.2.2.1.4. Perimeter block structure and street address
 - 5.2.2.2. City Block Study
 - 5.2.2.2.1. Dimensions 130 x 90m
 - 5.2.2.2.2. Jobs to built form calculation
 - 5.2.2.2.3. Lowest density option
 - 5.2.2.2.4. Configurations of Urban Core Block
 - 5.2.2.2.5. Highest density option
 - 5.2.2.3. Integration of residential into Urban Core
 - 5.2.2.4. Integration of mixed-use and SLEPs into precinct
 - 5.2.3. Innovation Quarter (IQ) Precinct
 - 5.2.3.1. Urban Design Principles
 - 5.2.3.1.1. Flexible lot mix
 - 5.2.3.1.2. High amenity innovation environment
 - 5.2.3.1.3. Freeway interface
 - 5.2.3.1.4. Integration with other precincts
 - 5.2.3.2. City Block Study
 - 5.2.3.2.1. Dimensions 45 x 20 or 90 x 40
 - 5.2.3.2.2. Jobs to built form calculation
 - 5.2.4. Town Centre Precinct
 - 5.2.4.1. Design Principles
 - 5.2.4.1.1. Retail main street
 - 5.2.4.1.2. Civic uses and integration
 - 5.2.4.1.3. Town Square
 - 5.2.4.1.4. Hotel and conference centre
 - 5.2.4.1.5. Integration of car parking
 - 5.2.5. Housing Diversity
 - 5.2.6. Public Realm
 - 5.2.7. Additional Intersection
 - 5.3. *Design implications of proposed curtilage options for the Myer House*
 - 5.4. *Comparison to exhibited PSP Future Urban Structure*
- 6. Conclusion**
- 7. References**
- 8. Appendices**

1. Name and address

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2. Qualifications and experience

I am a partner at ClarkeHopkinsClarke architects. I hold the qualifications of BA (Architecture) Deakin, Bachelor of Architecture, (Hons) Deakin, and have over 20 years' experience. Further details of my qualifications and experience are outlined in Appendix A of this statement.

3. Introduction and Scope

3.1. Role in preparation of the submission to Amendment C228

- 3.1.1. In October 2017, I was engaged by The Minta Group (TMG) as part of a team of design and planning professionals to prepare a detailed masterplan concept as part of a submission to Amendment C228 to the City of Casey Planning Scheme. Amendment C228 outlines the future urban structure guiding the development of land within the Minta Farm PSP area, prepared by the Victorian Planning Authority (VPA, 2017).
- 3.1.2. Our submission to Amendment C228 consists of an alternative future urban structure for the Minta Farm PSP area, in order to create a vibrant urban core to attract high-value knowledge jobs to the precinct. This alternative structure and concept is outlined in the 'Minta City Proposal' document (TMG, 2018).

3.2. Instructions to prepare this statement

- 3.2.1. I have been instructed by Norton Rose Fulbright Lawyers to prepare this expert design statement, to summarise and explain the key urban design and architectural elements of the Minta City Proposal, on behalf of TMG.
- 3.2.2. This statement is provided as expert evidence and justification for the design of the Minta City Proposal, for the purpose of the panel hearing regarding Amendment C228 and our alternative Proposal for Minta City.

3.3. Other contributors to this statement

3.3.1. This statement and the design of the Minta City Proposal was prepared with the assistance of:

- *Mike Day (Urban Designer, Roberts Day)* - who facilitated the agenda and logistics of the study tour. Assisted in the preparation of the design workshops.
- *Murray James (Urban Designer, Roberts Day)* – who was the collaborating designer on the concept masterplan. Preparation of urban design diagram studies.
- *Gaston Nogues (Project Leader, ClarkeHopkinsClarke)* – who facilitated and managed the concept masterplan design process and documentation of the design reports.
- *Andrew Amos (Urban Designer, ClarkeHopkinsClarke)* – who researched and prepared the case studies, proposal design reports and assisted in the preparation of design evidence.

3.3.2. These contributions notwithstanding, this design statement outlines my own opinions about the design for the Minta City Proposal.

3.4. Statement of relationship to Minta City Proposal Report (TMG, 2018)

3.4.1. This design statement and evidence is based upon Version 5 of the Minta City Proposal Design Report (TMG, 2018), which was previously circulated prior to the panel hearing.

3.4.2. I was the lead architect in the design of the concept masterplan in the Minta City Proposal (TMG, 2018) and oversaw the entire workshop, design and report preparation process.

3.4.3. I prepared and submitted the Minta City Proposal document and presentation, with direct assistance from Gaston Nogues and Andrew Amos from ClarkeHopkinsClarke (as outlined in section 3.3.1).

3.4.4. I adopt the exhibited Minta City Proposal design report document (TMG, 2018), subject to one alteration outlined in Section 3.4.5.

3.4.5. The Minta City Proposal has a typographical error on pages 11 and 15. The 'Employment Footprint' statistic is written as 53ha and should read 52ha.

4. Responding to the design brief

4.1. Responding to the 'Project Vision'

- 4.1.1. I was asked to design the masterplan for this proposal (in conjunction with Roberts Day) based upon the initial advice and vision provided to me by TMG. This vision was further refined by the wider project design team and is presented in the Proposal for Minta City, that *"Minta City will offer a unique setting that is attractive to 'next generation' businesses and workers who are seeking the amenity and synergies offered by a CBD location, but without the Melbourne CBD commute."* (TMG 2018, p7).
- 4.1.2. I have taken that the Project Vision is about accommodating and attracting high-value knowledge jobs to the precinct, and therefore must cater for the needs and desires of those workers and businesses through the kinds of buildings and spaces designed in the masterplan proposal.

4.2. Responding to the 'Place Vision'

- 4.2.1. In designing the masterplan for this proposal, I have responded to an alternate 'place vision.' This place vision for the site that was initially discussed by the wider project design team, and was refined by The Space Agency for the proposal document. The place vision is presented in the proposal as: *"...creating a new kind of urban centre for Casey where liveability and innovation are our priority. Minta City will provide unparalleled connectivity, walkability and amenity, setting the foundation for vibrant street and public spaces, as well as a collaborative business culture. Taking inspiration from the places we love, Minta City offers a unique setting for those attracted to the charm, character and natural beauty of the southeast, but who desire the convenience of an active urban lifestyle. It's the best features of Melbourne on a Berwick scale."* (TMG 2018, p8).
- 4.2.2. I have taken the Place Vision to mean that the design must include very high quality and walkable public spaces, a diverse mix of uses, a compact layout and local places to live that would create the amenity required by high-value knowledge businesses and workers.

4.3. Responding to challenges of PSP structure plan in Amendment C228

- 4.3.1. The design of this masterplan proposal has been based upon the premise explained in the joint written submission to Amendment C228 submitted by Urbis to the VPA on behalf of TMG in December 2017. (Urbis, 2017). This submission states that *"the PSP remains largely entrenched in 'old paradigm' thinking around the types of employment uses that Minta Farm should seek to accommodate, and the format that the employment precinct should take. The result is a plan that lacks the innovation and flexibility needed to realise Minta Farm's potential as a contemporary, future focused business environment that is attractive to high value employment generators."* (Urbis, 2017, p1).

- 4.3.2. I have based the design of the masterplan on local and international best practice examples (see section 4.6), and with input from the project design team for Minta City (TMG - landowners, Urbis - planning, Deepend Services - economics, Roberts Day – urban design and The Space Agency – place activation), to create a master plan that ameliorates the challenges provided by the current PSP structure plan.

4.4. Evidence supporting the design

- 4.4.1. This expert design statement is based on my professional opinion and research, beyond the background information provided to me and noted above in sections 4.1 – 4.3), and my extensive experience in the design and delivery of many mixed use developments.

4.5. Key understandings of the design brief

- 4.5.1. My understanding of the design brief was to provide a masterplan concept design to inform an alternative structure plan that would achieve the following:
- 4.5.1.1. a more urban environment with a diverse mix of uses;
 - 4.5.1.2. a more compact, walkable environment that is designed for people first;
 - 4.5.1.3. better integration of the isolated uses of the currently exhibited structure plan into a vibrant mixed-use series of precincts, with a strong sense of place, and
 - 4.5.1.4. the creation of an environment that is more conducive to the future employment and housing needs of the changing demands of a knowledge-based workforce and millennial generation.

4.6. Best Practice

- 4.6.1. As part of the research into the development of the Minta City Proposal, I partook in study tours and desktop research to various national and international best practice case study locations, upon which the Minta City proposal is based.
- 4.6.2. The case studies I have researched provide a direct insight into the feasibility and design ideas of compact, higher density and high amenity mixed-use developments around the world, and how elements of these may inform the design of the Minta City proposal.
- 4.6.3. National case study destinations included: Rouse Hill (NSW), Springfield (QLD), Norwest (NSW), Varsity Lakes (QLD), Skygate (QLD). Refer to Appendix C for Case Study details.
- 4.6.4. International case study destinations included: Avalon (Georgia, USA), Legacy West (Texas, USA), Plano Legacy (Texas, USA), Addison Circle (Texas, USA), HafenCity (Hamburg Germany) and Bahnstadt (Heidelberg Germany). Refer to Appendix C for Case Study details.

5. Design Evidence and Explanation

5.1. Site Context

5.1.1. *Macro Conditions*

5.1.1.1. The site is located around 45 kilometres southeast of the Melbourne CBD, within the 'South East Growth Corridor.' (VPA 2012). The site is immediately south of the Monash Freeway at the C101 exit, and loosely bounded by Soldiers Road to the west, Stockland future residential development to the south, Cardinia Creek to the east, and the Monash Freeway and future Oshea Road extension to the north. The Pakenham railway line and Beaconsfield station is approximately 1.4km north of the northern site boundary.

5.1.1.2. West of the site are the established residential suburbs of Cranbourne North and Narre Warren South. South of the site is future residential development. East of the site across the Cardinia Creek is the State Significant Industrial Precinct (SSIP) employment area of the Officer/Pakenham SSIP, representing around 1000ha of proposed future industrial land (State of Victoria Department of Environment, Land, Water and Planning, 2017, p4).

5.1.2. *Micro Conditions*

5.1.2.1. The site's eastern boundary is framed by Cardinia Creek, which forms an ecological corridor linking the site to existing suburbs to the north and future suburbs to the south.

5.1.2.2. The site is approximately 165ha, and the entire site area is within a 10 minute walkable catchment of its centre.

5.1.2.3. The site has a gently undulating slope and currently accommodates farmland, areas of wetlands and various structures.

5.1.3. *Opportunities and Constraints*

5.1.3.1. Significant opportunity exists to integrate and retain the natural beauty of the Cardinia Creek and surrounding wetlands into the proposal.

5.1.3.2. The freeway interface of the site required careful consideration as a strategic access point, whilst also balancing noise and amenity impacts.

5.1.3.3. Site vehicle access is heavily dependent on the future OSheas road extension to the freeway, and should provide the entrance to a major north-south road connection through the site.

5.2. Design Response – Concept Masterplan

5.2.1. *Urban design rationale*

5.2.1.1. *Integrate a wide mix of uses* – there is a need for the concept masterplan to incorporate a diverse mix of uses, in order to create the amenity anticipated by TMG's project vision. The concept masterplan includes business, recreation, retail, small-scale innovation commercial spaces, and residential areas woven into the urban fabric to create a place that is active for significant parts of the day and night, provides multiple opportunities for face-to-face connections and meetings, and places to socialise, live, work and play. This is directly in contrast to single-use office parks, which close at the end of the working day, and have similar uses across large areas.

5.2.1.2. *Establish the urban grid* – the basic structure of the proposal is a lattice of compact urban blocks that radiates outward from the core of the site. The benefits of such a structure include fine grain permeability and walkability, shorter distances between destinations, a network of pedestrian connections rather than single-routes and a flexible, agile and adaptive urban land framework that can accommodate changing uses over time.

5.2.1.3. *Integrate the green network* – The urban grid is punctuated by a network of urban parks and civic spaces linked together by tree-lined avenues. These provide strategic connections to the Cardinia Creek via an ecological corridor of lakes extending east-west through the site. Integrating open, attractive green urban spaces into the urban grid is essential to create a high-amenity precinct.

5.2.1.4. *Consolidated and compact precincts* – the masterplan is spatially described using three precincts, each performing a specialised function as part of the whole masterplan (Figure 1). Crucially, each precinct still supports and confirms the vision of a compact, walkable and vibrant new generation business centre.

Figure 1: Minta City Masterplan Precincts



5.2.1.5. *Define and activate the public spaces* – The grid structure allows each streetscape to be appropriately defined and framed by built form edges. These edges provide good conditions for street activity, active edges, a sense of enclosure, blurring of indoor and outdoor spaces and activities and a human scale to the ground level. Upper level residential apartments and balconies will combine with high levels of glazing and activities at the ground floor to provide passive surveillance and a feeling of safety in friendly, vibrant and social streets.

5.2.1.6. *Multi-modal transportation* – the masterplan can accommodate multiple modes and routes of transportation, including walking and cycling paths along key green spines, a bus loop through the urban grid structure to connect to surrounding rail stations, and slower-speed vehicle roads throughout the grid. This is consistent with national and international case studies, and how multiple modes of transport are incorporated.

5.2.2. Urban Core Precinct

5.2.2.1. Design Principles

- 5.2.2.1.1. *Urban Boulevard and character streets* – the masterplan creates a central boulevard framed by medium-high density office and commercial buildings, thus avoiding excessive street setbacks often seen in traditional business parks. The scale of the street width is designed to reflect the higher scale of buildings, to create a ‘St Kilda Road’ feel (See Figure 2). East-west streets similarly mirror this urban character, taking design cues from Melbourne CBD laneways and tree-lined streets.

Figure 2: Artists impression of Minta City Urban Core precinct and Boulevard
(ClarkeHopkinsClarke/Studio Magnified)



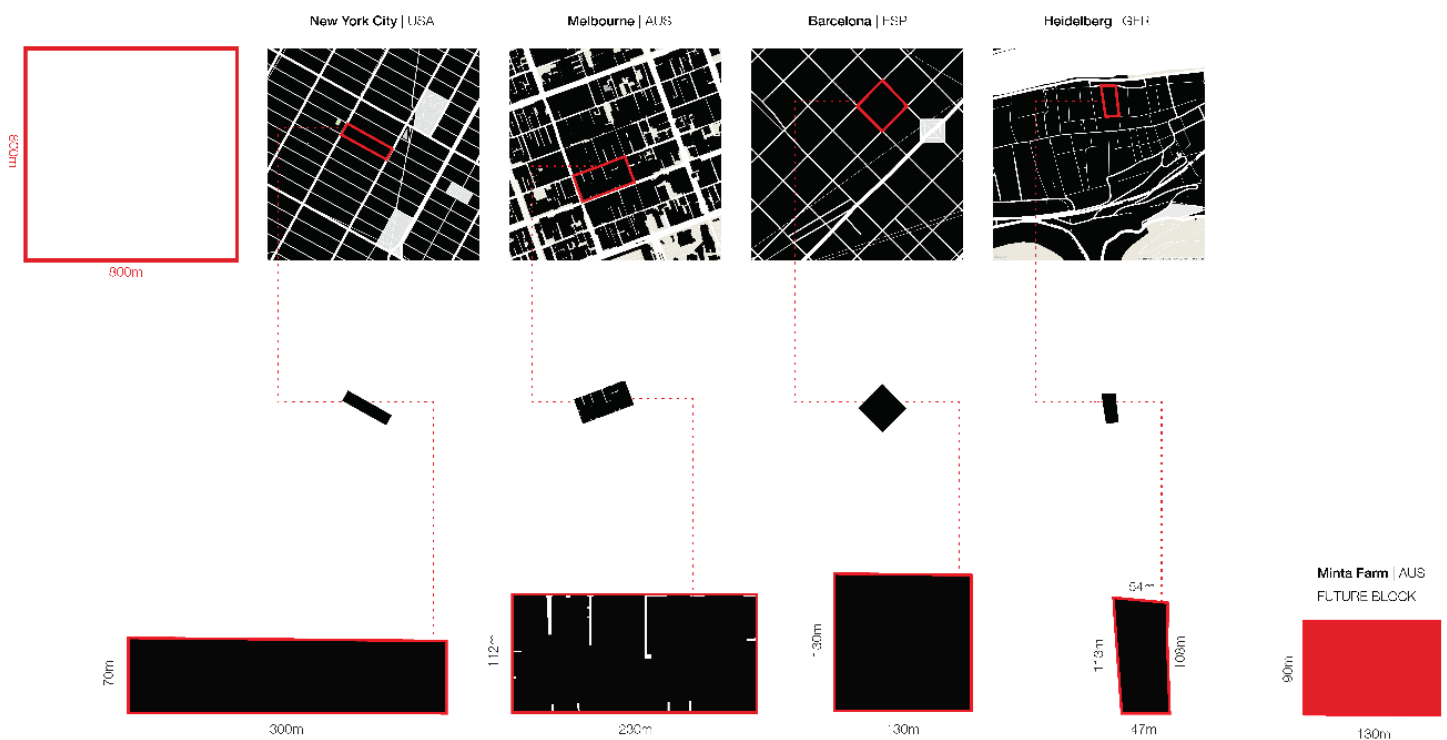
- 5.2.2.1.2. *Compact and walkable blocks* – city block dimensions ensure minimal distances and maximum connectivity between destinations.
- 5.2.2.1.3. *Small urban green spaces* – within the street network and grid structure, areas of pocket-parks, ‘spill-out spaces,’ and alfresco areas provide the business amenity and high-quality public realm that would cater to knowledge-intensive businesses who require comfortable and vibrant places for face-to-face collaboration.

- 5.2.2.1.4. *Perimeter block structure and street address* – by framing each block with built form, car parking is internalised within the block. Thus, buildings are able to frame and activate the street with articulated forms, multiple openings and glazing.
- 5.2.2.1.5. *Integration of residential into urban core* – Each city block has been designed to allow for 20% of land to be utilised for residential uses. The benefits of intertwining residential typologies throughout the urban core include activation of spaces into the evening and night, passive surveillance and safety, and the opportunity for local knowledge workers to live close to workplaces and areas of high amenity. The implementation of residential uses into the Urban Core is discussed further by Urbis, in their evidence report to this submission.
- 5.2.2.1.6. *Integration of mixed-use and SLEPs into urban core* – the urban core precinct incorporates the areas that are currently designated as ‘mixed-use’ and ‘SLEP’s in the exhibited PSP layout. I believe that the urban core precinct is a more logical integration for these uses, in order to better overlap them with high-value businesses and allow for better synergies, instead of separating them out into individual, single-use precincts.

5.2.2.2. Urban Core City Block and Built Form Study

5.2.2.2.1. The dimensions of the standard city block in the urban core precinct are 90m x 130m. These dimensions are consistent with other international street grids renowned for their fine-grain character and walkability (Figure 3). These dimensions are able to accommodate flexible building typologies and large land parcels in a perimeter block format, whilst still maintaining a permeable grid structure for high walkability.

Figure 3: Comparison of city block dimensions (ClarkeHopkinsClarke)



5.2.2.2.2. Figure 4 shows a comparison study of potential built form configurations on the 130 x 90m city block, based on typical office building built form assumptions (refer to appendix D). This study was undertaken to properly inform how the precinct's built form may appear, and to examine a range of configurations to better achieve the desired urban design principles whilst providing a mix of office space, car parking and residential uses.

Figure 4: Study of potential built form outcomes to accommodate required jobs in urban core precinct (ClarkeHopkinsClarke).

BLOCK TYPE		1	2	3	4	5	6	7	8
	Unit	Non-Compliant On-grade Car Park Only - Low Density	On-grade & Podium Car Park	On-grade & Podium Car Park; Underground Car Park	Multi-Deck Car Park (2 Levels)	Multi-Deck Car Park (3 Levels)	Podium Car Park (2 Levels)	Podium Car Park	Podium Car Park (High Yield)
									
Lot Size	m	130 X 90	130 X 90	130 X 90	130 X 90	130 X 90	130 X 90	130 X 90	130 X 90
Jobs Provided	Jobs	370	620	620	620	620	620	620	840
Office GLA	m ²	8300	13600	13600	13600	13600	13600	13600	18480
Office NLA (80% Efficiency)	m ²	6600	10900	10900	10900	10900	10900	10900	14800
Residential Lot (20%)	m ²	2350	2350	2350	2350	2350	2350	2350	2350
Underground Car Park	m ²	N/A	N/A	3200	N/A	N/A	N/A	N/A	N/A
On-grade Car Park	m ²	8100	6000	8400	2000	N/A	N/A	N/A	N/A
Podium Car Park	m ²	N/A	5600	N/A	N/A	N/A	N/A	11600	15520
Multi-Deck Car Park	m ²	N/A	N/A	N/A	9600	11600	11600	N/A	N/A
Total Car Bays		270	380	380	380	380	380	380	520
Access Lane way	m	90	90	90	90	275	180	190	190

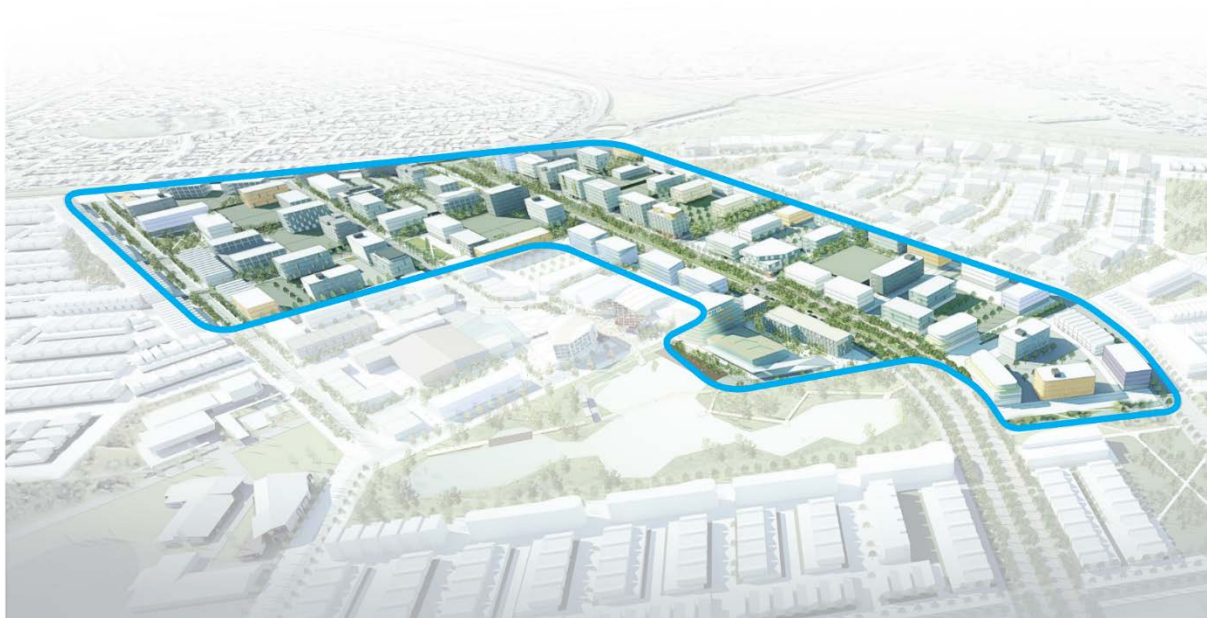
5.2.2.2.3. Block type 1 in Figure 4 is the lowest density option, providing low job densities, high land-take and inefficient use of the land. This form represents more typical office parks with large on-grade parking. This typology is too low-density to comply with the exhibited design guidelines (VPA 2017: G23 – G27, p26), and is neither recommended nor applied in this design proposal for Minta City.

5.2.2.2.4. Block types 2 – 7 in Figure 4 represent different possible configurations of the urban core block, which may be utilised throughout the precinct. Each configuration accommodates the same number of jobs (620), office area (GLA) and residential area (20% of the block), whilst varying the building configurations, location and type of car parking and access.

5.2.2.2.5. Block type 8 in Figure 4 is a higher density option which demonstrates the ability of each block to accommodate even higher job densities. This is not necessary to accommodate the job targets for Minta City, but I include it as a reference and encouragement that higher density options with good design outcomes are possible here.

5.2.2.3. *Urban Core Built Form Study* – modelling of potential built form was produced to test the job capacity of the concept masterplan (Figure 5), based on the job ratios provided by Deepend Services as part of the brief. The result shows that based on a typical office building (the same as that used in the typical city block study), the urban core precinct potential built form can comfortably accommodate the NLA required to support 8669 jobs (refer to appendices B and D), as well as the required car parking and integrated residential uses.

Figure 5: 3D modelling of urban core precinct to test job capacity (ClarkeHopkinsClarke).



5.2.3. *Innovation Quarter (IQ) Precinct*

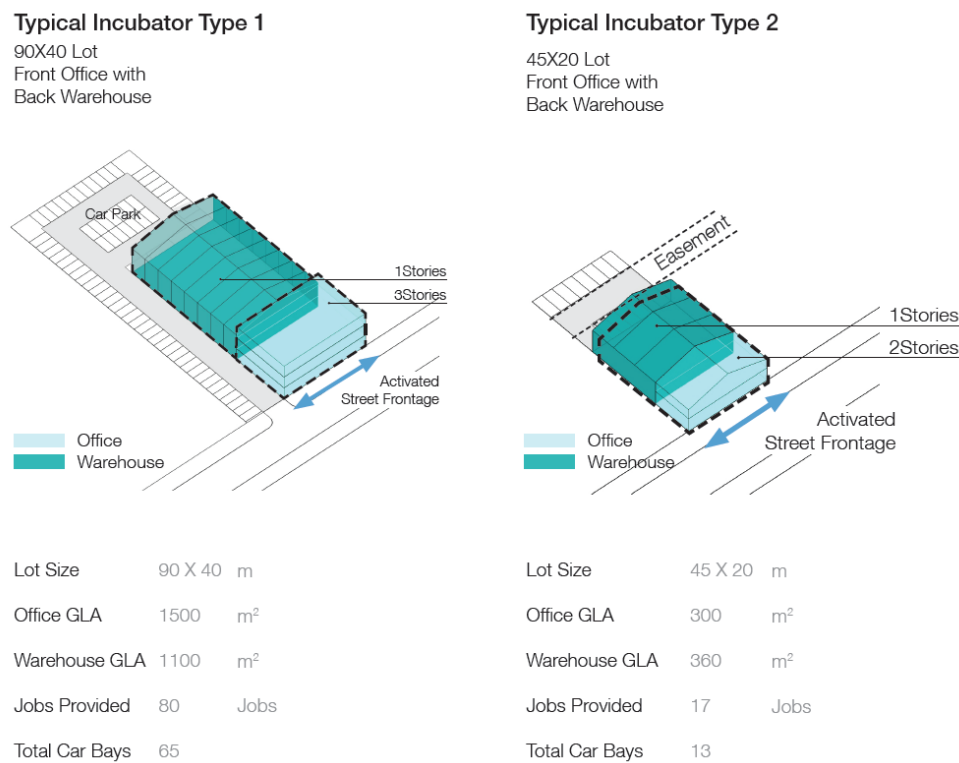
5.2.3.1. Design Principles

- 5.2.3.1.1. *Flexible lot mix* – Based on the jobs projections provided by Deepend Services (Appendix B), it is my understanding that this precinct must create an environment that is conducive to knowledge based innovation businesses and start-ups. The built form proposed on smaller lots intentionally discourages land hungry warehouse and manufacturing uses. The IQ precinct is not designed to be an industrial park but a highly walkable precinct that can provide affordable spaces to allow small business to incubate and scale.
- 5.2.3.1.2. *High amenity innovation environment* – the more urban setting of the IQ precinct frames high quality public realm with more compact hybrid office/warehouse ‘maker-spaces.’ This kind of environment is purposely designed to encourage smaller, start-up and innovation businesses to locate here.
- 5.2.3.1.3. *Freeway interface* – consideration has been given to the amenity impacts of the Monash freeway, with some larger lots and perimeter street acting as a buffer to the denser form of the IQ precinct.
- 5.2.3.1.4. *Integration with other precincts* – the IQ precinct seamlessly integrates with the urban core precinct across the connector road – providing multiple pedestrian and street connections which utilise the urban grid network. This allows for easy access to business services in the urban core. Similarly, the IQ precinct has been positioned in close proximity to the surrounding residential areas to the south, albeit with a high quality urban park in between. This will allow easy walking/cycling access directly into the IQ precinct for workers living in the surrounding areas.

5.2.3.2. IQ Precinct City Block Study

5.2.3.2.1. In order to accommodate the diversity and flexibility of innovation business in the IQ, potential built form considered includes a combination of smaller (45m x 20m) and larger (90m x 40m) lots. The built form proposed for these lots ensures the street is well-framed by 2-3 storey office spaces, with warehouse spaces and car parking also provided on-site (Figure 6).

Figure 6: Study of potential built form outcomes to accommodate required jobs in IQ precinct (ClarkeHopkinsClarke).



5.2.3.2.2. *IQ Precinct Built Form Study* – Modelling of potential built forms in the IQ precinct was undertaken to test job capacity based on job ratios provided by Deepend Services (Appendix B). the result shows the IQ precinct could comfortably accommodate 2361 jobs (Refer to appendix D).

5.2.4. Town Centre Precinct

5.2.4.1. Design Principles

- 5.2.4.1.1. *A centre for Minta City* – the town centre precinct has been proposed at the centre of all other business/commercial precincts, as the heart of the Minta City development. This ensures maximum integration into the urban fabric of the surrounding urban core precinct, IQ precinct and public spaces. Retail, hospitality and commercial services, landmark buildings, public spaces and cultural experiences would serve as a magnet to knowledge businesses, and the town centre would become a destination for both workers and visitors.
- 5.2.4.1.2. *Retail main street* – a compact and framed street would locate specialty retail, service businesses and other uses along a connector street spanning from the town centre to the urban core precinct. Street furniture, tree planting and on-street parking will be crucial to create a 'main street' feeling. Additionally, the town centre precinct has been developed to accommodate the entire 13000m² of retail area allocated within the exhibited PSP town centre.
- 5.2.4.1.3. *Civic uses* – the town centre has been strategically repositioned at the nexus of the proposed school and community precinct (to the west) central wetlands (to the south), and job-dense urban core and IQ precincts (to the north and east). This allows a much higher level of connectivity between the town centre and civic uses, and consequently greater activation of the town centre with a critical mass of people in surrounding areas.
- 5.2.4.1.4. *Town Square* – the pedestrian-only town square has a food and beverage and retail focus, to create a vibrant social hub with direct physical and visual connections to the 'Minta Gardens' wetland park. The town square is a place for social gatherings, business meetings, dining and cafes, living, recreation and connections to both built form and green space (Figure 7). It forms the central landmark to the entire Minta City development.

Figure 7: Artists impression of Minta City Town Square in the town centre precinct.
(ClarkeHopkinsClarke/Studio Magnified)



5.2.4.1.5. *Hotel and conference centre* – directly adjacent to both the town centre and wetland park a landmark hotel building is suggested, as a signpost for the centre of the precinct and the location for business conferences, exhibitions and events that may utilise the park interface and water views.

5.2.4.1.6. *Integration of car parking* – the town centre precinct design allows for a combination of on-grade parking that is sleeved by built form; basement parking underneath key developments; and on-street kerbside parking along the main street and surrounding connector roads.

5.2.5. *Housing Diversity*

- 5.2.5.1. Across the urban core and town centre precincts, a range of housing typologies and sizes have been suggested in order to complement and integrate with the surrounding neighbourhoods.
- 5.2.5.2. These residential uses are suggested to form a transition from surrounding low-density detached houses (existing and proposed); medium density town homes at the interface with business precincts; to high density, upper level apartments and town houses woven into the urban core and town centre precincts.
- 5.2.5.3. The integration and diversity of housing within the urban core and town centre is considered a key part of the Minta City Proposal, as it ensures knowledge businesses have access to local skilled workers, and that workers have an attractive, affordable and convenient place to live.

5.2.6. *Public Realm*

- 5.2.6.1. The quality, dispersed locations and proximity to businesses of the public spaces (parks, wetlands, pocket-parks, plazas etc.) is also considered to be a crucial element in achieving the vision of TMG for Minta City, as they provide the basis for high amenity spaces to attract knowledge businesses.
- 5.2.6.2. Integrating the Cardinia Creek with future lakes, green spines, a hilltop park and public spaces serves a twofold benefit – to provide attractive spaces to do business and collaborate; and to provide active, quick pedestrian and cycle connections within Minta City and to surrounding areas.

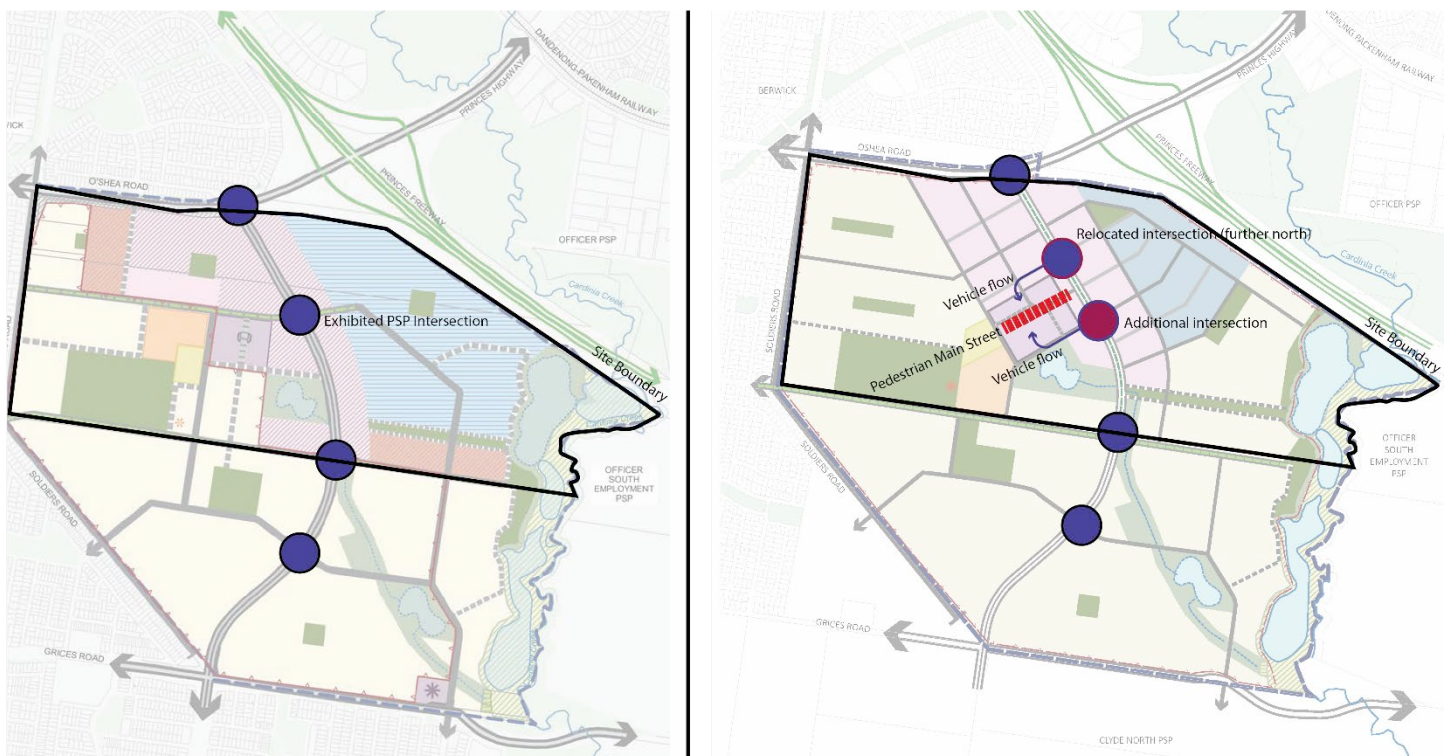
5.2.7. Additional vehicle intersection

5.2.7.1. The current single signalised intersection in the northern part of the site has been repositioned to the north, and an additional intersection has been introduced (Figure 8).

5.2.7.2. The introduction of the second signalised intersection enables vehicles to access the rear side of the city blocks that frame the pedestrian focused Main Street. This enables more efficient and focused vehicle flow and servicing access to the north and south of the Main Street, and creates a more pedestrian focused Main Street by reducing the requirement for all vehicle movements to access Main Street (Figure 8).

5.2.7.3. The proposed modifications and addition to the intersection design would require further expert traffic engineering input.

Figure 8: Intersections along main arterial road – exhibited Minta Farm PSP (left) and Minta City Proposal (right).



5.3. Design implications of curtilage options for the Myer House

- 5.3.1. Regarding the curtilage options surrounding the Myer House currently on the site, I understand that the VPA suggests a smaller curtilage based on heritage advice of GJM (GJM, 2017), whilst the City of Casey proposes a larger curtilage area based on heritage advice of Context (City of Casey, 2018).
- 5.3.2. If the Myer House was to be retained in its current location in the Minta City Proposal, it would be integrated into the broader sports and recreation precinct (See Figure 9), and could be repurposed for a non-residential use (e.g. community or sports facilities).
- 5.3.3. The integration of the Myer House into the Minta City Masterplan proposal would require further consideration and possible repositioning of the sports fields shown in the proposal (TMG, 2018).
- 5.3.4. If retained as part of the sports and recreation precinct in Minta City, the house would not retain a direct street reference or frontage, and would instead remain embedded in a relatively open landscaped setting.
- 5.3.5. If a large curtilage is to be implemented surrounding the Myer House, I consider that this would have a large impact on the proposed urban structure and would affect the sports fields, community and school sites, and consequently the Town Centre precinct.
- 5.3.6. Further, given its proposed setting in an open landscape amongst sports fields in the Minta City proposal, I believe that the views and vistas toward the Myer House would be sufficiently retained in the Minta City Proposal, even with a smaller curtilage.
- 5.3.7. An alternative option I would consider would be the relocation of the prefabricated Myer House to another, more street-based location within the Minta City Proposal.

Figure 9: Location of existing prefabricated Myer House within the Minta City Masterplan proposal (Shown in red).



5.4. Comparison to exhibited PSP Future Urban Structure

5.4.1. In comparing the exhibited PSP future urban structure proposed in Amendment C228 to the one proposed in our Minta City Proposal (Figure 10 and Figure 11), I make the following observations:

5.4.1.1. The exhibited PSP future urban structure would continue to encourage a 'business-as-usual' office and industrial park, with little to no incentives through its design or built form to attract knowledge businesses. This is due to single-use areas spread across large land areas.

5.4.1.2. The urban structure of the exhibited PSP disconnects the town centre and mixed use sub-precincts (the most vibrant areas of the PSP) to far edges of the plan, which would result in less active centres without a critical mass of people, and no defined centre.

Figure 10: Comparison of exhibited VPA and TMG future urban structures (Adapted from TMG, 2018, p11)



5.4.1.3. The Minta City future urban structure will create a new generation innovation and business park, as a clear incentive for knowledge based businesses and workers to locate there. This is due to a vibrant mix of uses in a compact footprint to create walkable and activated areas.

5.4.1.4. The Minta City town square consolidates the mixed use and town square areas into one clear centre of the entire proposal, within a 10 minute walking distance from anywhere else in Minta City. This would result in an activated, connected heart buzzing with activity due to the critical mass of workers and visitors surrounding the town centre precinct.

Figure 11: Potential urban design outcomes resulting from each proposed future urban structure

PSP (Exhibited) Future Urban Structure	Minta City Future Urban Structure
Segregated and separated uses	Co-located uses
Car-based, suburban structure	Walkable, urban structure
Large footprints and low job densities	Compact footprints with more intensive job densities
Locking-in business to old building typologies	Flexible building typologies allowed with resilient grid structure
Open spaces not placed for best use	Open spaces functional and well-placed in context
Mixed use precincts and local town centre pushed to edges of site	One central core at Town Centre
Daytime only activities	Day and night activities

6. Conclusion

- 6.1. This expert design statement sets out the reasons why the design of the Minta City Proposal can better achieve the 'project vision' and 'place vision' developed by TMG in collaboration with the project design team.
- 6.2. Through my involvement in the design, research and collaboration in the Minta City Proposal, I believe that the compact, job-dense urban form as proposed in this statement and the Minta City Proposal (TMG 2018), will best achieve these strategic visions, as well as attract the kinds of knowledge-based organisations and skilled workers desired in this area.
- 6.3. I believe that the Minta City proposal is consistent with national and international trends in mixed-use and commercial development I have observed in my experience working in this area, and through my visits to case studies in the Australia, USA, and Germany (also described in Appendix C).
- 6.4. I support the design proposal for Minta Farm, in order to achieve TMG's vision and the 20 minute neighbourhoods that the market is demanding in the growth areas of Melbourne.
- 6.5. 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.

7. References

City of Casey (2018) *City of Casey Submission to Amendment C228 Minta Farm Precinct Structure Plan.*

GJM (2017) *Heritage Advice for the Victoria Planning Authority, 'Myer House', Minta Farm, Berwick (Stage 3).* Prepared for the Victorian Planning Authority, Melbourne.

State of Victoria Department of Environment, Land, Water and Planning (2017) *Urban Development Program: State Significant Industrial Precincts 2016.* Planning Division.

TMG (2018) *Minta City Proposal.* Prepared by Roberts Day, ClarkeHopkinsClarke, Deepend Services, Urbis and The Space Agency.

Urbis (2017) *Submission to Amendment C228 to the Casey Planning Scheme: Minta Farm Precinct Structure Plan.* Letter dated 4 December 2017

Victorian Planning Authority VPA (2012) *South East Growth Corridor Plan* (prepared as Growth Areas Authority).

Victorian Planning Authority VPA (2017) *Minta Farm Structure Plan*

8. Appendices

Appendix A – Dean Landy CV

Appendix B – Deepend Memo

Appendix C – Case Studies (Compiled by Roberts Day and ClarkeHopkinsClarke)

Appendix D – Built Form Study (ClarkeHopkinsClarke)

Appendix A

Dean Landy CV

DEAN LANDY

PARTNER | ARCHITECT

RAIA, 20 years experience
B.Arch(Hons), BA(Arch)(Hons)
Registered Architect, ARBV 16210



dean.landy@chc.com.au



EXPERTISE

Dean Landy leads ClarkeHopkinsClarke's mixed-use and retail team, and is responsible for some of Australia's most progressive thinking in the field of urban design.

Over the past two decades he has been responsible for the creation of new town centres, master planned communities and mixed-use developments across Australia, as well as several significant social impact projects internationally.

By nature, Dean takes an entrepreneurial approach. He is highly regarded, and indeed sought after, for his ability to understand and embrace the commercial imperatives of complex projects and then add value to them through the strategic planning and design process.

His experience spans a wide range of sectors. His network crosses industries, demographics and indeed, the globe. His ability to reach out, engage and bring people of various backgrounds together on a project, has paved the way for many mutually beneficial partnerships and the creation of places that future generations will live, work, learn and connect in meaningful ways.

Dean Landy has been a partner at ClarkeHopkinsClarke for over 15 years and is the driving force behind the practice mission of 'Creating Vibrant Communities'. In 2016 he wrote and published his first book of the same name to serve as a practical guide to creating stronger communities through the development process.

Dean is the founder and director of One Heart Foundation, a 'for purpose' organisation that is working to break the poverty cycle in Africa, and change the future of orphaned and abandoned children. He was recently the recipient of Deakin University's 2017 Young Alumni Award and is an active examiner for the Architects Registration Board of Victoria.

AWARDS

Deakin University Young Alumni Award (2017)
VARB Architectural Services Award (2009)

"The most successful projects always tend to be born out of a dual focus; delivery on a feasibility and delivery of a genuinely human-centric outcome."

RECENT PROJECTS

- Armstrong Creek Town Centre, Armstrong Creek
- CLARA Masterplan
- Cloverton Town Centre, Beveridge
- Eyensebury Town Centre, Eynesbury
- Jackson Hill Heritage and Adaptive Reuse Study
- Kalkallo Neighbourhood Activity Centre, Lockerbie South
- Kingston Village, Ocean Grove
- Leopold Gateway Shopping Centre, Leopold
- Lucas Town Centre, Ballarat
- Polaris Town Centre, Bundoora
- Saltwater Coast Neighbourhood Activity Centre, Point Cook
- Seville Town Centre, Seville
- Skennars Head Mixed Use Town Centre, Skennars Head
- Soho Village, Point Cook
- Springvale Mixed-Use Town Centre
- St Germain Town Centre, Clyde North
- Warrailly Neighbourhood Activity Centre, Armstrong Creek
- Wollert Town Centre, Wollert

Appendix B

Deepend Services Memo

Memo

To: Alex Guild, Norton Rose Fulbright

From: Justin Ganly

CC:

Date: 7 March 2018

Subject: Casey Am C228 – Minta Farm employment calculations

Dear Alex,

As requested, this memorandum sets out my employment forecasts for the land which is the subject of the exhibited Amendment C228 to the Casey Planning Scheme (“Am C228”).

In Table 1 below I set out the key land area (both gross and net where available), floorspace and job forecasts for the three precincts which are adopted in TMG’s proposed PSP for Minta Farm. These forecasts have been generated in conjunction with Dean Landy at Clarke Hopkins Clarke who has been responsible for the masterplan development.

Table 1—Forecast land area, floorspace and jobs for Minta Farm employment precinct

Precinct	Gross area (ha)	Net area (ha)	Employment generators (sqm NLA)				Total
			Office	Warehouse	Retail	F&B, hotel and other	
Precinct 1 - Urban core	30.0	16.4	145,920	0	0	11,680	157,600
Precinct 2 - Innovation quarter	16.0	11.9	34,080	41,320	0	0	75,400
Sub-total Precinct 1 and 2	46.0	28.3	180,000	41,320	0	11,680	233,000
Precinct 3 - Town centre	6.0	n/a	3,900	0	13,000	3,073	19,973
Total employment area	52.0	n/a	183,900	41,320	13,000	14,753	252,973
Proportion	-	-	73%	16%	5%	6%	100%

Precinct	Gross area (ha)	Net area (ha)	Jobs (no.)				Total	Job density (no./gross ha)	Job density (no./net ha)
			Office	Warehouse	Retail	F&B, hotel and other		Total	Total
Precinct 1 - Urban core	30.0	16.4	8,338	0	0	330	8,669	289	529
Precinct 2 - Innovation quarter	16.0	11.9	1,947	413	0	0	2,361	148	199
Sub-total Precinct 1 and 2	46.0	28.3	10,286	413	0	330	11,030	240	390
Precinct 3 - Town centre	6.0	n/a	223	0	390	92	705	118	n/a
Total employment area	52.0	n/a	10,509	413	390	423	11,735	226	n/a
Proportion	-	-	90%	4%	3%	4%	100%	-	-

The highlights are:

- Gross land area of 52.0 ha;
- Office floorspace represents 73% of NLA but provides 90% of jobs; and
- A total of 11,735 jobs will be supported at full development.

The City of Casey’s long-held criteria has been that Minta Farm is to deliver a minimum of 10,000 jobs and TMG’s masterplan will result in the jobs threshold being exceeded by quite a margin.

I have also been asked to compare the job forecasts with those provided within the exhibited PSP. To do this, I have separated the employment precinct from the balance of the PSP area and then aligned, as closely as possible, TMG's three proposed precincts with the land uses nominated in the PSP.

The resulting comparisons are set out below (with the PSP data being reproduced from Table 5 in the exhibited document):

Table 2—Comparison of TMG and VPA employment forecasts for Minta Farm

TMG proposed PSP									Exhibited PSP (Table 5 - Anticipated Employment Creation)				
Precinct/land use	Gross area (ha)	Net area (ha)	Floorspace (sqm)					Jobs (No.)	Precinct/land use	Unit of measure	Jobs per unit	Projected units in PSP	Jobs (No.)
			Office	W/house	Retail	Other*	Total						
Employment precinct									Employment precinct				
Urban core	30.0	16.4	145,920	0	0	11,680	157,600	8,669	Office and commercial	Jobs per hectare	280	26.15	7,322
									Mixed use	Jobs per hectare	56	10.4	582
									Sub-total	-	216	36.55	7,904
Innovation quarter	16.0	11.9	34,080	41,320	0	0	75,400	2,361	Innovation and technology	Jobs per hectare	56	39.26	2,199
									Small local enterprise	Jobs per hectare	158	3.4	536
									Sub-total	-	64	42.66	2,735
Town centre	6.0	n/a	3,900	0	13,000	3,073	19,973	705	Local town centre	Jobs per hectare	87	3.62	314
Total employ. precinct	52.0	n/a	183,900	41,320	13,000	14,753	252,973	11,734	Total employ. precinct	-	-	-	10,953
Balance PSP area									Balance PSP area				
Council kindergarten	-	-	-	-	-	-	-	10	Council kindergarten	Jobs per centre	10	1	10
Community centre	-	-	-	-	-	-	-	10	Community centre	Jobs per centre	10	1	10
Government primary school	-	-	-	-	-	-	-	40	Government primary school	Jobs per school	40	1	40
Private child care facility	-	-	-	-	-	-	-	15	Private child care facility	Jobs per 100 places	15	1	15
Local convenience centre	-	-	-	-	-	-	-	0	Local convenience centre	Jobs per hectare	87	1	87
Home-based business	-	-	-	-	-	-	-	193	Home-based business	Jobs per dwelling	0.05	2,853	143
Total balance PSP area	-	-	-	-	-	-	-	268	Total balance PSP area	-	-	-	305
Total PSP area	-	-	-	-	-	-	-	12,002					11,258

*Comprises Food & Beverage, Hotel and Other Non-Retail

It is apparent that the TMG scheme delivers more jobs within the employment precinct but slightly less in the balance of the PSP area (because of the proposed deletion of the local convenience centre on the Stockland land).

Overall, the TMG scheme supports 744 more jobs (i.e. an increase of 7% compared to the exhibited PSP). Significantly, this is achieved by a stronger focus on white-collar, office-based employment with 8,669 jobs within the Urban core compared to the PSP's forecast of 7,904 jobs within the Office and commercial and Mixed use land use areas.

The final issue I have been asked to address in this memorandum is why my job forecasts are different to those within the exhibited PSP. There are, of course, many ‘moving parts’ but I will now highlight the key differences.

To start, I have copied below Table 4 from the VPA’s background report *Minta Farm Precinct Structure Plan, Employment Precinct Land Review* of October 2017. This table is important because it provides some of the basis to the job figures provided within the exhibited PSP.

Figure 1—Key VPA PSP job projection background data

		Commercial /Office	Light Industry	SLEP	Town Centre	Mixed Use	Summary
Land take	Net Developable Area (ha)	26.15	39.26	3.40	3.62	10.40	82.83
	Internal Road Area (%)	30	30	30	30	30	30
	Net Lot Area (Ha)	18.31	27.48	2.38	2.53	7.28	57.98
Built form	Built Form Coverage (%)	50	50	50	45	50	45 to 50
	Average Storeys	2.00	1.20	2.00	1.10	1.00	1.0 to 2.0
	Floor Space Efficiency (%)	80	80	90	75	80	75 to 90
	Net Floor Space (sqm)	146,440	131,914	21,420	9,407	29,120	338,301
Jobs	Job Density (sqm/job)	20	60	40	30	50	20 to 60
	Job Density (jobs/ha)	280	56	158	87	56	56 to 294
	Projected Job Number	7,322	2,199	536	314	582	10,953

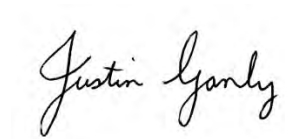
I then set out below what I believe to be the key reasons for the differences in job calculations:

1. TMG has a focus on high-value white-collar employment with 145,920 sqm of office floorspace within the Urban core precinct alone (and 183,900 sqm of such floorspace throughout the employment precinct). On the other hand, the VPA has more of a focus on “light industry” floorspace with a total of 153,334 sqm within the Innovation and technology and Small local enterprise land use areas (equivalent to Light Industry and SLEP in the table above).
2. TMG has integrated the VPA’s Office & commercial and Mixed use land use areas into its Urban core precinct where heights are assumed as average 5 storeys for office buildings whereas the VPA assumes an average of 2 storeys.
3. TMG has integrated the VPA’s Innovation and technology and Small local enterprise land use areas into its Innovation quarter where building heights are 2-3 storeys whereas the VPA assumes 1.2-2 storeys.
4. TMG has planned for 13,000 sqm of retail floorspace plus other non-retail and office uses to be provided within the Town Centre whereas the VPA assumes 9,407 sqm of retail floorspace and nothing else.
5. TMG is using a masterplan which allows for different built form coverage rates throughout all precincts but these will generally be significantly higher than the 45-50% assumed by the VPA.

6. TMG's assumed employment densities are generally higher, with the most obvious example being office-based employment (i.e. 17.5 sqm per job compared to 20 sqm per job adopted by the VPA).

I trust this memorandum appropriately addresses the issues as required but please contact me if you require anything further.

Kind regards

A handwritten signature in black ink that reads "Justin Ganly". The signature is written in a cursive, flowing style.

Justin Ganly
Managing Director

Appendix C

Employment Precinct Case Studies
(Roberts Day and ClarkeHopkinsClarke)

Employment Precinct Case Studies

National Examples

CASE EXAMPLE	DISTANCE	AREA (HA)	JOB	JOB /HA ¹	MIX OF ACTIVITIES	TRANSPORT	COMMENTS
Circa Commerical Precinct (Mulpha Northwest)	27km to Sydney	30 (total)	25,000	830	Office Outdoor Plaza Waterfront dining Retirement living Apartments Retail Commercial towers	<ul style="list-style-type: none"> Future train station under construction Major intersection and exposure to highway and tollway 	<ul style="list-style-type: none"> Vibrant centre surrounded by commercial precinct of 2-15 storey offices and facilities. Project includes 1000 residential units, retirement village and aged care home
Tonsley Innovation District	9km to Adelaide	61 (total) 24 (employment)	6,300	270	High value industry and commercial Business (24ha) Retail University	<ul style="list-style-type: none"> Positioned between Tonsley and Clovelly Park Railway stations Local bus routes on surrounding roads 	<ul style="list-style-type: none"> Collaboration between South Australian government and industry.
Rouse Hill	40km to Sydney	122 (total) 30 (employment)	12,000	400	Retail (LFR & specialty) Office (Approx 200,000m2 total) Hospitality Education	<ul style="list-style-type: none"> Local bus routes through residential development Transit interchange incorporating a bus station Future train station under construction majority of public car parking provided underground to minimise impact on public realm 	<ul style="list-style-type: none"> Combination of traditional mixed use main street + convential suburban mall Multiple architectural firms commissioned to provide diverse built from Variety of public open spaces Permeable, pedestrian focused, fine grain design
Williams Landing	19km to Melbourne	274 (total) 49 (employment)	5,000 (forecast)	100	25,000m2 retail 13,500m2 bulky good retail 20,000m2 commercial	<ul style="list-style-type: none"> On site car parking plans to be addressed site by site at development plan stage A major public transport node is proposed on the site , consisting of the Palmers Rd Fwy, a new passenger rail station, a bus interchange, commuter car parking 	<ul style="list-style-type: none"> urban street blocks defined by a series of active streets and pedestrian spaces to allow intensification over time Active frontages around selected streets and open spaces Building typologies that enable a mix of uses over time are encouraged
Mawson Lakes	12km to Adelaide	620 (total) 71 (employment)	8,000	110	Retail Office Hospitality Education Government	<ul style="list-style-type: none"> Developed adjacent to an existing railway line Mawson Lakes Railway Station + Interchange developed adjacent to site 13 minutes from the Adelaide CBD by train. 	<ul style="list-style-type: none"> High quality public realm that integrates the natural features, creates lakes, and pedestrian-friendly streetscapes Provision of schools, local retai and recreation destinations provide for both a residents and employees Provision of a railway station connecting to the CBD has secured major employers
University Hill	17km to Melbourne	104 (total) 35.5 (employment)	4,000	115	Retail (27,000m2) Office (45,000m2)	<ul style="list-style-type: none"> Tram + bus connections 	<ul style="list-style-type: none"> Branded as a ‘new generation business environment’ with high amenity, flexible design, and excellent transport access Retail centre located at the heart of the development

^[1] total jobs / size of employment area

Employment Precinct Case Studies

International Examples

Case Example	Distance	Area (ha)	Jobs	Jobs / ha ¹	Mix of Activities	Transport	Comments
Legacy West Town Centre	33km to Dallas	103 (total) 17 (Legacy West)	20,000	200	Hotel - 15 storeys Food Hall - 5,000sqm Corporate Headquarters Main street dining	<ul style="list-style-type: none"> Parking accomodated in multi-storey buildings away from main street 	<ul style="list-style-type: none"> Focus on dining and entertainment Main street configuration Food halls 'Build-to-rent' model of housing
Bahnstadt	2km to Heidelberg	116 (total) 16.5 (Employment)	5-6,000	300 -350	Knowledge/research based commercial Childcare/school Retail Community Centre	<ul style="list-style-type: none"> Immediately adjacent to Heidelberg Main Rail Station Tram connections 	<ul style="list-style-type: none"> Technology and innovation park with research facilities combined with totally passive residential areas, high quality public space and retail/commercial areas.
Pike & Rose	17km to Washington DC	9.5 (total) 9.5 (employment)	6,000 ^[2]	630 ^[3]	160,000m2 residential 160,000m2 non-res	<ul style="list-style-type: none"> 2,000 car parks provided in shared multi-storey parking buildings Immediately accessible to I-270, I-495 and the metro 	<ul style="list-style-type: none"> Compact, pedestrian oriented grid block structure Intensive style of built form (116+ storeys) Diverse mixing of land use Deliberate effort to provide nighttime activities 12.5% of dwellings affordable 'workforce housing'
City Line	26km to Dallas	48.5 (Total) 48.5 (Employment)	12,800 (currently)	260	Retail (25,600m2) Office (270,500m2) Hospitality	<ul style="list-style-type: none"> DART Light rail Access to major high-ways 	<ul style="list-style-type: none"> Compact block structure Pedestrian oriented design Developed according to form based code to allow greater diversity
Reston Town Centre	23km to Washington DC	26	2,400 ^[2]	90 ^[3]	Retail (40,000m2) Office (24,000m2) Hospitality / Hotel	<ul style="list-style-type: none"> 8,700 car parks provided in shared parking buildings Rail - Reston Town Centre Station Bus - Reston Town Centre Transit Station 	<ul style="list-style-type: none"> Pedestrian-oriented grid structure Highly varied mixed-use environment focused around clear urban core Best multi-modal access in northern VA Residential use seen as vital to supporting commercial development Subject of a book entitled "Reston Town Centre: Downtown for the 21st Century"^[4]
Mosaic	17km to Washington VA	13	7,000 ^[2]	530 ^[3]	Retail (4,600m2) Office (6,800m2) Hospitality	<ul style="list-style-type: none"> 4,000 car parks in 4 multi-storey garages Center within walking distance (1.2km/15 minutes) of the Dunn Loring-Merrifield Metro Station 	<ul style="list-style-type: none"> Mainstreet based retail with carefully selected and clustered tenants Accepted into the LEED Neighborhood Development Pilot Program and has achieved Silver Certification as a LEED Intended as pedestrian-based environment, but most travel to Mosaic by car due to existing infrastructure

^[1] total jobs / size of employment area
^[2]Estimation based on total commercial GFA x 75% efficiency x 0.05 jobs/m²
^[3] Estimation based on extimated total jobs / employment area
^[4] <https://www.amazon.com/Reston-Town-Center-Downtown-Century/dp/0972857516>

CIRCA COMMERCIAL PRECINCT
(Mulpha Norwest)
Bella Vista, NSW
-33°44'5", 150°57'40"

Currently vacant land surrounding Norwest Private Hospital and Circa Shopping Centre, Mulpha Norwest plan to develop the Circa Commercial Precinct as a vibrant, mixed-use centre around a central, outdoor plaza and commercial core of office buildings with ground floor shops, cafes, restaurants and bars, over more than 450,000sqm of floor space. The concept plan also includes scope for cinemas, function centres, gymnasium, childcare centres and medical facilities - all surrounded by a commercial precinct of 2-15 storeys comprising of office buildings, research centres, consulting rooms and health facilities. Key to the plan is the inclusion of a retirement village, aged care home and residential units for 1000 residents.

Area (ha)	30 ^[1] ^[2]
Projected Jobs	25,000 ^[1] ^[2]
Nearest city	Sydney
Distance to nearest city	27km
Year begun	2017
Expected completion	2031
Uses	Office Outdoor Plaza Waterfront dining Retirement living Apartments Retail Commercial towers

[1] <https://www.dailytelegraph.com.au/newslocal/the-hills/planned-circa-commercial-precinct-to-create-25000-new-jobs/news-story/e31bccd491db29e07c251ffe3715b111>

[2] <https://www.dailytelegraph.com.au/newslocal/the-hills/vision-for-mixed-use-development-at-bella-vista-to-create-25000-jobs-in-the-hills/news-story/78682e09010977b83f44c984ef-2dcca7>

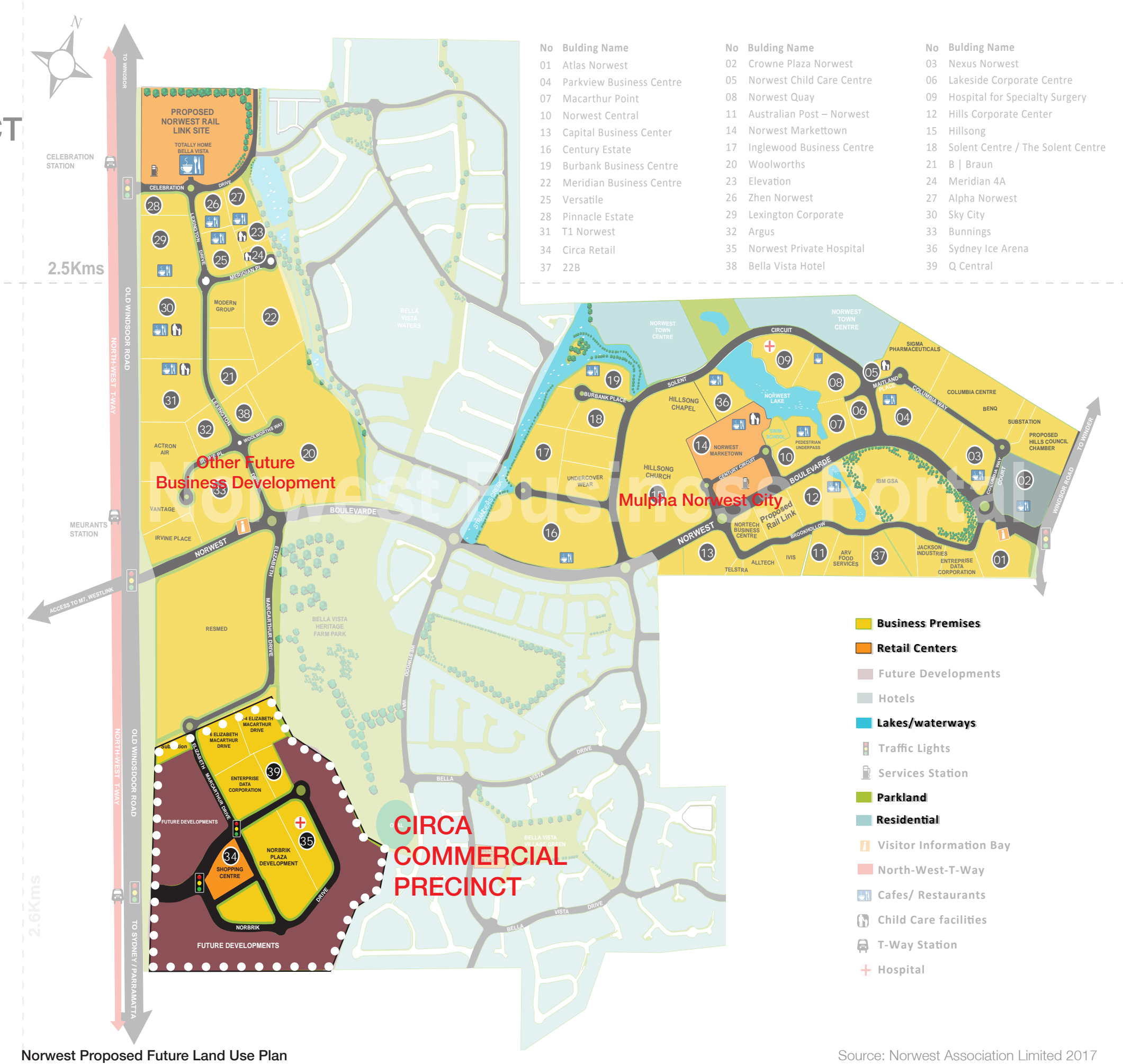


CIRCA COMMERCIAL PRECINCT (Mulpha Norwest)

Bella Vista, NSW
-33°44'5", 150°57'40"

“...our vision is to create a highly desirable work and lifestyle destination that will attract entrepreneurial workers and industries of the future”

Tim Spencer
Mulpha Norwest executive general manager



CIRCA COMMERCIAL PRECINCT (Mulpha Norwest)

Bella Vista, NSW
-33°44'5", 150°57'40"



“Norwest is entering a transitional period that will shift the area’s status as solely a business park to a lifestyle destination and urban hub”

Steve Grant
Capital Bluestone Executive Chairman



TONSLEY INNOVATION DISTRICT

Clovelly Park, SA

-35°0'35", 138°34'16"

An initiative of the South Australian Government, Tonsley Innovation District combines central innovation hub sits under a large roof, providing a meeting place and focal point for surrounding commercial and education tenancies. Residential precincts are interwoven among the knowledge and commercial precincts.

High value industry/ commercial/retail Area (ha)	24 ^[1]
Projected Jobs	6,300 ^[2]
Total Area (ha)	61 ^{[1] [2]}
Nearest city	Adelaide
Distance to nearest city	9km
Year begun	2012
Expected completion	2027
Uses	High value industry and commercial business (24ha) Apartments and townhouses (11ha) Town Square Retail University Meeting/Working Spaces

[1] <https://tonsley.com.au/about/vision/>

[2] <https://renewalsa.sa.gov.au/projects/tonsley/>



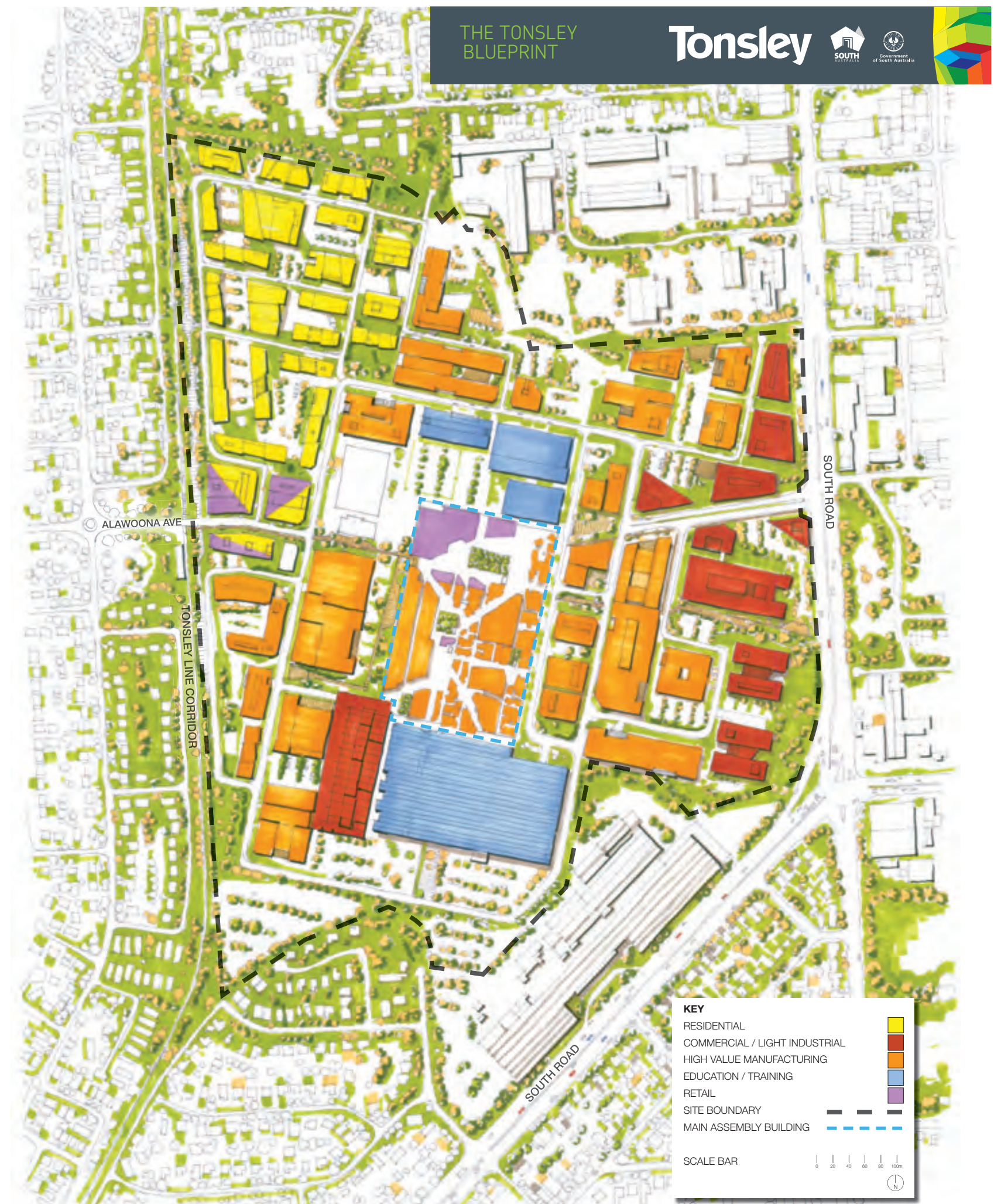
Source: Google Maps 2017

TONSLEY INNOVATION DISTRICT

Clovelly Park, SA
-35°0'35", 138°34'16"

Tonsley brings together leading-edge research and education institutions, established businesses and start-ups, business incubators and accelerators as well as government and the wider community.

tonsley.com.au



TONSLEY INNOVATION DISTRICT

Clovelly Park, SA

-35°0'35", 138°34'16"

This is where entrepreneurs, researchers and incubators will develop synergistic relationships with one other that will drive productivity, innovation, technology and thought transfer to create and build solutions to global problems.

tonsley.com.au



The Tonsley Redevelopment is purposely designed to attract investment and create a thriving jobs and education precinct that includes residential and community living.

renewalsa.sa.gov.au/projects/tonsley



Source: tonsley.com.au 2017

ROUSE HILL

NSW, Australia

33°41'25", 105°55'20"

“Located in the growing north-west corridor, the Rouse Hill Regional Centre, now called the New Rouse Hill (NRH), has been identified by the New South Wales Government (Government) as a major emerging centre for Sydney’s expansion.

In developing the principles for the New Rouse Hill masterplan, the Developers and Government considered how to integrate the best of what makes traditional town centres work as well as elements that make retail centres successful. This included the integration of significant community, learning and residential components both within the Town Centre and within the Regional Centre. A masterplan, developed according to these benchmarks, was approved in 2004 by Baulkham Hills Shire Council (“Council”).”
- Cottier K, Rudolph, J ^[1]

Commerical /retail / employment area (ha)	30 ^[3]
Projected jobs	12,000 ^[2]
Total Area (ha)	122 (total development)
Year begun	2007
Expected completion	2018+
Nearest city	Sydney
Distance to nearest city	40km
Uses	1800 dwellings / 4500 residents ^[1] Retail Office High school + primary school Library & community centre Medical & dental centre 32ha open space Transport interchange

^[1] Cottier K, Rudolph, J (2006) Rouse Hill Town Centre: From Concept to Detailed Design. Accessed from <http://www.ictcsociety.org/LinkClick.aspx?fileticket=RB2XuWsboes=&tabid=129&mid=548>

^[2] <http://www.landcom.com.au/places/rouse-hill>

^[2] Approximate extent of employment area shown in red (right)

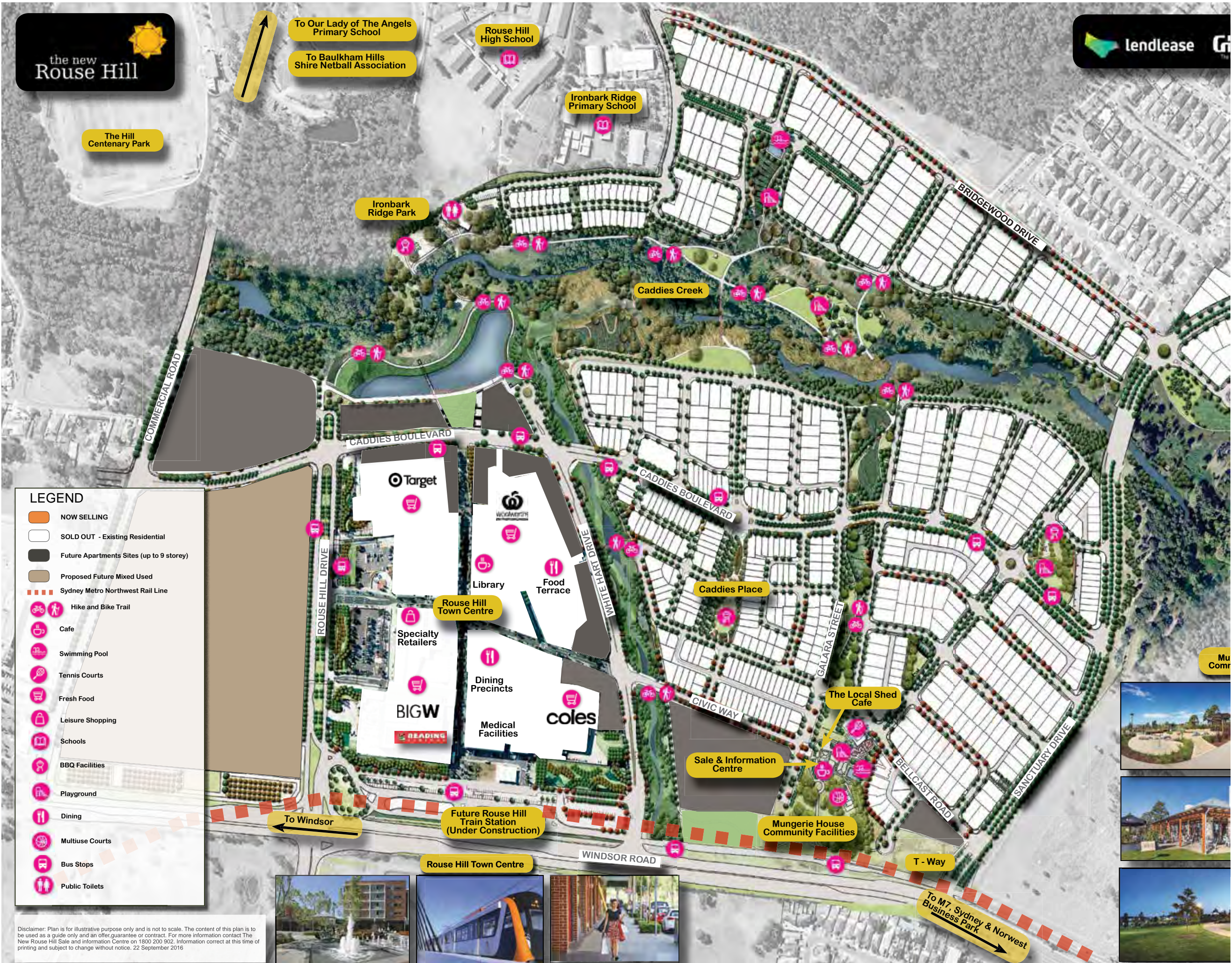


Source: Google Earth 2018

ROUSE HILL
NSW, Australia
33°41'125", 105°55'20"

- EMPLOYMENT:
- 12,000 permanent jobs^[1]
 - 200,000m2 retail and commercial^[1]
 - The Rouse Hill Town Centre includes over 200 stores, anchored by Coles, Woolworths, Target and Big W.
 - Facilities include Vinegar Hill Memorial Library and Community Centre, Rouse Hill Medical and Dental Centre, fitness providers, banking, and the Community Kitchen Garden.

- TRANSPORT:
- Local bus route run through residential development
 - Transit interchange incorporating a bus station, connecting Rouse Hill to Parramatta and Blacktown via bus-only lane
 - Future Rouse Hill train station under construction



^[1]<http://www.landcom.com.au/places/rouse-hill>

ROUSE HILL

NSW, Australia
33°41'125", 105°55'20"

"Life will return to the streets and lanes. The comings and goings of the pedestrians will dominate that life, yet they will always feel connected to the unique Australian landscape. Interest in the town centre as meeting place will be renewed, the centre will become an attraction, people will stop and stay a while, participate, take pride in its look, its structure and its innovations. It will become their second home"

- Vision for Rouse Hill (cited in Cottier K, Rudolph, J)^[1]



Getting About the Rouse Hill Town Centre

Rouse Hill Town Centre has four primary access points. With Big W, Coles, Target and Woolworths stores located at each of these points, you can easily customise each visit. Head straight to the supermarket for the week's shop, or simply spend time exploring stores and open spaces.

There is a choice of car parks, all easily accessible from Windsor Road, and regular public transport services that take you to the heart of Rouse Hill Town Centre.

A main two way thoroughfare in the centre of Rouse Hill Town Centre is supported by an integrated network of foot and cycle paths, ensuring visitors can get to where they need by car, bicycle, foot or public transport.



WILLIAMS LANDING

VIC, Australia

37°51'43", 144°44'52"

The guiding vision for the project is to establish a major activity centre and employment node, attracting a range of employment, business, shopping, living and recreation opportunities and to integrate this with a master planned residential community.

EMPLOYMENT:

- 5,000 permanent jobs (forecast)
- 25,000m2 retail
- 13,500m2 bulky good retail
- 20,000m2 commercial

TRANSPORT:

- A major public transport node is proposed on the site ,consisting of the Palmers Rd Fwy, a new passenger rail station, a bus interchange, commuter car parking
- On site car parking plans to be addressed at development plan stage for individual developments.

Commerical /retail / employment area (ha)	49 ^[1] ^[2]
Projected jobs	5,000 (forecast) ^[1]
Total Area (ha)	274
Year begun	2007
Expected completion	2025
Nearest city	Melbourne
Distance to nearest city	19km
Uses	3,000 dwellings Retail Hospitality Office Research and development Open space

^[1]Roberts Day_Laverton Incorporated Plan 2006

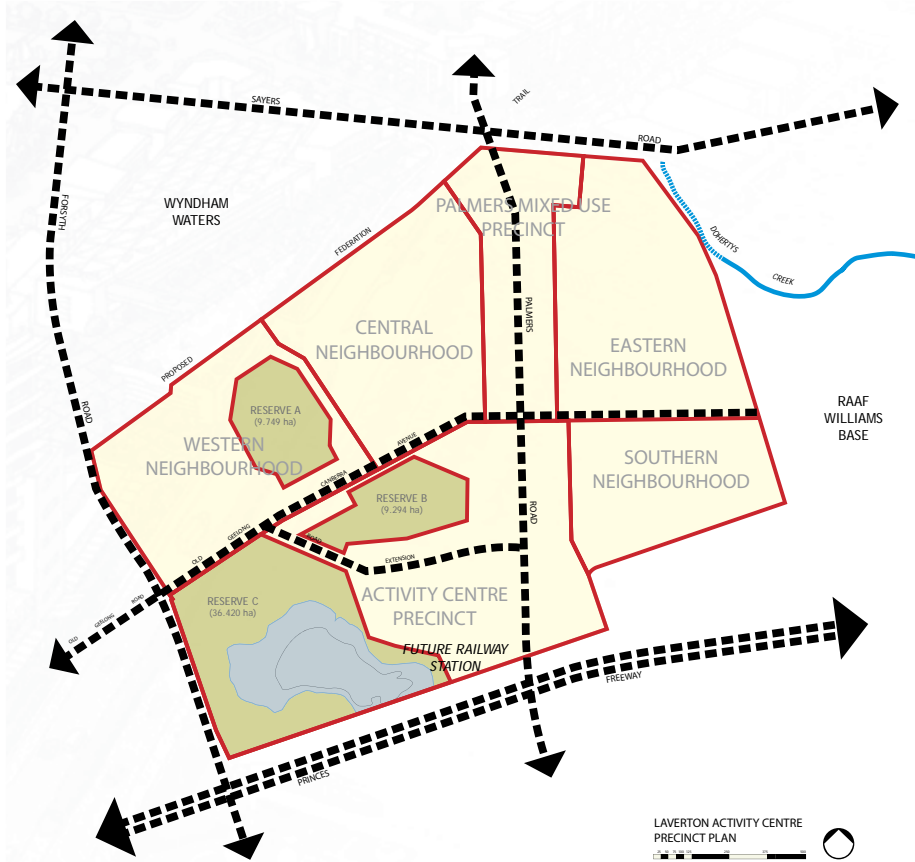
^[2]Approximate extent of employment area shown in red (right)



Source: Google Earth 2017

WILLIAMS LANDING

VIC, Australia
37°51'43", 144°44'52"



37°51'43", 144°44'52"



ILLUSTRATION 1 - VIEW FROM VILLAGE SQUARE



ILLUSTRATION 2 - WESTERN ENTRY TO ACTIVITY CENTRE



MAWSON LAKES

SA, Australia

34°48'30", 138°36'57"

Mawson Lakes is a fully planned 620 hectare community which is a joint venture between the State Government and Delfin Lend Lease Ltd. The project integrates the University of South Australia's Mawson Lakes campus and Technology Park with new residential, commercial and industry space. .

EMPLOYMENT:

- Retail
- Office (Optus, Motorola, Tenix, Woolworths)
- Education
- Government

TRANSPORT:

- Developed adjacent to an existing railway line
- Mawson Lakes Railway Station + Interchange developed adjacent to site
- 13 minutes from the Adelaide CBD by train.

Commerical /retail / employment area (ha)	71 ^[2]
Projected jobs	8,000
Total Area (ha)	620
Year begun	1982
Expected completion	2010
Nearest city	Adelaide
Distance to nearest city	12km
Uses	11,000 residents 7,000 students Promenade town centre Tertiary, secondary and primary education facilities 70ha lakes and waterways 189 ha open space 26km network of walking & cycling

^[2]Approximate extent of employment area shown in red (right)



Source: Google Earth 2017

MAWSON LAKES

SA, Australia
34°48'30", 138°36'57"



SA, Australia
34°48'30", 138°36'57"



UNIVERSITY HILL

Bundoora, VIC, Australia

37°40'55", 145°04'19"

PROJECT OVERVIEW:
University Hill is an award winning mixed-use development incorporating retail, residential, commercial, industrial, and environmental precincts. Developed by MAB, the vision for University Hill was to create a living and working community that strikes a balance between lifestyle, retail, community, business, and the environment.

- EMPLOYMENT:**
- 4,000 projected jobs ^[1]
 - 27,000m² retail floor space ^[1]
 - 130 retailers
 - Anchor factory outlet store
 - 45,000m² commercial GFA (projected) ^[1]
 - 5 commercial buildings
 - 155 businesses

TRANSPORT:
Tram + bus connections

Commerical /retail / employment area (ha)	33.5 ^[2]
Projected jobs	4,000 ^[1]
Total Area (ha)	104 (total)
Year begun	2005
Expected completion	2020
Nearest city	Melbourne
Distance to nearest city	17km
Uses	3000 residents (projected) ^[1] Retail Office 18ha open space Tram & bus connections

^[1] <http://universityhill.com.au>

^[2]Approximate extent of employment area shown in red (right)



Source: Google Earth 2017

UNIVERSITY HILL

Bundoora, Vic, Australia

37°40'55", 145°04'19"

A key goal underpinning the planning of University Hill has been the generation of employment, particularly new economy jobs. Achieving efficient job creation in the precinct involves the overlapping of complementary precincts, each with core land use and employment generating roles. University Hill has to date delivered 3,000 new jobs in the City of Whittlesea, with a high proportion of white collar employment. ^[1]

Image source: <http://sunlandgroup.com.au>



UNIVERSITY HILL
Bundoora, Vic, Australia
37°40'55", 145°04'19"



Project masterplan vision for 2020



Twenty Enterprise - 4 storeys, 33 suites



240 Uni Hill - 5 storeys, 39 suites



Town Centre - 130 retailers

LEGACY WEST TOWN CENTRE

Plano, Texas, USA

33°4'43", -96°49'32"

Legacy West Town Centre provides a walkable neighbourhood of residential, boutique office, retail, dining and entertainment uses with a food hall and micro-brewery. The mix of uses are vertically integrated to allow pedestrian connections along a high quality main street.

Total Area (ha)	103 ^[1]
Projected Jobs	20,000 ^[1]
Nearest city	Dallas
Distance to nearest city	33km
Year begun	2014
Expected completion	2019
Uses	Hotel Food Hall - 5,000sqm Apartments/houses (1000 units) Corporate Headquarters Main street dining

[1] <https://legacywest.com/2016/10/04/completion-in-sight-for-legacy-west-development-will-bring-20000-jobs/>



Source: Gensler/Legacy West 2017

LEGACY WEST TOWN CENTRE

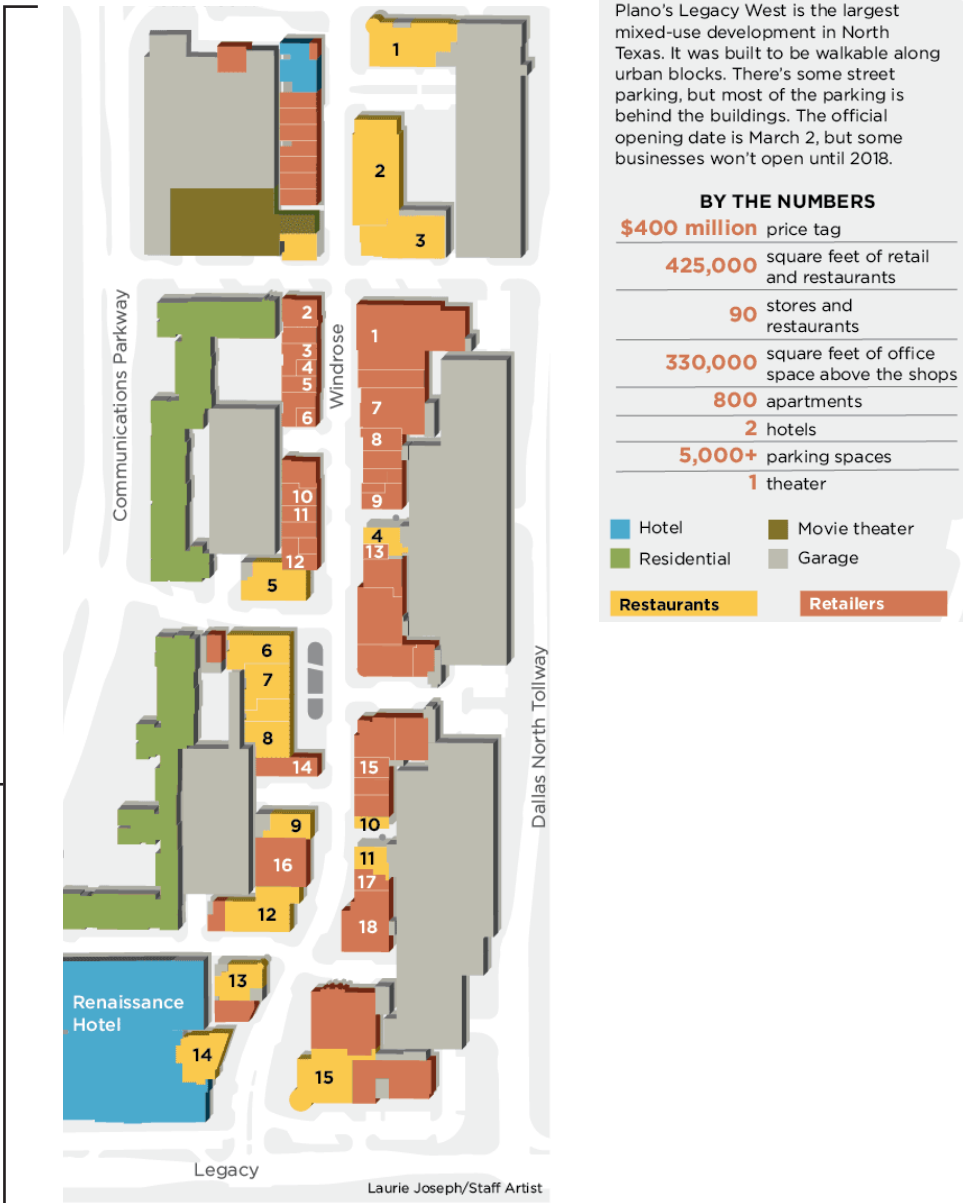
Plano, Texas, USA
33°4'43", -96°49'32"

"The first question I often get is
"how many minutes walk from my
office is it to the food hall?""

Fehmi Karahan
CE of Karahan Companies



Legacy West Land Use and Tenancies Plan



Source: Gensler/Legacy West 2017

LEGACY WEST TOWN CENTRE

Plano, Texas, USA

33°4'43", -96°49'32"



It was the right location and design of the project that attracted international companies...Companies these days do not want a typical corporate headquarters that might be isolated and self-contained.

Peter Braster
Director of special projects



"Human resource departments are involved in the decision-making process...they were emphasising being in the right location for their employees"

Fehmi Karahan
CE of Karahan Companies



BAHNSTADT

Heidelberg, Germany

49°24'11", 8°39'54"

Bahnstadt integrates a neighbourhood of totally passive houses with an extremely high quality of human-scale public spaces, water sensitive urban design and a large range of research/ knowledge, child care, retail and entertainment uses.

Industry/ Commerce Area (ha)	116 ^[1]
Projected Jobs	5,000 - 6,000 ^[2]
Total Area (ha)	16.5 ^[1]
Year begun	2010
Expected completion	2017+
Nearest city	Heidelberg
Distance to nearest city	2km
Uses	Office and Laboratories Technology Park Community and Cultural centre Local Shopping Centre Station/Town Square Residential

[1] <http://heidelberg-bahnstadt.de/en/facts-and-figures>

[2] http://heidelberg-bahnstadt.de/sites/heidelberg-bahnstadt.de/files/documents/2017-09-07_hd_imagebroschuere_englisch_final.pdf



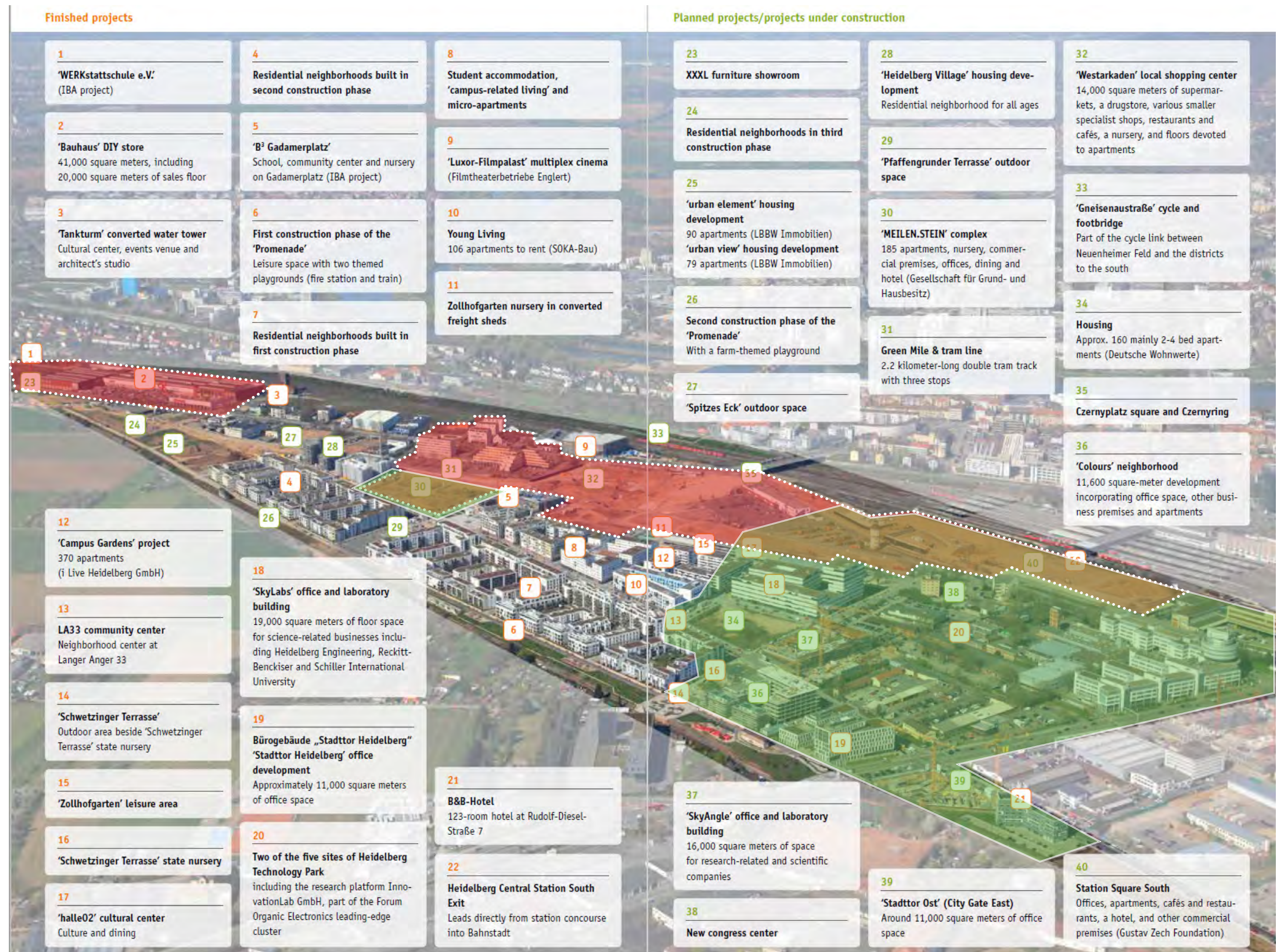
Source: Google Maps 2017

BAHNSTADT

Heidelberg, Germany

49°24'11", 8°39'54"

- Tech Park
- Retail / Community
- Tech, Commercial, Retail and Community



Bahnstadt Completed and Planned Projects

Correct as of: August 2017

Source: heidelberg-bahnstadt.de/en 2017

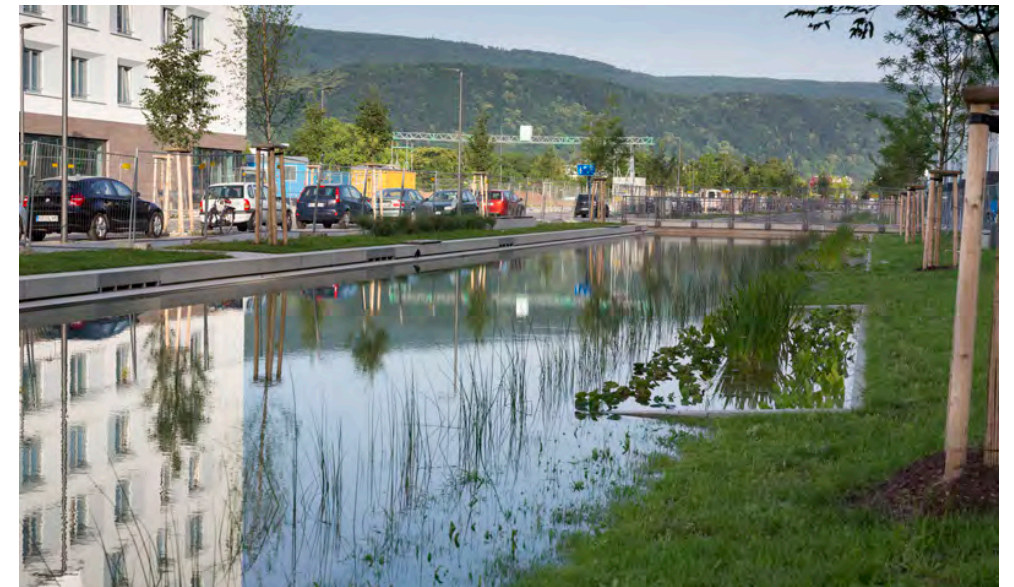
BAHNSTADT

Heidelberg, Germany
49°24'11", 8°39'54"



It is more than just an office district - it is a vibrant, inspirational environment for companies and their employees that offers housing close at hand (saving the need to commute), and quality childcare facilities and shops to ensure that everyday needs are met.

heidelberg-bahnstadt.de



Source: heidelberg-bahnstadt.de/Fischer Architekten/latzundpartner.de/c40.org2017

PIKE & ROSE

Rockville, MD, USA

39°03'00", 77°07'01"

Pike & Rose is a mixed-use browfield development located in the White Flint District in Montgomery County, MD. The project has involved transforming what was formerly a conventional car-oriented retail strip centre, into a compact, mixed-use neighbourhood comprised of a fcollection of fine grain pedestrian-oriented city blocks.

The first phase opened in the fall of 2014 and is a key component in the area's revitalization efforts. The second phase is currently under construction

- EMPLOYMENT:
- 160,000m² (approx) non-residential ^[1]
 - 160,000m² (approx) residential^[1]

- TRANSPORT:
- Site is located approximately 400m to existing White Flint Metro Station
 - Immediately accessible to I-270, I-495
 - 2,036 parking space

Commerical /retail / employment area (ha)	9.5
Estimated jobs	6,000 ^[2]
Total Area (ha)	9.5
Year begun	2012
Expected completion	2014 (phase 1)
Nearest city	Washington DC
Distance to nearest city	17km
Uses	1,500 residential dwellings Retail Office Hotel

^[1] Preliminary Plan No. 120120020 approved by Montgomery County Planning Board (MCPB No. 12-26), 2012. Accessed from www.montgomeryplanning.org

^[2]Estimation based on total commercial GFA x 75% efficiency x 0.05 jobs/m²



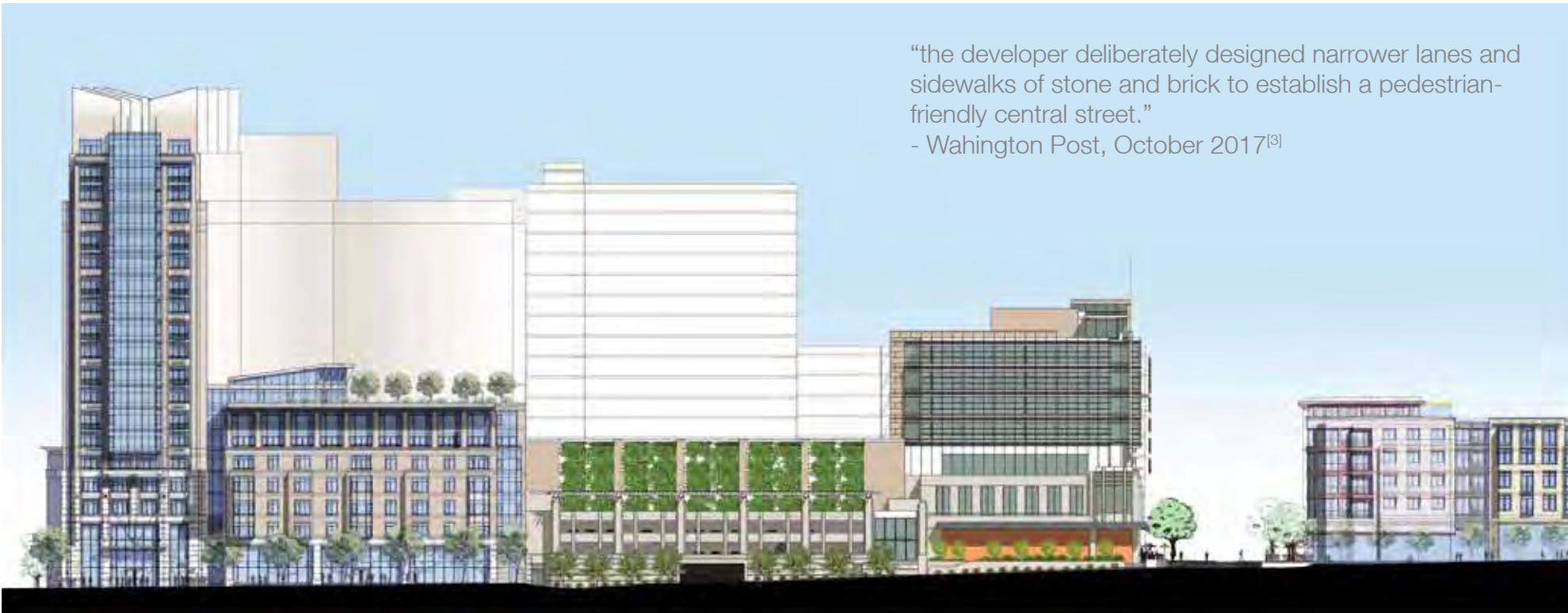
Source: Google Earth 2017

PIKE & ROSE

Rockville, MD, USA
39°03'00", 77°07'01"

“If strip malls represent the zenith of the American love affair with the car, new walkable urban-suburban communities exemplify the new love of walking, biking, ride-sharing and relying on public transportation. The replacement of acres of parking lots and shops with “surban” developments is more than a fad; it’s a re-imagination of how people prefer to live.”
- Wahington Post, October 2017^[3]

^[3] https://www.washingtonpost.com/realestate/pike-and-rose-a-community-grows-on-rockville-pike/2017/10/03/fb15c442-8c04-11e7-84c0-02cc069f2c37_story.html?utm_term=.cf189625af56



PIKE & ROSE

Rockville, MD, USA

39°03'00", 77°07'01"

The focus is on creating vibrant, active places with interesting streets and landscaped gathering areas where people want to stay longer after running an errand"

- Wahington Post, October 2017^[3]



CITY LINE

Richardson, TX, USA

33°00'10", 96°42'00"

CityLine is a dynamic transit-oriented located near the intersection of the George Bush Turnpike (Highway 190) and Central Expressway in Richardson, Texas. The project involved transforming a car-oriented site located immediately adjacent to a major highway quadrant into a world class urban village comprising a regional employment center; thousands of urban-style homes; extensive retail, restaurant and entertainment options; and a diversity of recreational amenities. The develop vision was to create a compelling urban environment that would attract a dynamic mix of full time residents, workers, and shoppers.

- EMPLOYMENT:
- 21,000m² retail ^[1]
 - 240,000m² office ^[1]
 - Hospitality / Hotel (400 rooms approx)

- TRANSPORT:
- Bush Turnpike Station (light rail) located at north eastern corner of site
 - Access to US-75 Central Expressway + George Bush Highway
 - 1,193 parking spaces beneath turnpike lanes (more in individual buildings)

Commerical /retail / employment area (ha)	48.5ha (approx)
Projected jobs	12,800 (current) ^[2]
Total Area (ha)	48.5ha (approx)
Year begun	2012
Expected completion	2014 (phase 1)
Nearest city	Dallas
Distance to nearest city	25km
Uses	4,000 dwellings Office Retail Specialty grocery centre Hotel / hospitality 2ha open space

^[1] <http://citylinedfw.com/about/>

^[2] <http://citylinedfw.com/current>



Source: Google Earth 2017

CITY LINE
Richardson, TX, USA
33°00'10", 96°42'00"

“State Street and CityLine Plaza are oriented and scaled specifically for pedestrians to encourage sidewalk and patio activity and to promote community interaction and gathering throughout the day.” [9]



OFFICE		MULTIFAMILY		RETAIL/ENTERTAINMENT		HOTEL	
COMPLETED		COMPLETED/UNDER CONSTRUCTION		COMPLETED/UNDER CONSTRUCTION		UNDER CONSTRUCTION	
UNDER DEVELOPMENT		UNDER DEVELOPMENT		UNDER DEVELOPMENT			

CITY LINE

Richardson, TX, USA
33°00'10", 96°42'00"

CITY
LINE



"Buildings that incorporate several uses are central to the CityLine master plan. Restaurant, retail and entertainment spaces are integrated into the base of the office towers, the multi-family residential, and the hotel, allowing CityLine Plaza and both sides of State Street to be surrounded by activity. The master plan also focuses on creating a walkable, pedestrian-friendly environment, while providing easy access for vehicles and ample parking in the 7,700 spaces within CityLine parking garages." [3]

Source: http://citylinedfw.com/wp-content/uploads/2014/05/Cityline_Renderings_LR.pdf



Image source: <http://www.omniplan.com/work/case-studies/cityline.html>

[3] <https://kdc.com/press-room/kdc-announces-project-name-and-plans-for-initial-phase-of-186-acre-transit-oriented-development-in-richardson-texas-2/>

RESTON TOWN CENTRE

Reston, VA, USA

38°58'54", 77°05'43"

Reston Town Center is a community destination, offering more than 50 shops, 30 restaurants, an 11-screen cinema and open-air pavilion, luxury residences, and a four-diamond Hyatt Regency hotel.

The program for the Reston Town Center includes over 300,000 square feet of retail and restaurants, a cinema, convention hotel, over two million square feet of offices, and over 1,500 units of high density residential.

The walkable design of the town center has succeeded in reducing automobile trips by nearly 30% as compared to other suburban sites. Reston is now home to nearly 100,000 residents, 3,500 businesses, and 50,000 employees. Reston Town Center is firmly established as a premier address in the region for office as well as residential uses.

EMPLOYMENT:

- 40,000m² retail ^[2]
- 24,000m² office ^[2]
- Hospitality / Hotel (500 rooms)

TRANSPORT:

- Rail - Reston Town Centre Station
- Bus - Reston Town Centre Transit Station
- 8,700 parking spaces / Seven car parking buildings

Commerical /retail / employment area (ha)	26ha
Estimated jobs	2,400 ^[3]
Total Area (ha)	1990
Year begun	2009 (some construction ongoing)
Expected completion	Washington DC
Nearest city	23km
Distance to nearest city	4,000 residential units
Uses	Retail Office Hospitality Hotel + conference centre

^[1] www.sasaki.com

^[2] Reston Town Centre University

^[3] Estimation based on total commercial GFA x 75% efficiency x 0.05 jobs/m²



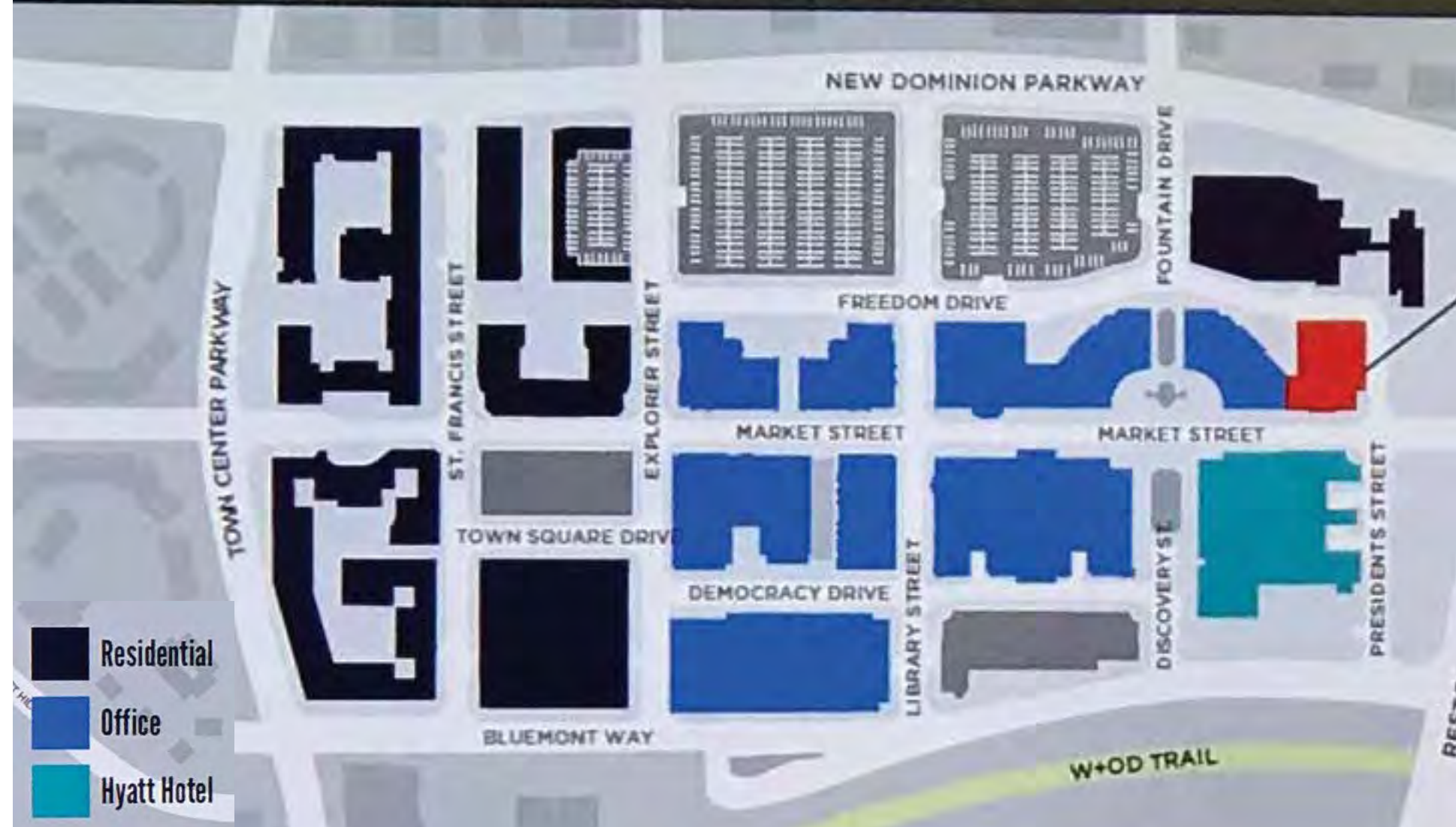
Source: Google Earth 2017

RESTON TOWN CENTRE

Reston, VA, USA

38°58'54", 77°05'43"

The vision declared that Reston Town Center would be a downtown inspired by America's great city centers. Shops, offices, hotels and even residences would be brought together in a provocative mix seen in no other suburban center. ^[3]



^[3] <https://www.planetizen.com/node/20938>

RESTON TOWN CENTRE

Reston, VA, USA
38°58'54", 77°05'43"



Source: Reston Town Centre University



Source: Wikipedia



Source: www.sasaki.com

MOSAIC DISTRICT

Merrifield, VA, USA

38°52'23", 77°13'45"

The Mosaic District is a 31-acre mixed-use development with significant developed open space that was designed to revitalize the Merrifield area. The Mosaic District is an infill development on the site of a former multiplex theater that includes:

- EMPLOYMENT:
- 185,000m² commerical floor space including retail, office, food and beverage

- TRANSPORT:
- Center within walking distance (1.2km/15 minutes) of the Dunn Loring-Merrifield Metro Station ^[1]
 - 4,000 parking spaces in 4 multi storey garages ^[2]
 - Traffic count: 80,000 cars per day Lee Highway & Gallows Road ^[1]

Commercial /retail / employment area (ha)	13
Estimated jobs	2,400 ^[3]
Total Area (ha)	13
Year begun	2009
Expected completion	2017
Nearest city	Washington
Distance to nearest city	17km
Uses	1,000 dwellings Retail Office Hospitality 6,000m ² open space

^[1] <http://edens.com/centers/VA/Fairfax/Mosaic>
^[2] <http://www.vika.com/project-portfolio/merrifield-town-centermosaic/>
^[3] Estimation based on total commercial GFA x 75% efficiency x 0.05 jobs/m²



Source: Google Earth 2017

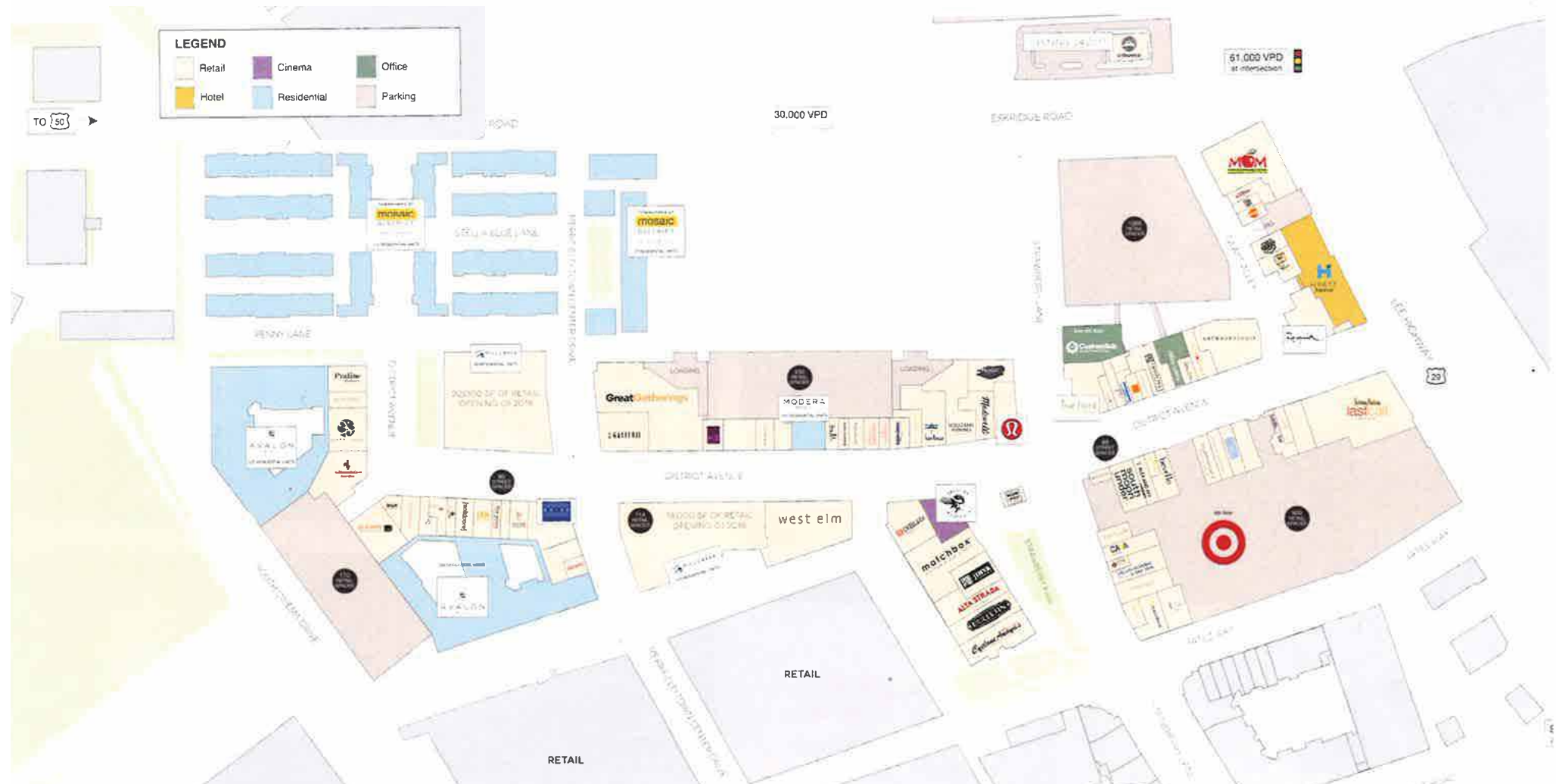
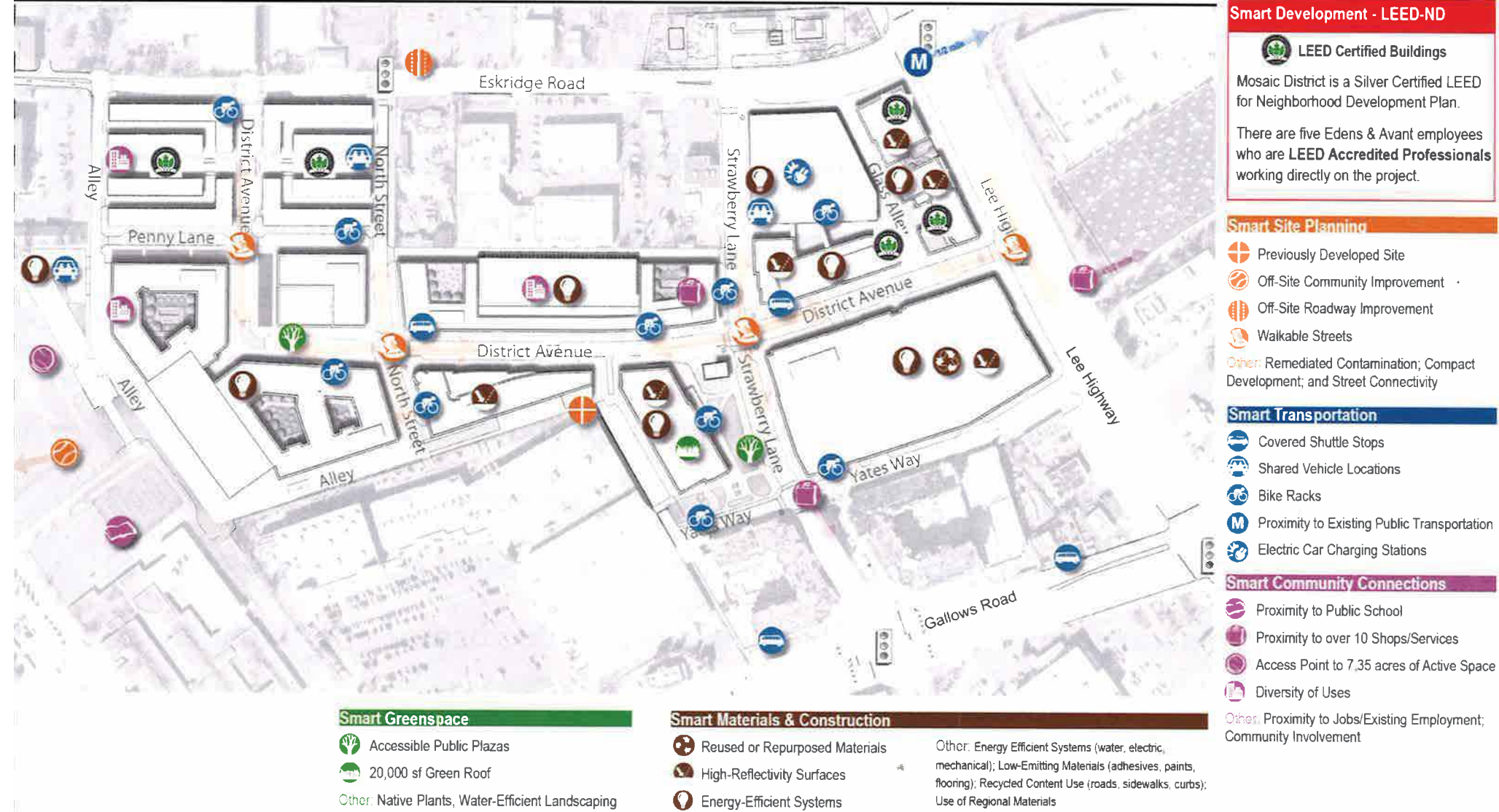
MOSAIC DISTRICT

Merrifield, VA, USA

38°52'23", 77°13'45"

"You can stroll down narrow streets, stop at a butcher, fishmonger, wine shop or even a barber — most of them local businesses rather than national chains — or come for dinner and a movie"

- Washtington Post, July 2014 [9]



MOSAIC DISTRICT

Merrifield, VA, USA

38°52'23", 77°13'45"

"It probably wasn't easy to create the intimate feel of a small town in an area known for strip malls, office parks and busy highways. Yet developers, including retail developer Edens and local homebuilders EYA, did just that with the Mosaic District."

- Washington Post, July 2014 ^[3]



^[3] https://www.washingtonpost.com/express/wp/2014/07/16/hot-hoods-mosaic-district/?utm_term=.3ad54d62bfd9

Appendix D

Built Form Study
(ClarkeHopkinsClarke)



The
Minta
Group

Clarke
Hopkins
Clarke

MINTA CITY

BUILT FORM STUDY

29.03.18

TABLE OF CONTENTS

Executive Summary	3
Master Plan Overview	4
Methodology	5
Precincts Overview	6
Precinct 1 Urban Core	7
Built Form Assumptions	8
Area Analysis	9
Built Form - Typical City Block	10
Precinct 2 IQ - Innovation Quarter	11
Built Form Assumptions	12
Area Analysis	13
Built Form Analysis	14
Precinct 3 Town Centre	15
Area Analysis	16
Concept Plan	17
Appendix	18
Urban Core City Block Study	

This study was prepared by ClarkeHopkinsClarke architects for The Minta Group (TMG) with the purpose of testing the capacity of the built form of the proposed Minta City masterplan to accommodate the employment targets and proposed job numbers outlined in the Minta Farm Precinct Structure Plan (VPA, 2017).

The study also examines possible urban design outcomes of different city block configurations given the required floorspace, uses and parking elements of each block.

The Masterplan breaks up the proposal into 3 distinct precincts:

- 1 Urban Core
- 2 Incubator Quarter (IQ)
- 3 Town Centre

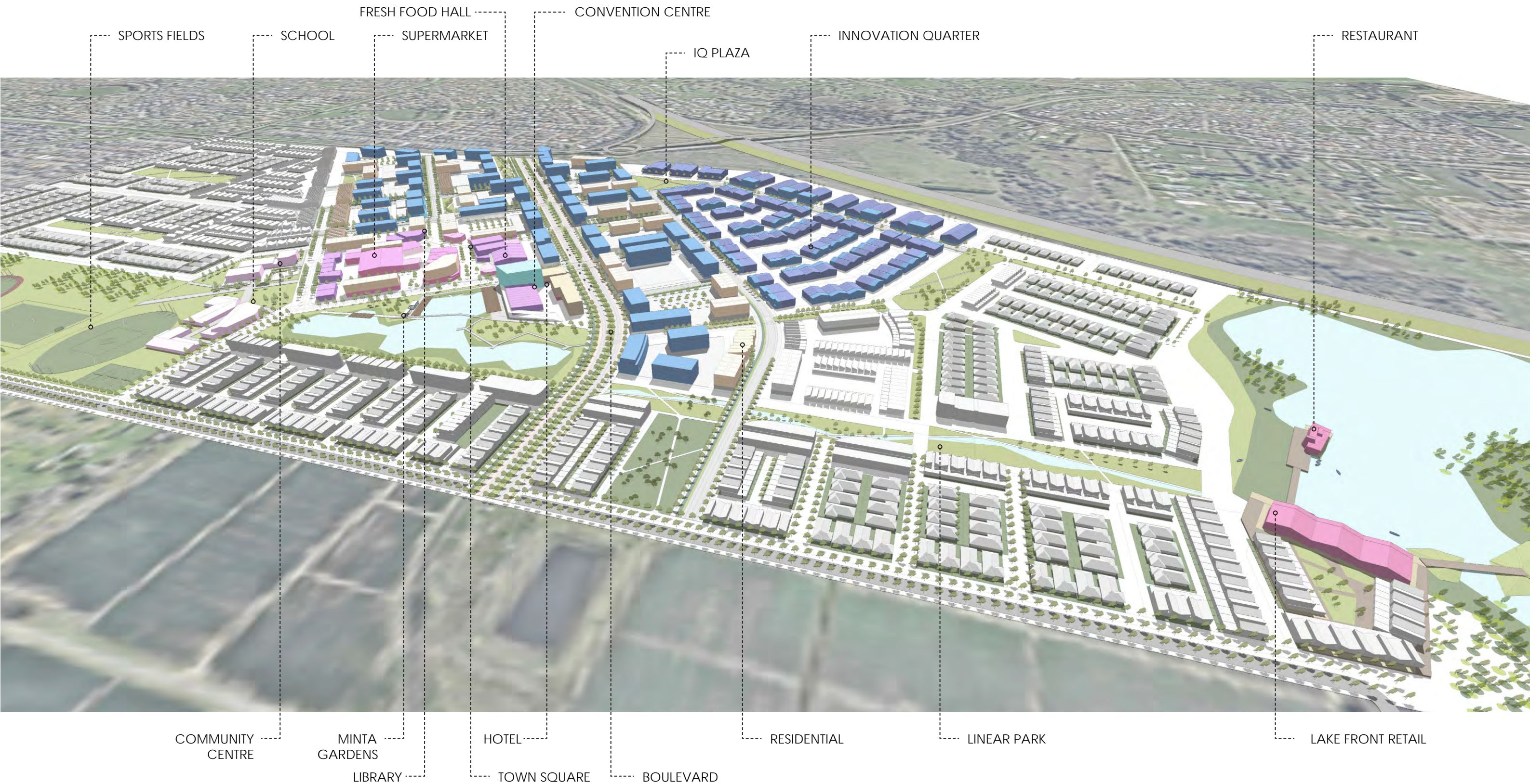
General Findings

Built form modeling for each of the 3 proposed precincts and its employment capacity modeling shows how the Minta City Masterplan can comfortably accommodate the required number of jobs, if not more. It also proves compliance with the existing statutory car parking requirements and presents multiple configurations in which the city blocks could be developed, thus proving the flexibility of the proposed urban grid structure.

Reference:

VPA (2017) *Minta Farm Structure Plan*

MASTER PLAN OVERVIEW



METHODOLOGY

Built form modeling for employment capacity

Testing of potential built form and job capacity was undertaken on each of the 3 precincts of the proposed Minta City Masterplan.

Precinct 1 - Urban Core

Typical medium-scale commercial building envelopes and typical medium-density residential building envelopes were benchmarked to provide a feasible starting point for the dimensions and scale of buildings in this precinct. (Page 9).

Commercial building heights of 4 to 6 levels were adopted across the precinct, as a conservative height based on case studies of similar developments.

A floor efficiency of 80% of gross leasable area (GLA) was adopted across every level of commercial buildings in the precinct. To account for potentially larger lobbies, cafes or showrooms at ground floor level, 25% of all ground floor net leasable area (NLA) was discounted (i.e. this area is not included in calculating precinct 1 job numbers).

Each typical city block in precinct 1 was modeled to accommodate 4 typical commercial buildings with its associated car parking, and 20% of the block was designated for residential use. (Page 11) The total number of typical commercial buildings in precinct 1 was calculated,

the total net leasable area (NLA) was calculated and the total number of jobs accommodate in precinct 1 was then calculated based on Deepend Services employment ratios.

The total number of jobs was then compared against the PSP proposed number of jobs for the precincts that are consolidated in the urban core. Finally an analysis of city block footprint areas proved the capacity of the typical city block to accommodate the proposed uses and buildings.

Multiple city block scenarios were prepared to illustrate the potential for different configurations in which the block can be developed. (Page 11 and Appendix). Block Type 1 shows the lower density option which is not recommended, as it is an inefficient use of the land with a poor urban design outcome. Block Type 2 to 7 show the typical block considered in the analysis and recommended as they makes more efficient use of the land, can accommodate a larger number of jobs and provide a much better urban design result. Block Type 8 is the highest density option that shows the land could accommodate even more jobs and still produce a positive urban design outcome.

Precinct 2 - Innovation Quarter (IQ)

Typical co-working spaces, large warehouse with office and small office / local enterprise building typologies were analysed to provide a realistic feasible built form assumption for the dimensions and scale of lots and buildings in this precinct (Page 13).

Building heights of 2 to 3 levels (for the office component only) were adopted across the precinct as a conservative height based on case studies of similar developments. Commercial buildings floor efficiency of 80% of gross leasable area (GLA) was adopted on every level. The warehouse component building height considered is 1 storey.

Areas of typical co-working, large incubator and small incubator buildings in the precinct were calculated, and the number of lots for each typology counted.

Precinct 2 lots were modeled on the 3D massing model and total areas were calculated based on the number of lots. Job numbers were then calculated based on Deepend Services employment ratios).

Precinct 3 - Town Centre

A town centre concept plan and development schedule was prepared. GLA (m2) and total number of jobs were calculated based on Deepend Economics employment ratios.

PRECINCTS OVERVIEW

- TOTAL AREA: 52 ha
- TOTAL JOBS PROJECTED: 11,735

PRECINCT 1: URBAN CORE

AREA: 30 ha

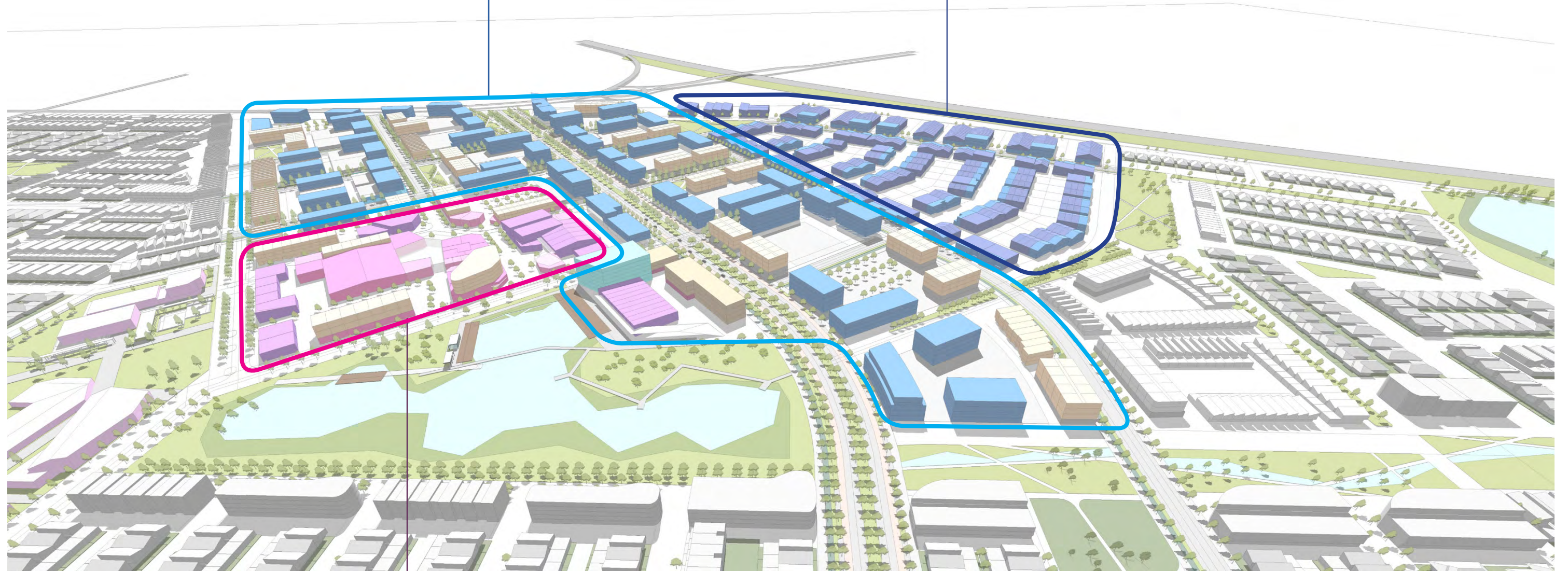
- JOBS PROJECTED: 8669
- 80% COMMERCIAL
- 20% RESIDENTIAL (1000 DWELLINGS)

PRECINCT 2: INNOVATION QUARTER

- AREA: 16 HA.
- JOBS PROJECTED: 2361

PRECINCT 3: TOWN CENTRE

- AREA: 6 ha
- JOBS PROJECTED: 705
- RESIDENTIAL (100 DWELLINGS)



An architectural sketch of an urban core. The scene features modern, multi-story buildings with glass facades and complex, angular rooflines. A large, stylized tree with a jagged canopy stands prominently in the center. In the foreground, a wide pedestrian walkway is populated with various figures: a person on a bicycle, several people walking, and a person in a suit. A car is visible in the distance. The overall style is a light blue line drawing on a white background, with a blue gradient overlay on the right side.

PRECINCT 1 URBAN CORE

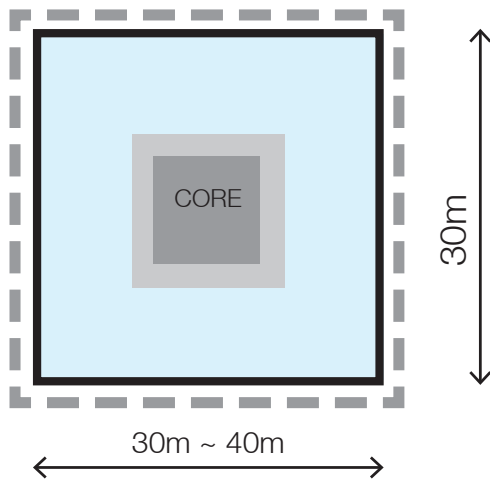
- AREA: 30 ha
- JOBS PROJECTED: 8669
- 80% COMMERCIAL
- 20% RESIDENTIAL (1000 DWELLINGS)

PRECINCT 1: URBAN CORE

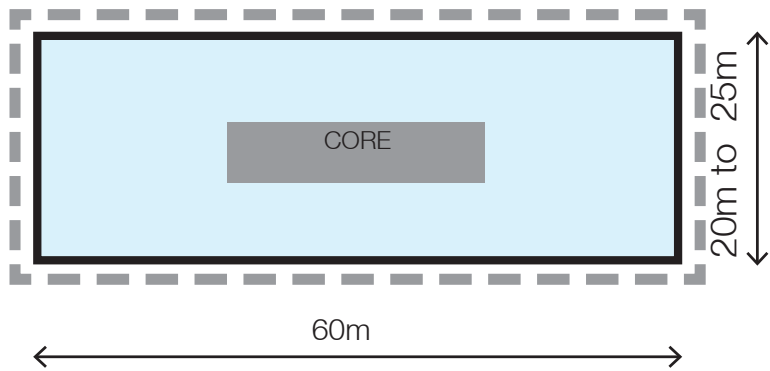
BUILT FORM ASSUMPTIONS

TYPICAL COMMERCIAL BUILDING ENVELOPE

EXAMPLES



University Hill, Bundoora

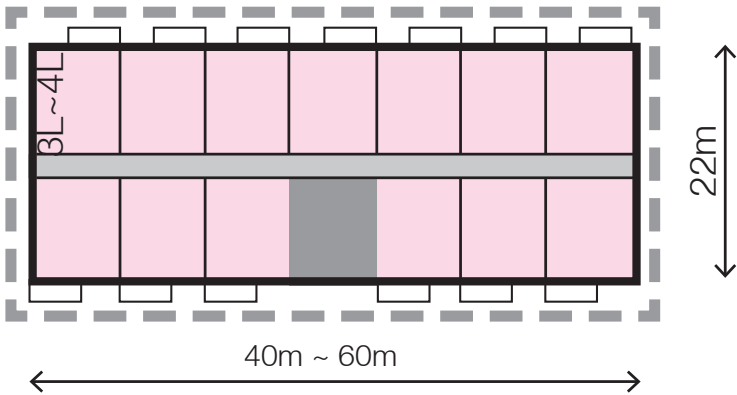


York Street, South Melbourne

TYPICAL RESIDENTIAL BUILDING ENVELOPE

EXAMPLES

Apartment Building

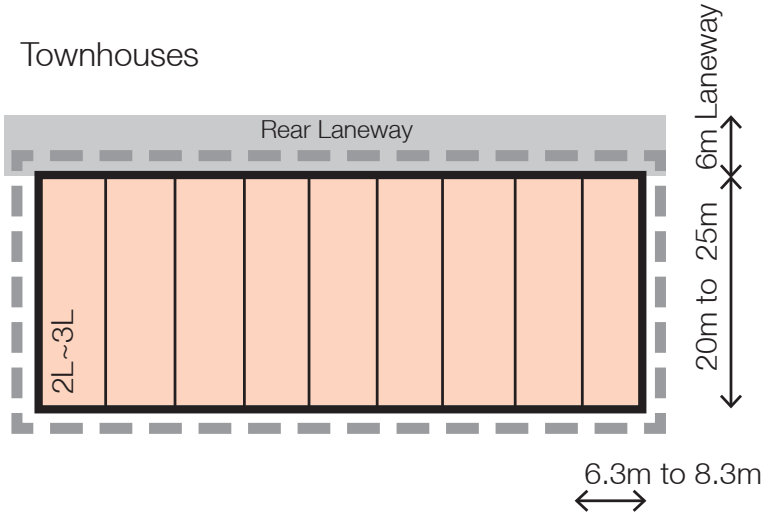


Stewart Street, Brunswick East



Alexa Apartments, Essendon

Townhouses



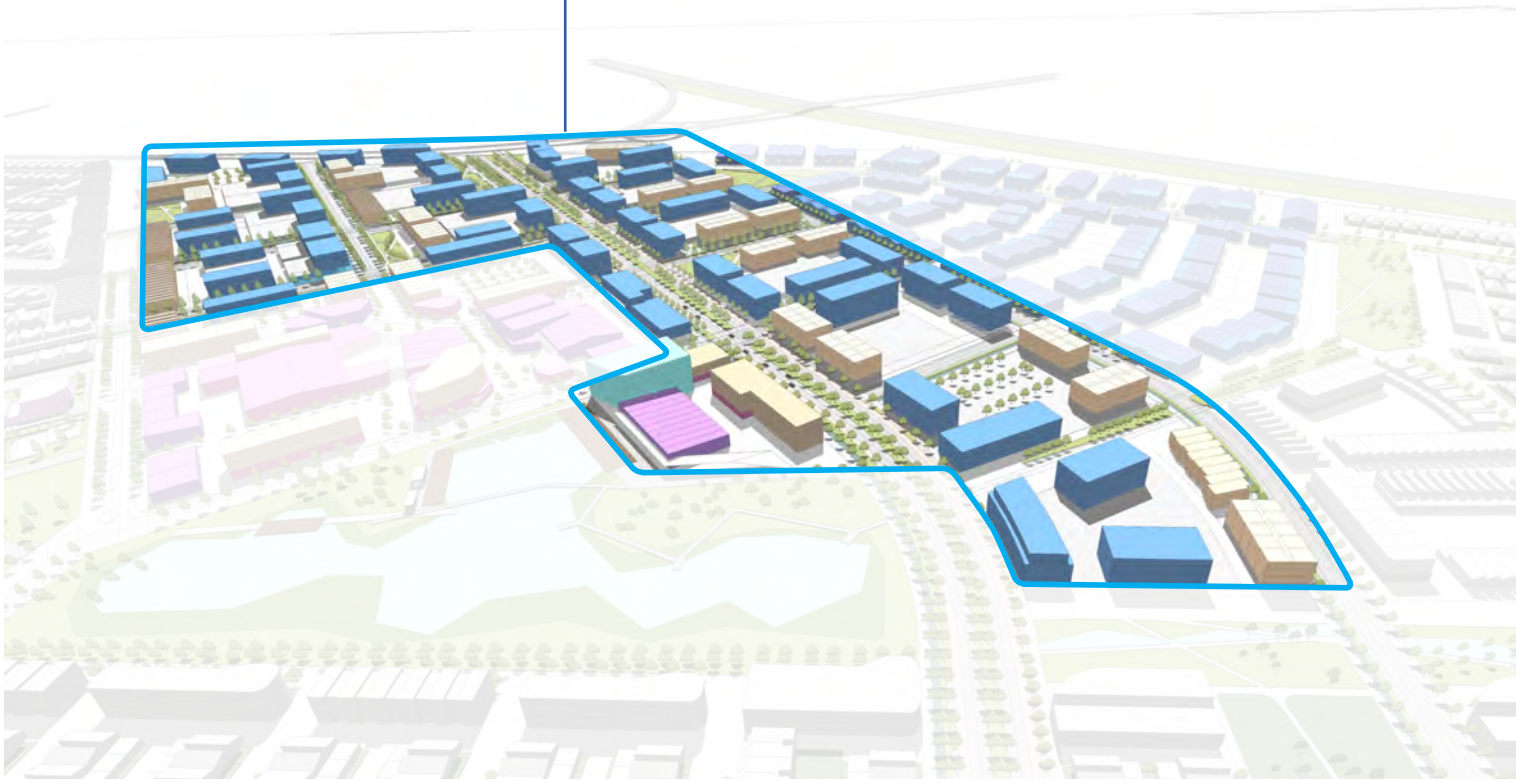
Cowper Street Townhouses, Footscray

PRECINCT 1: URBAN CORE

AREA ANALYSIS

PRECINCT 1: URBAN CORE

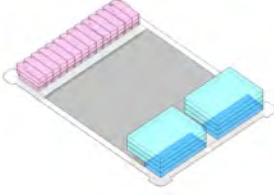
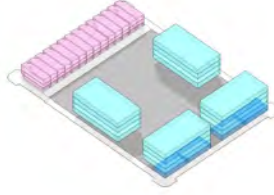
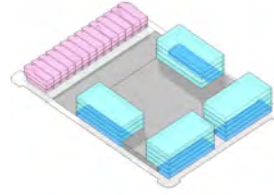
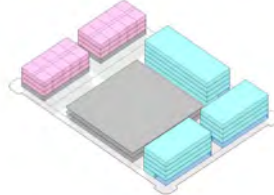

- AREA: 30 ha
- JOBS PROJECTED: 8669
- 80% COMMERCIAL
- 20% RESIDENTIAL (1000 DWELLINGS)



PRECINCT 1		URBAN CORE	
Total Area		30 ha.	
Typical City Block	130m x 90m	11700m2	
Typical office building	20x40 m	5 storeys	average between 4 and 6 storey buildings
		Ground floor Retail NLA (80%GLA 25% of GF area) m2	Office NLA (80% GLA) m2
Total GLA m2		4000	160
Jobs per Building		187	(22m2 GLA per Job)
Totals			
Number of typical office buildings considered		48	
Total GLA m2		192000	
Total NLA m2		153600	
Total Non-Office uses NLA at ground Level		7680	
Total Office NLA		145920	
Total Hotel GLA m2		4000	
Office Employment Ratios (based on Deepend Services ratios)			
GLA(m2)/Job		22	
NLA(m2)/Job		17.5	
Total office Jobs		8338	
Hotel and non-office uses on ground floor Jobs		330	
Total Jobs Provided		8669	
Job Density (jobs/ha)		289	
PSP projected jobs per zone			
Commercial and office subprecinct		Small local enterprise	Mixed use
7320		535	580
Total Jobs required by psp Precinct 1		8,435	
Job Density (jobs/ha)		211	
Total office GLA (m2) required		185570	
Total office NLA (m2) required		147612.5	
Typical city block			
		Area m2	80% Commercial
130mx90m		11700	9360
4 typical office buildings per city block			
		Ground floor Retail NLA (80%GLA 25% of GF area) m2	Office NSA (80% GLA) m2
Total GLA m2		13600	544
Jobs per City Block		635	10880
Residential Schedule			
lot size (20% of city block)		2340	
80% floor coverage		1872	
Apartments per lot		80% efficiency	1498 per level
Avg apartment area		60	m2
over 3 levels		75	Apartments
Over 5 Levels		125	Apartments
Townhouses per lot		Individual lot size	6x20
Yield		15	
Total Residential Yield		Lots	Dwellings
Townhouses		5	75
Apartments (3 levels)		4	300
Apartments (5 levels)		5	625
total Dwellings		1000	
Office Carparking			
Carpark footprint @ 3.5 cars /100m2NLA			
Area per level (m2)		Levels	width (m)
3744		3	52
			length (m)
			72
Note: carpark assumes 3 level centralised carpark. Refer to block study for alternative carparking configurations.			
Typical City Block Area Analysis			
Typical city block size (130m x 90m)		11700 m2	
Office footprint		2650 m2	
Carpark footprint		3744 m2	
Residential footprint		2340 m2	
Balance (laneways, open space, building separation)		2966 m2	

PRECINCT 1: URBAN CORE

BUILT FORM ANALYSIS - TYPICAL CITY BLOCK SUMMARY

BLOCK TYPE	Unit	1	2	3	4	5	6	7	8
		Non-Compliant On-grade Car Park Only - Low Density	On-grade & Podium Car Park	On-grade & Podium Car Park Underground Car Park	Multi-Deck Car Park (2 Levels)	Multi-Deck Car Park (3 Levels)	Podium Car Park (2 Levels)	Podium Car Park	Podium Car Park (High Yield)
									
Lot Size	m	130 X 90	130 X 90	130 X 90	130 X 90	130 X 90	130 X 90	130 X 90	130 X 90
* Jobs Provided	Jobs	● 370	● 620	● 620	● 620	● 620	● 620	● 620	● 840
Office GLA	m ²	8300	13600	13600	13600	13600	13600	13600	18480
Office NLA (80% Efficiency)	m ²	6600	10900	10900	10900	10900	10900	10900	14800
Residential Lot (20%)	m ²	2350	2350	2350	2350	2350	2350	2350	2350
Underground Car Park	m ²	N/A	N/A	3200	N/A	N/A	N/A	N/A	N/A
On-grade Car Park	m ²	8100	6000	8400	2000	N/A	N/A	N/A	N/A
Podium Car Park	m ²	N/A	5600	N/A	N/A	N/A	N/A	11600	15520
Multi-Deck Car Park	m ²	N/A	N/A	N/A	9600	11600	11600	N/A	N/A
Total Car Bays		270	380	380	380	380	380	380	520
Access Lane way	m	90	90	90	90	275	180	190	190

Refer to Appendix for full City Block design and variations

● Low Density - Not Recommended

● High Density - Recommended

* Job ratio (Office) 1Job/22m² GLA



PRECINCT 2 INNOVATION QUARTER (IQ)

- AREA: 16 ha
- JOBS PROJECTED: 2361

PRECINCT 2 - INNOVATION QUARTER

BUILT FORM ASSUMPTIONS

LARGE LOT
The Commons Co-working
Collingwood VIC



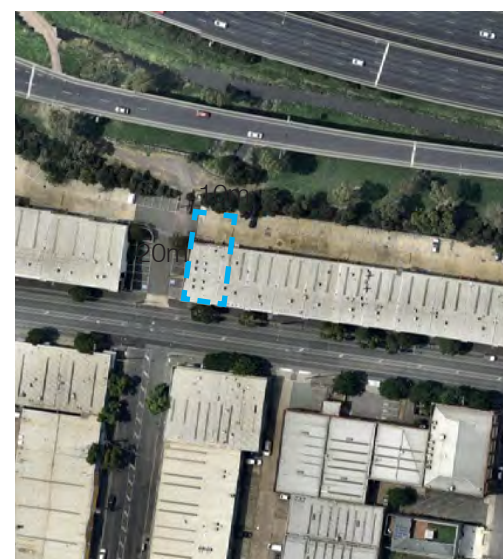
LARGE LOT
Warehouse and Office
University Hill, Bundoora



SMALL LOT
Small office - Incubator
University Hill, Bundoora



SMALL LOT
Small office - Incubator
Stubbs St. Kensington



PRECINCT 2 - INNOVATION QUARTER

AREA ANALYSIS

PRECINCT 2: INNOVATION QUARTER (IQ)

- AREA: 16 HA.
- JOBS PROJECTED: 2361



PRECINCT 2	IQ - Incubator Quarter		
------------	------------------------	--	--

Total Area	16 ha.		
------------	--------	--	--

Typical Lot 1 (Large Incubator)			
3600	m2	Lot Size	40x90m
Typical heights	2 - 3 storeys		
	GLA m2	Jobs	Cars required
Warehouse	1100	11	11
Office	1500	68	42
Totals per lot		79	53

Typical Lot 2 (SLEPS)			
900	m2	Lot Size	45x20m
Typical heights	2-3 storeys	Average height	2
	GLA m2	Jobs	Cars required
Warehouse	360	3.6	3.6
Office	300	14	8
Totals per lot		17	12

Totals	Number of Lots	Office NLA (m2)	Warehouse GLA (m2)
Lot type 1 provided	14	16800	15400
Lot type 2 provided	72	17280	25920
Area Totals		34080	41320
Jobs Provided		1947	413.2

Total Jobs Provided	2361
Job Density	148

PSP projected jobs for Innovation and Technology Precinct		
2,199	Job Density	56

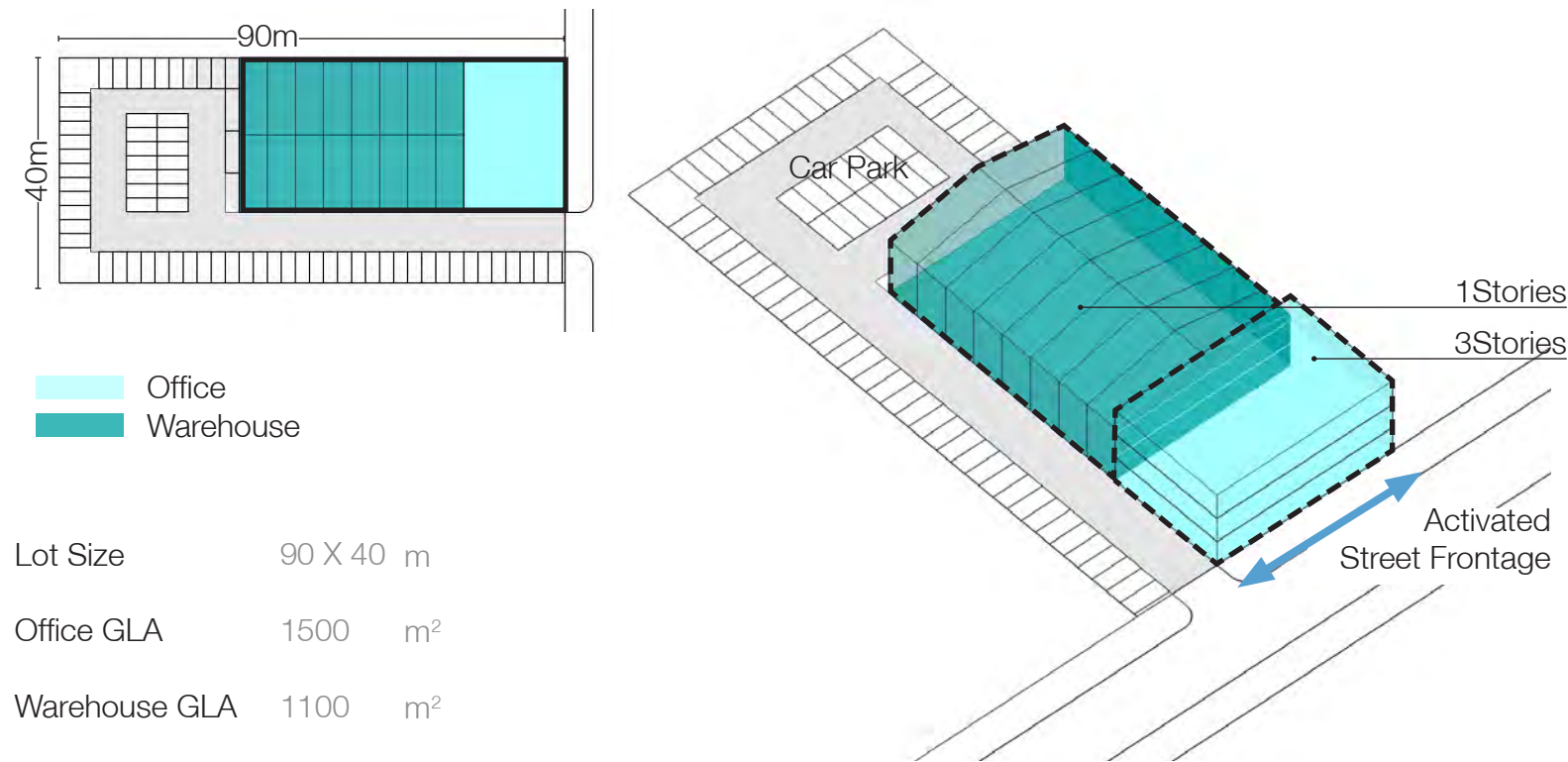
Office Employment Ratio	GLA(m2)/Job 22	NLA(m2)/Job 17.5
Warehouse Employment Ratio	GLA(m2)/Job 100	

PRECINCT 2 - INNOVATION QUARTER

BUILT FORM ANALYSIS

Typical Large Lot

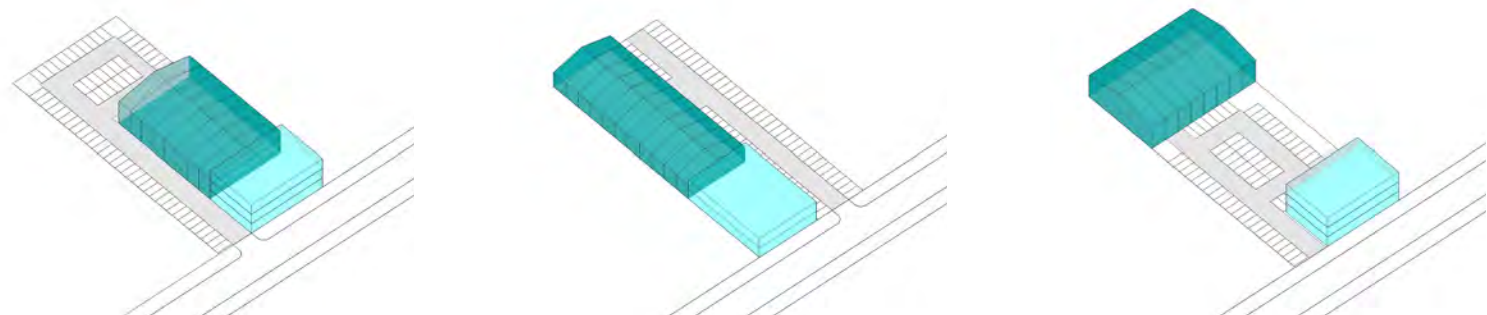
90X40 Lot
Front Office with
Back Warehouse



Office
Warehouse

Lot Size	90 X 40	m
Office GLA	1500	m ²
Warehouse GLA	1100	m ²
Jobs Provided *	80	Jobs
Total Car Bays	65	

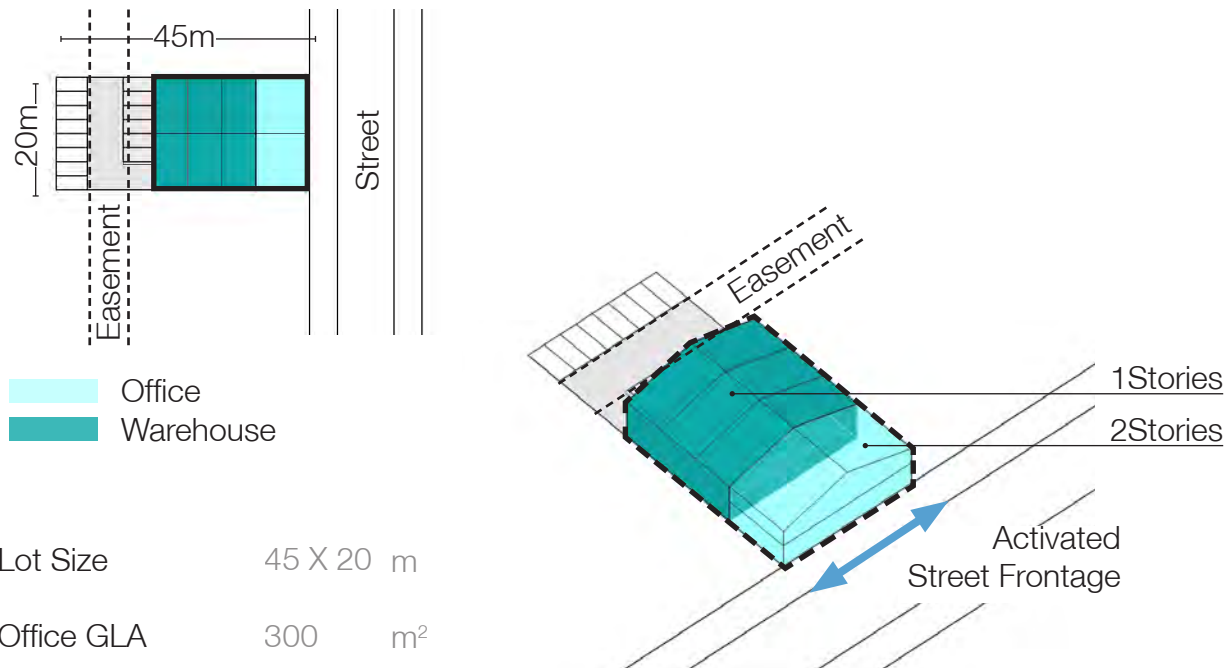
Variations:



* Job ratio (Office) 1Job/22m²

Typical Small Lot

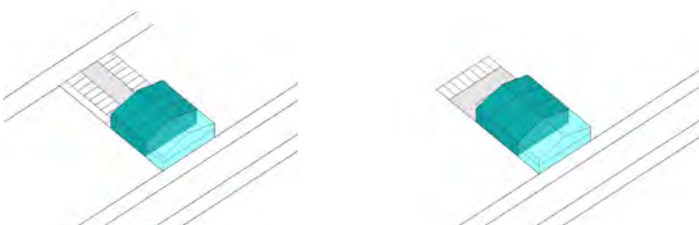
45X20 Lot
Front Office with
Back Warehouse



Office
Warehouse

Lot Size	45 X 20	m
Office GLA	300	m ²
Warehouse GLA	360	m ²
Jobs Provided *	19	Jobs
Total Car Bays	13	

Variations:

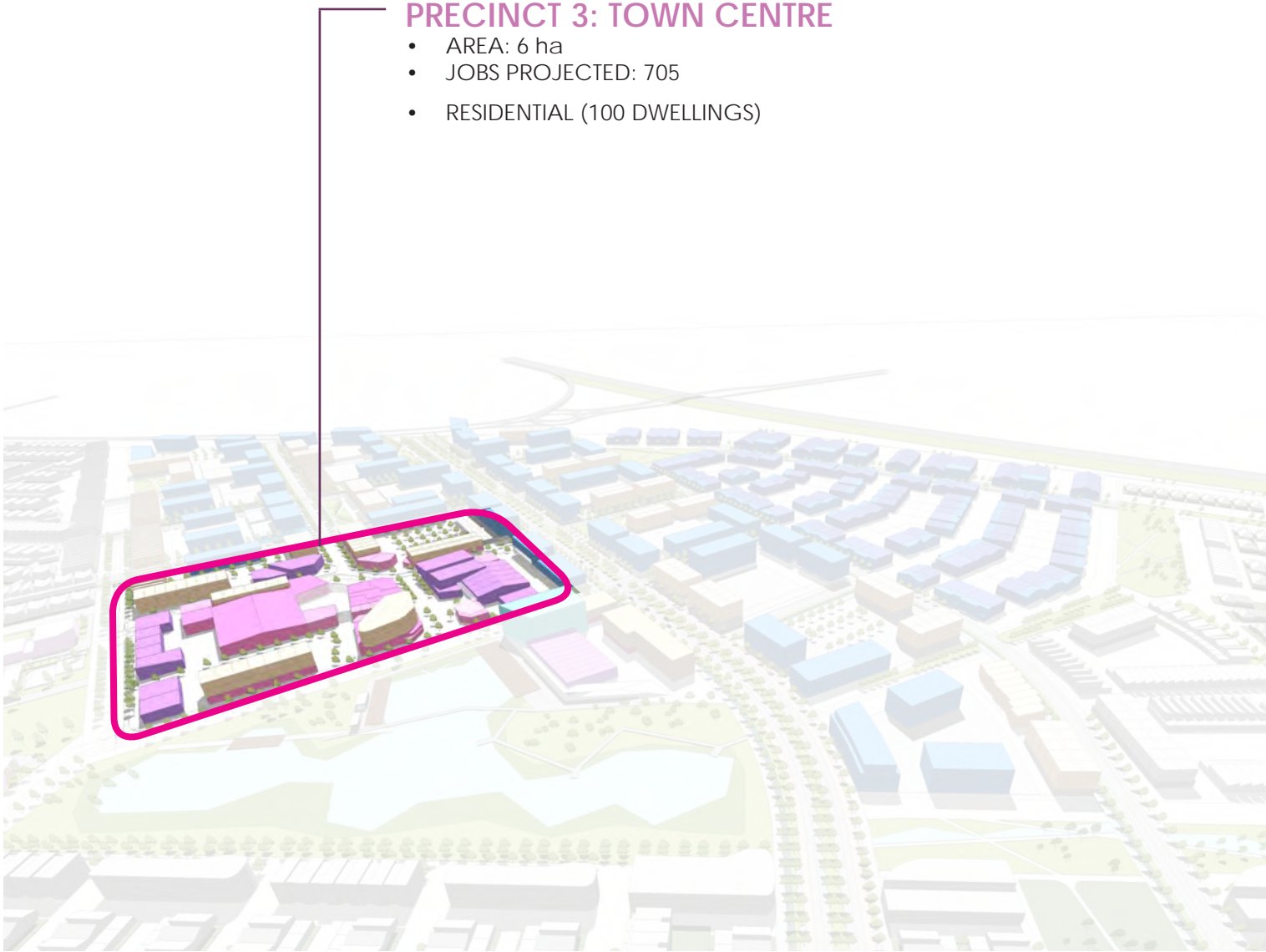


An architectural sketch of a town centre precinct. The scene features modern buildings with large glass windows and balconies. In the foreground, there's a wide pedestrian walkway with people walking, some sitting at outdoor tables, and a person playing a guitar. A large, curved building with a glass facade is on the left. The sky is blue. The text 'PRECINCT 3 TOWN CENTRE' is overlaid on the right side.

PRECINCT 3 TOWN CENTRE

- AREA: 6 ha
- JOBS PROJECTED: 705

PRECINCT 3: TOWN CENTRE



PRECINCT 3: TOWN CENTRE

- AREA: 6 ha
- JOBS PROJECTED: 705
- RESIDENTIAL (100 DWELLINGS)

PRECINCT 3		TOWN CENTRE	
Total Area		6 ha.	
Total Jobs Precinct 3		705	
Retail		390	
Mixed Use		92	
Office		223	
Job Density	jobs/ha	118	
Job ratios	retail	1job / 0.03m2	
	Restricted Retail	1 Job /0.01m2	
	other uses	1job / 0.03m2	
Retail Uses			
Name		Area (m2)	
F&B		342	
F&B		302	
F&B		360	
F&B		486	
F&B		432	
Retail		711	
Retail		415	
Retail		713	
Retail		411	
Retail		260	
Retail		163	
Retail		699	
Retail		700	
Retail		285	
Retail		178	
Retail		291	
Retail		752	
Mini Major (Fresh Food Hall)		1500	
Supermarket		4000	
Total Retail		13000	
Jobs		390	
Other Uses			
Swim School		665	
Library		1044	
Gym/ Health / Yoga / Dance		1364	
Total Other Uses		3073	
Jobs		92	
Office/Sohos NLA		3900	
Total Office/Sohos		3900	
Jobs		223	
PSP projected jobs forTown Centre			
Jobs		314	
Job Density		87	

PRECINCT 3: TOWN CENTRE

CONCEPT PLAN



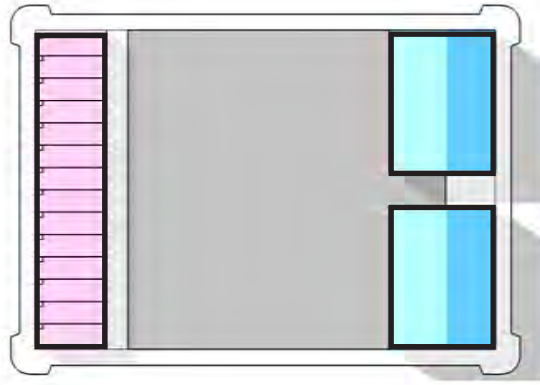
* NOT TO SCALE

PRECINCT 1: URBAN CORE

BUILT FORM ANALYSIS - TYPICAL CITY BLOCK

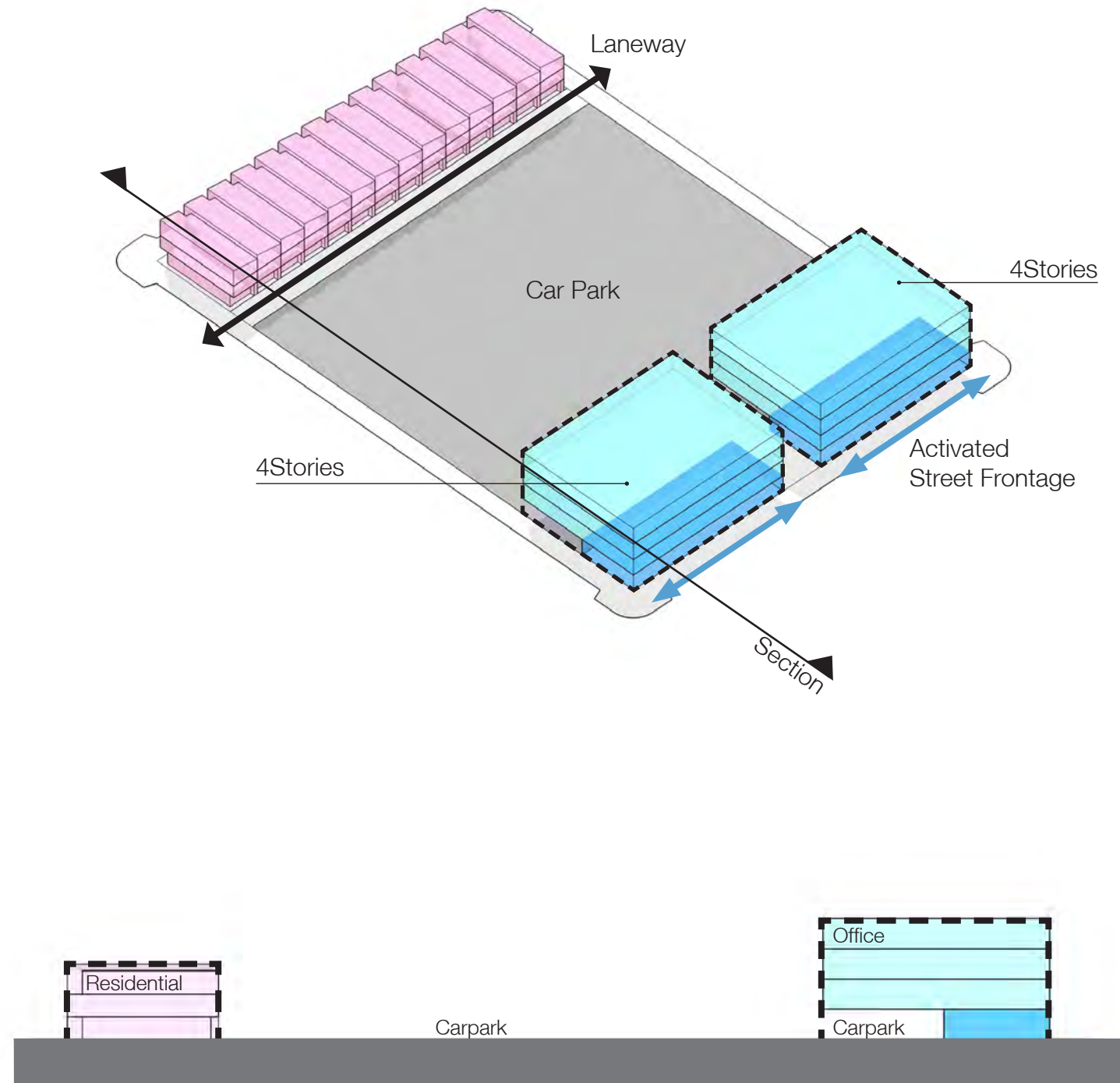
BLOCK TYPE 1

Non-Compliant On-grade Car Park Only - Low Density

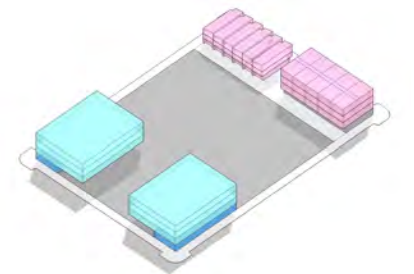
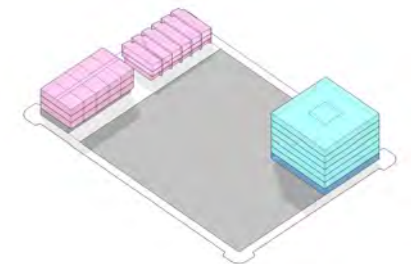
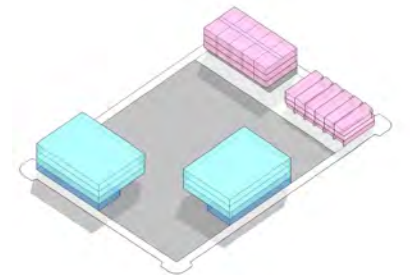
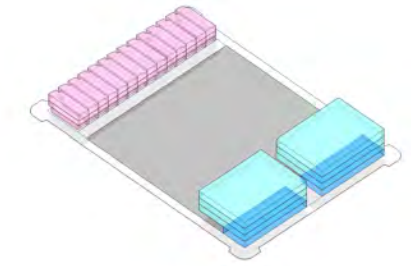


Commercial
Residential
Carpark

Jobs Provided *	370	Jobs
Office GLA	8300	m ²
Office NLA (80% Efficiency)	6600	m ²
Residential Lot (20%)	2350	m ²
Underground Car Park	N/A	m ²
On-grade Car Park	8100	m ²
Podium Park	N/A	m ²
Multi-Deck Car Park	N/A	m ²
Total Car Bays	270	
Access Laneway	90	m



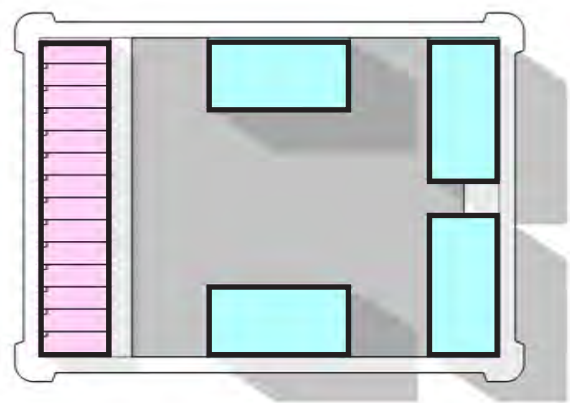
Variations:



PRECINCT 1: URBAN CORE

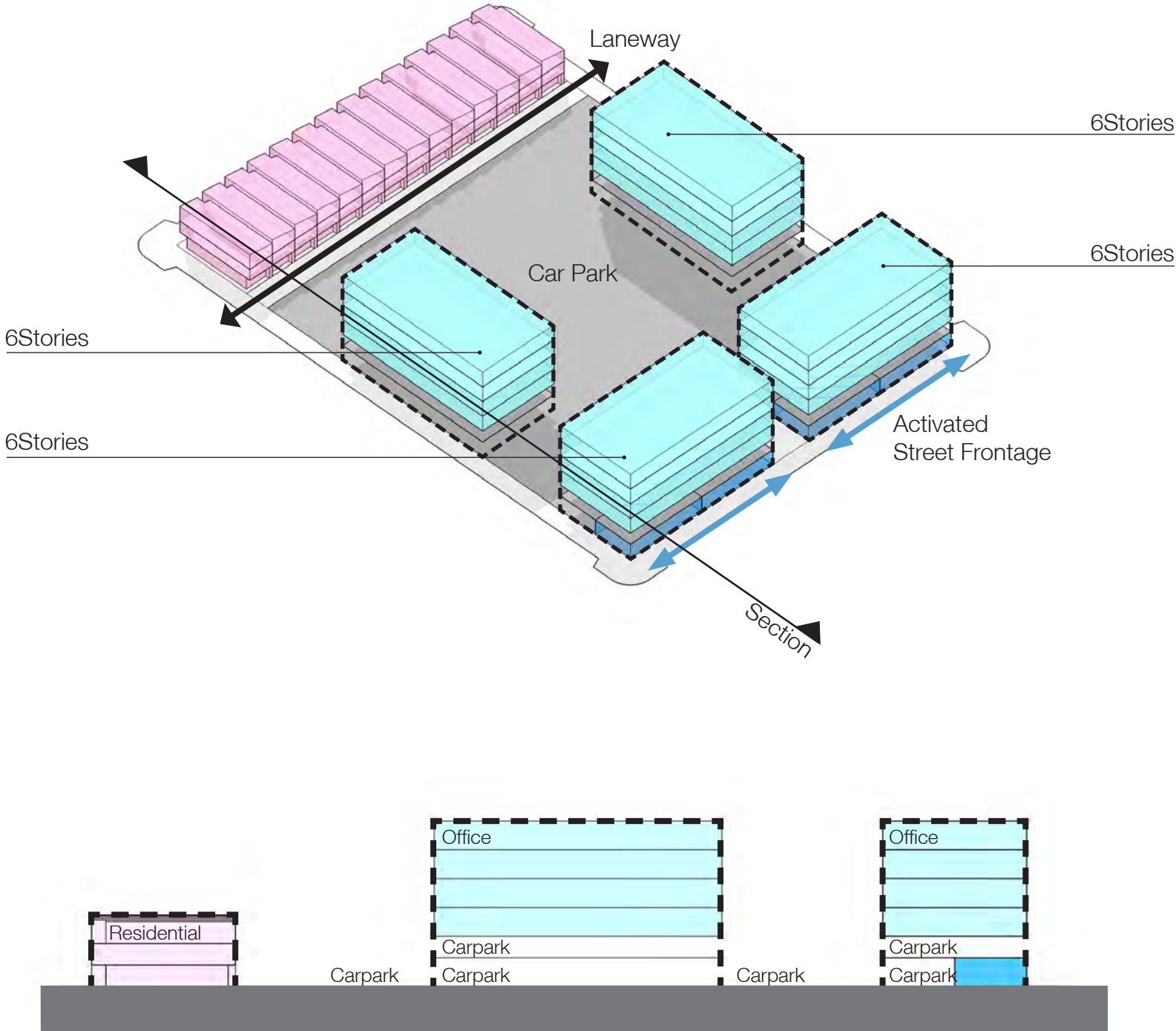
BUILT FORM ANALYSIS - TYPICAL BLOCK BLOCK TYPE 2

On-grade &
Podium Car Park

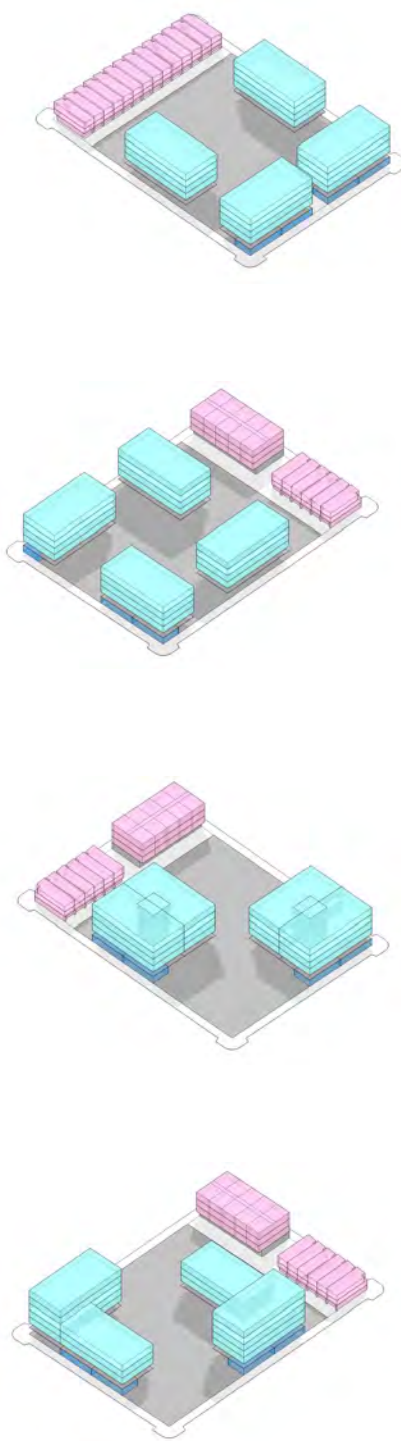


- Commercial
- Residential
- Carpark

Jobs Provided *	620	Jobs
Office GLA	13600	m ²
Office NLA (80% Efficiency)	10900	m ²
Residential Lot (20%)	2350	m ²
Underground Car Park	N/A	m ²
On-grade Car Park	6000	m ²
Podium Car Park	5600	m ²
Multi-Deck Car Park	N/A	m ²
Total Car Bays	380	
Access Laneway	90	m



Variations:

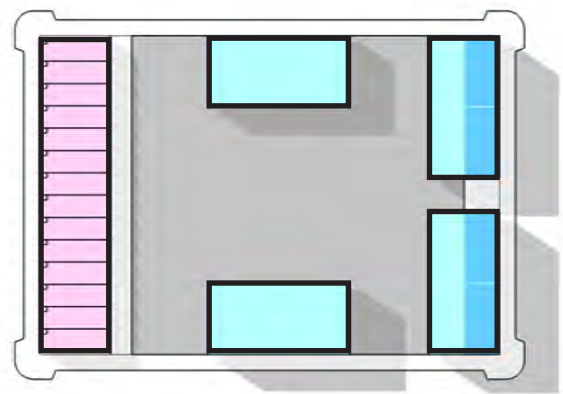


* Job ratio (Office) 1Job/22m² GLA

PRECINCT 1: URBAN CORE

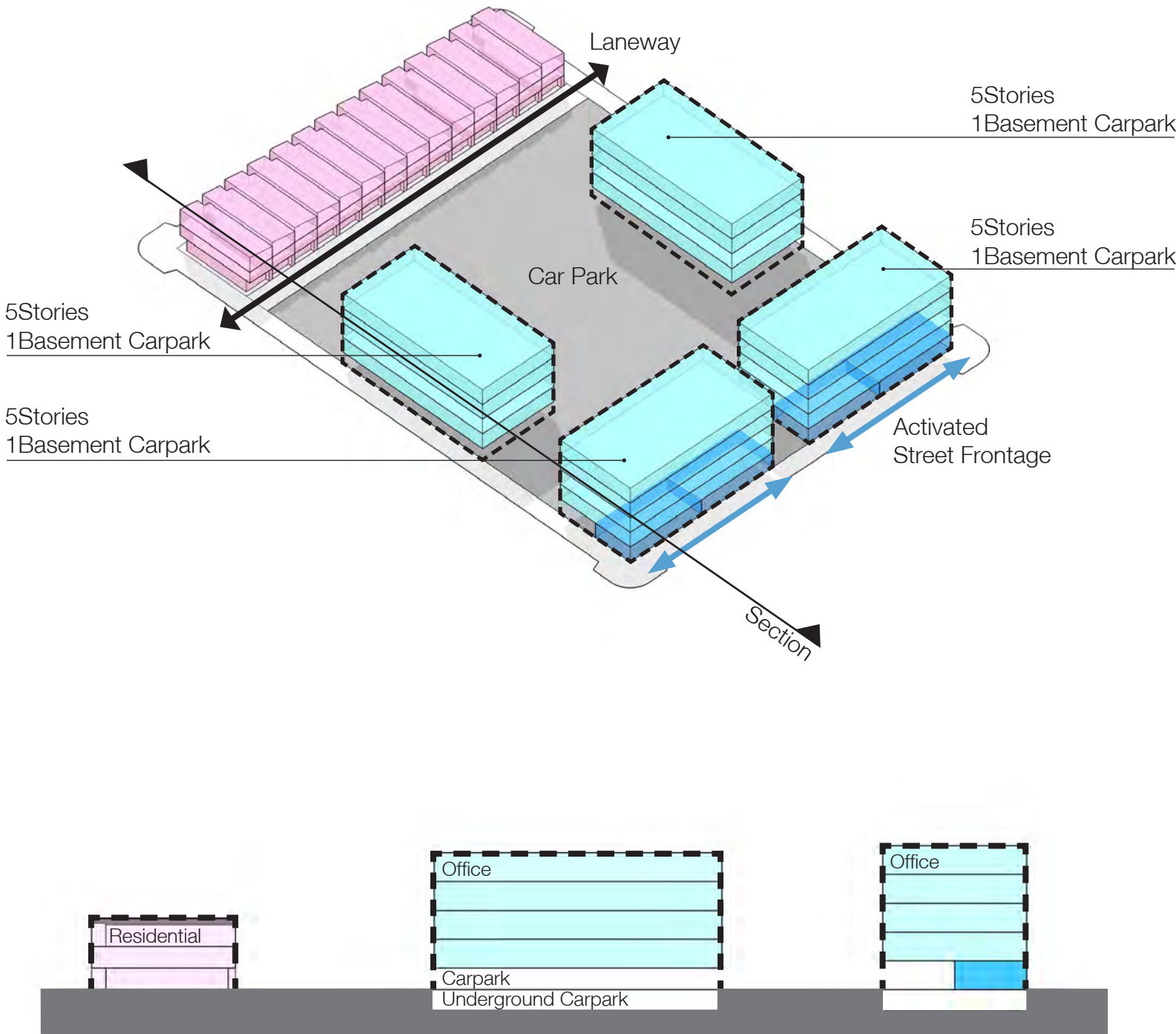
BUILT FORM ANALYSIS - TYPICAL BLOCK BLOCK TYPE 3

On-grade &
Podium Car Park
Underground Car Park

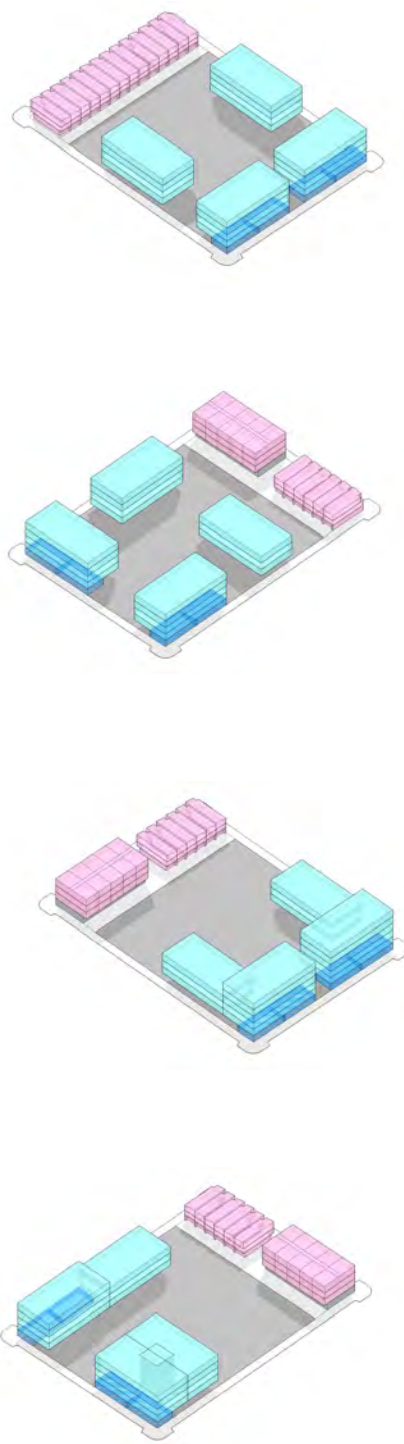


- Commercial
- Residential
- Carpark

Jobs Provided *	620	Jobs
Office GLA	13600	m²
Office NLA (80% Efficiency)	10900	m²
Residential Lot (20%)	2350	m²
Underground Car Park	3200	m²
On-grade Car Park	8400	m²
Podium Car Park	N/A	m²
Multi-Deck Car Park	N/A	m²
Total Car Bays	380	
Access Laneway	90	m



Variations:

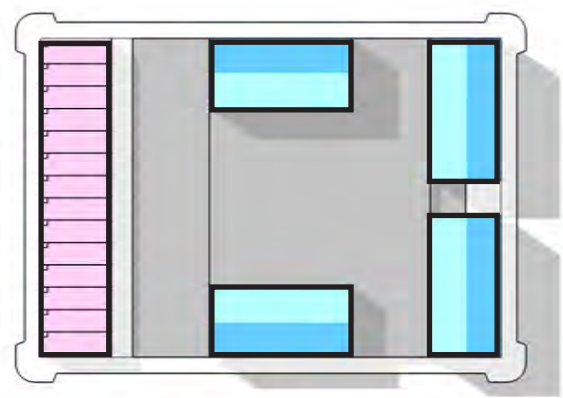


* Job ratio (Office) 1Job/22m² GLA

PRECINCT 1: URABAN CORE

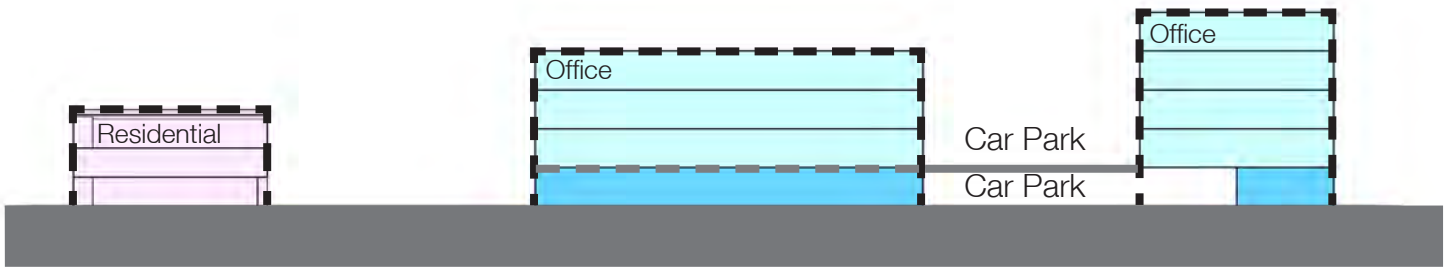
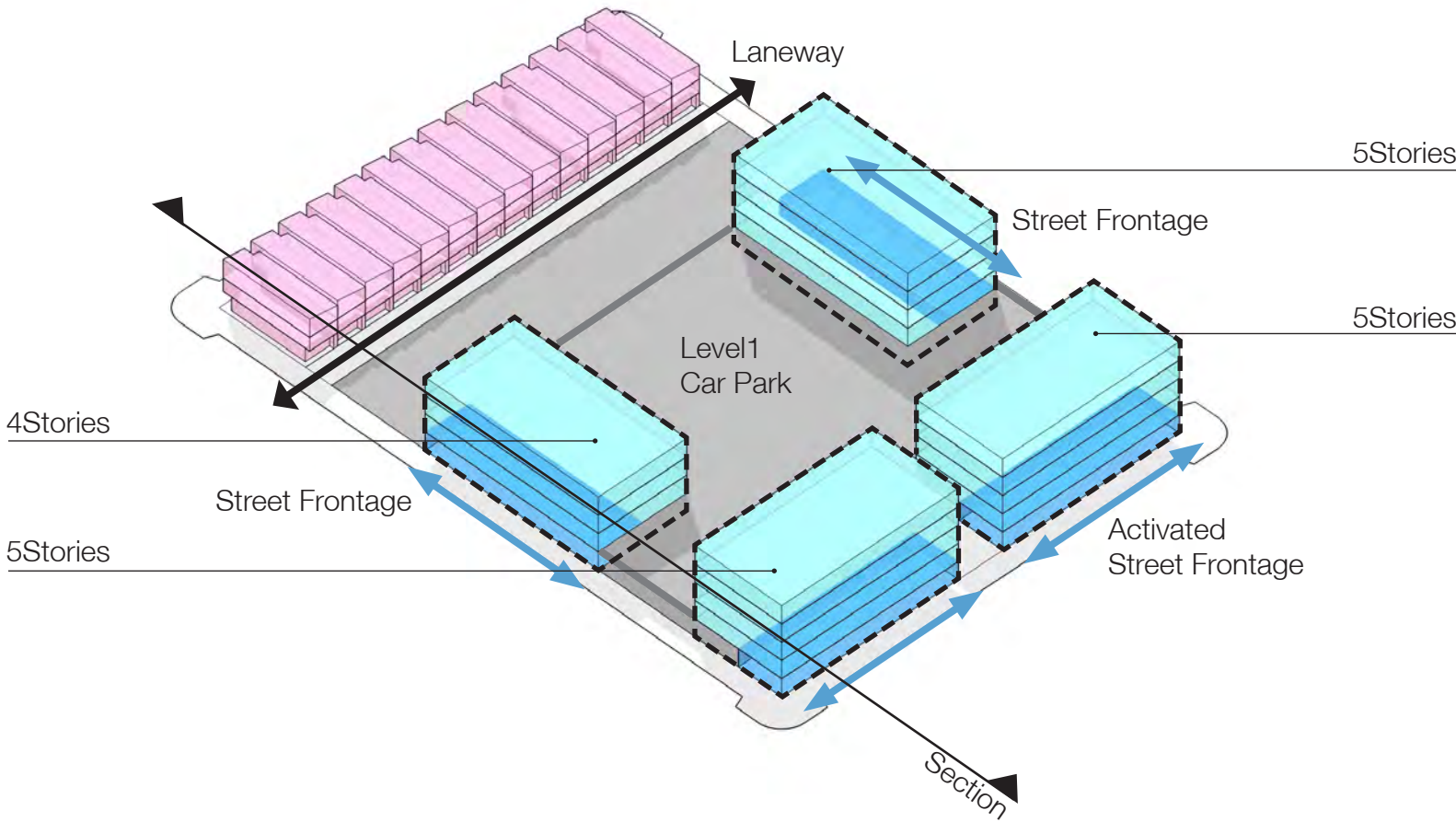
BUILT FORM ANALYSIS - TYPICAL BLOCK BLOCK TYPE 4

Multi-Deck Car Park (2 Levels)

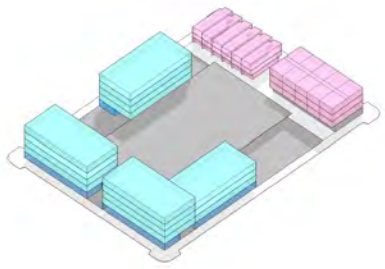
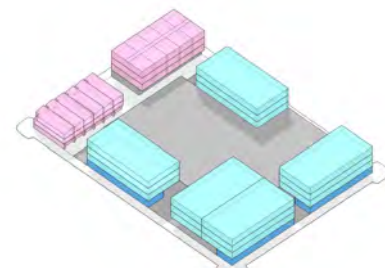
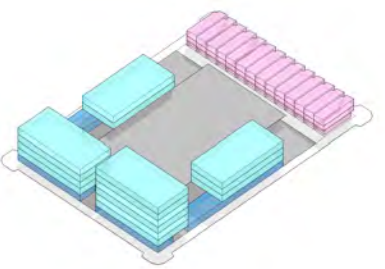
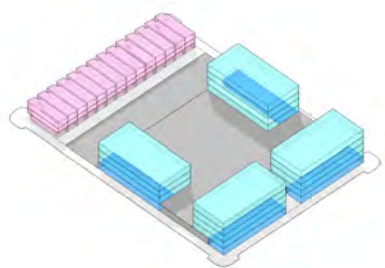


- Commercial
- Residential
- Carpark

Jobs Provided *	620	Jobs
Office GLA	13600	m ²
Office NLA (80% Efficiency)	10900	m ²
Residential Lot *(20%)	2350	m ²
Underground Car Park	N/A	m ²
On-grade Car Park	2000	m ²
Podium Car Park	N/A	m ²
Multi-Deck Car Park	9600	m ²
Total Car Bays	380	
Access Laneway	90	m



Variations:

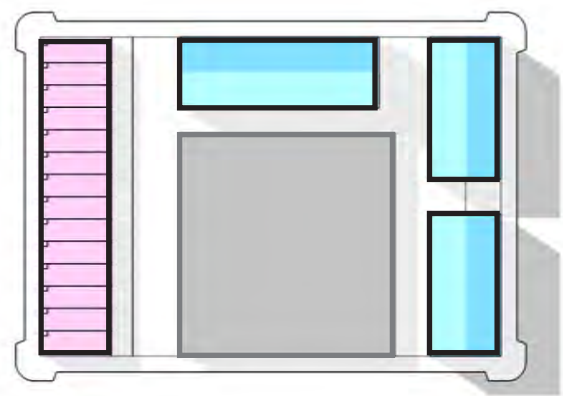


* Job ratio (Office) 1Job/22m² GLA

PRECINCT 1: URBAN CORE

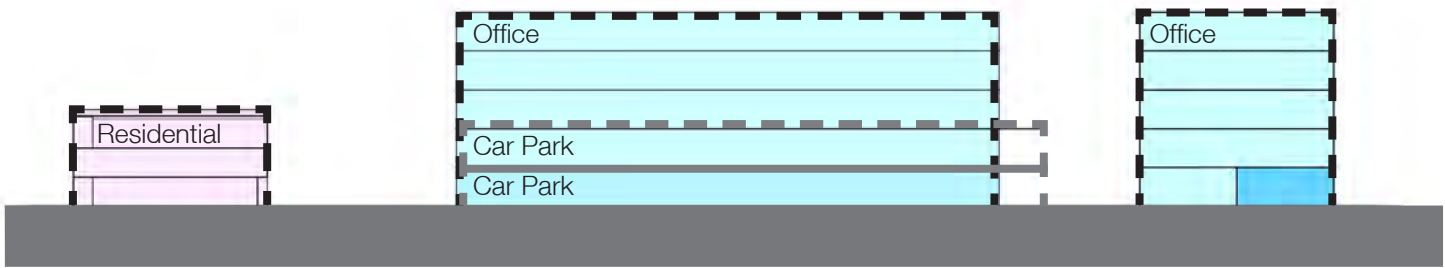
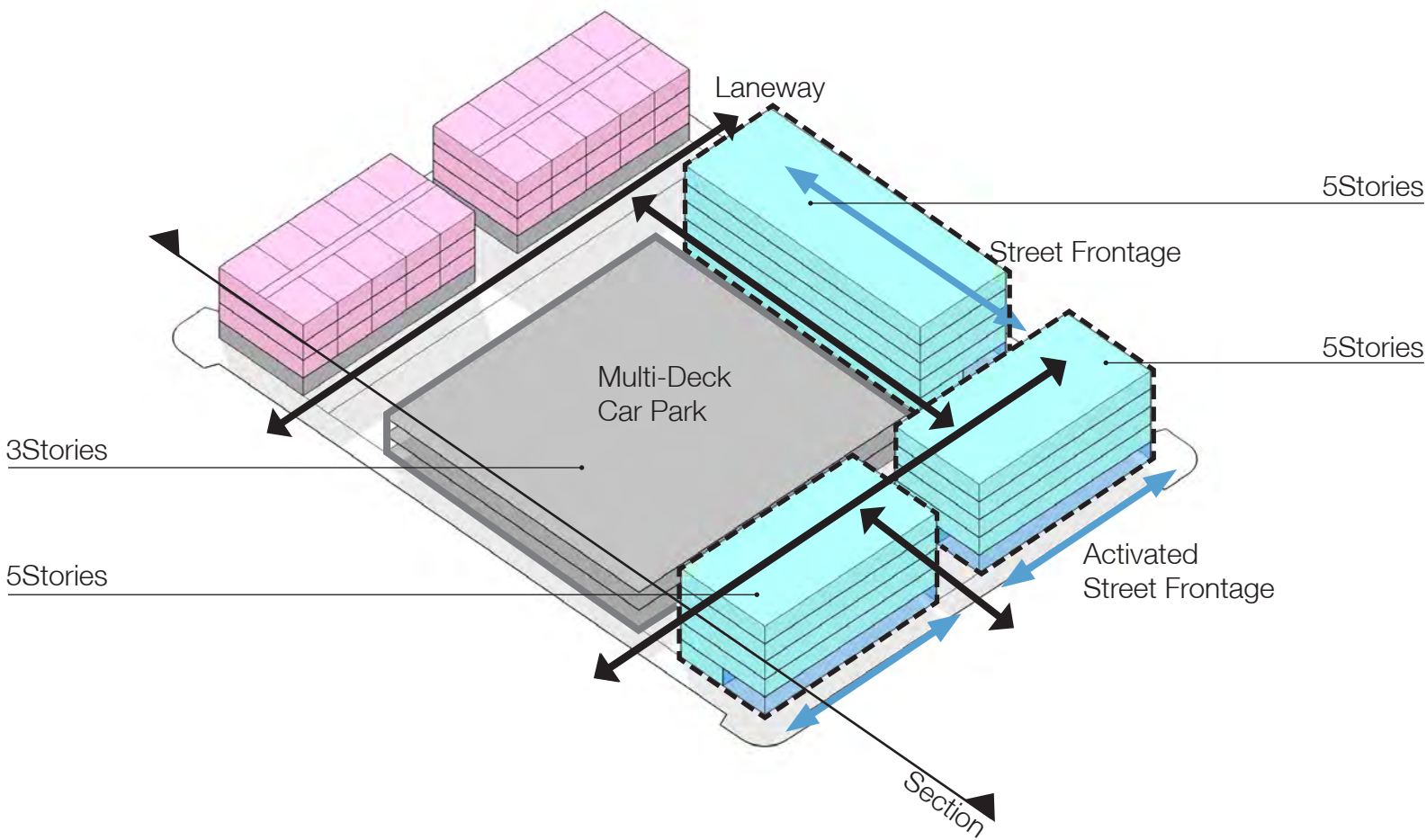
BUILT FORM ANALYSIS - TYPICAL BLOCK BLOCK TYPE 5

Multi-Deck Car Park (3 Levels)

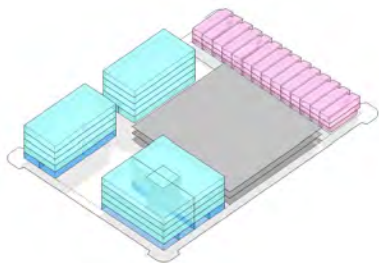
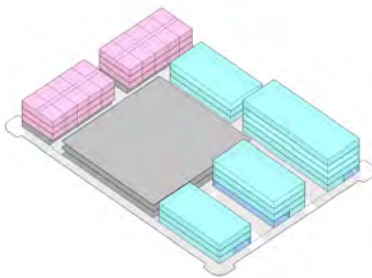
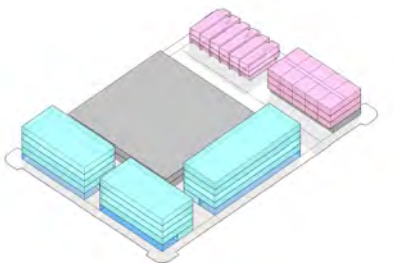
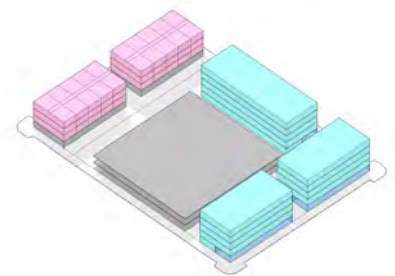


- Commercial
- Residential
- Carpark

Jobs Provided *	620	Jobs
Office GLA	13600	m ²
Office NLA (80% Efficiency)	10900	m ²
Residential Lot (20%)	2350	m ²
Underground Car Park	N/A	m ²
On-grade Car Park	N/A	m ²
Podium Car Park	N/A	m ²
Multi-Deck Car Park	11600	m ²
Total Car Bays	380	
Access Laneway	275	m



Variations:



* Job ratio (Office) 1Job/22m² GLA

PRECINCT 1: URBAN CORE

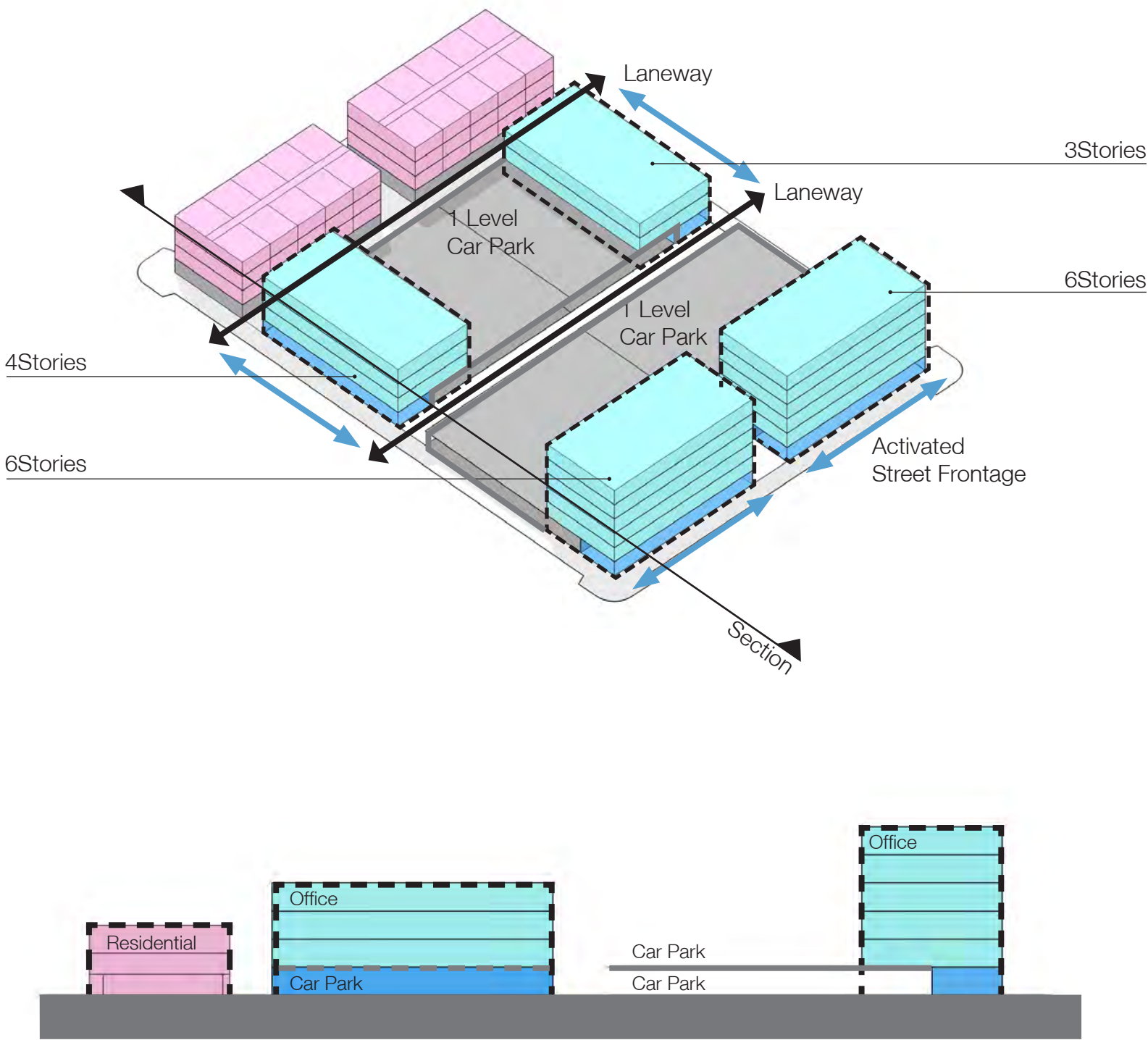
BUILT FORM ANALYSIS - TYPICAL BLOCK BLOCK TYPE 6

Podium Car Park
(2 Levels)

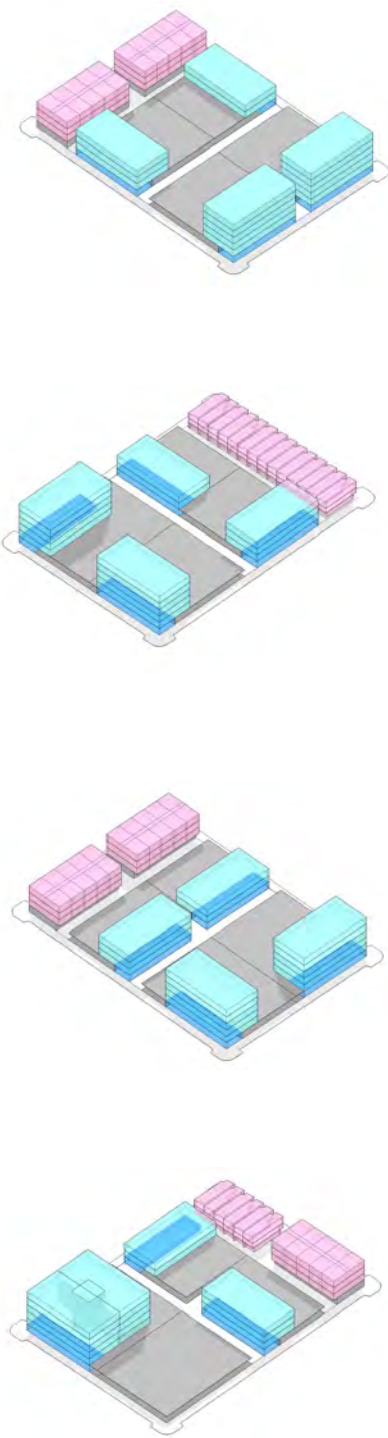


- Commercial
- Residential
- Carpark

Jobs Provided *	620	Jobs
Office GLA	13600	m ²
Office NLA (80% Efficiency)	10900	m ²
Residential Lot (20%)	2350	m ²
Underground Car Park	N/A	m ²
On-grade Car Park	N/A	m ²
Podium Car Park	N/A	m ²
Multi-Deck Car Park	11600	m ²
Total Car Bays	380	
Access Laneway	180	m



Variations:

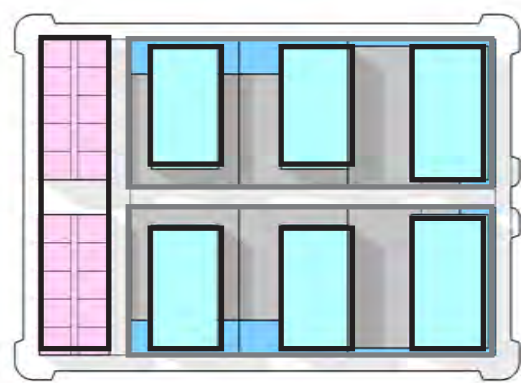


* Job ratio (Office) 1Job/22m² GLA

PRECINCT 1: URBAN CORE

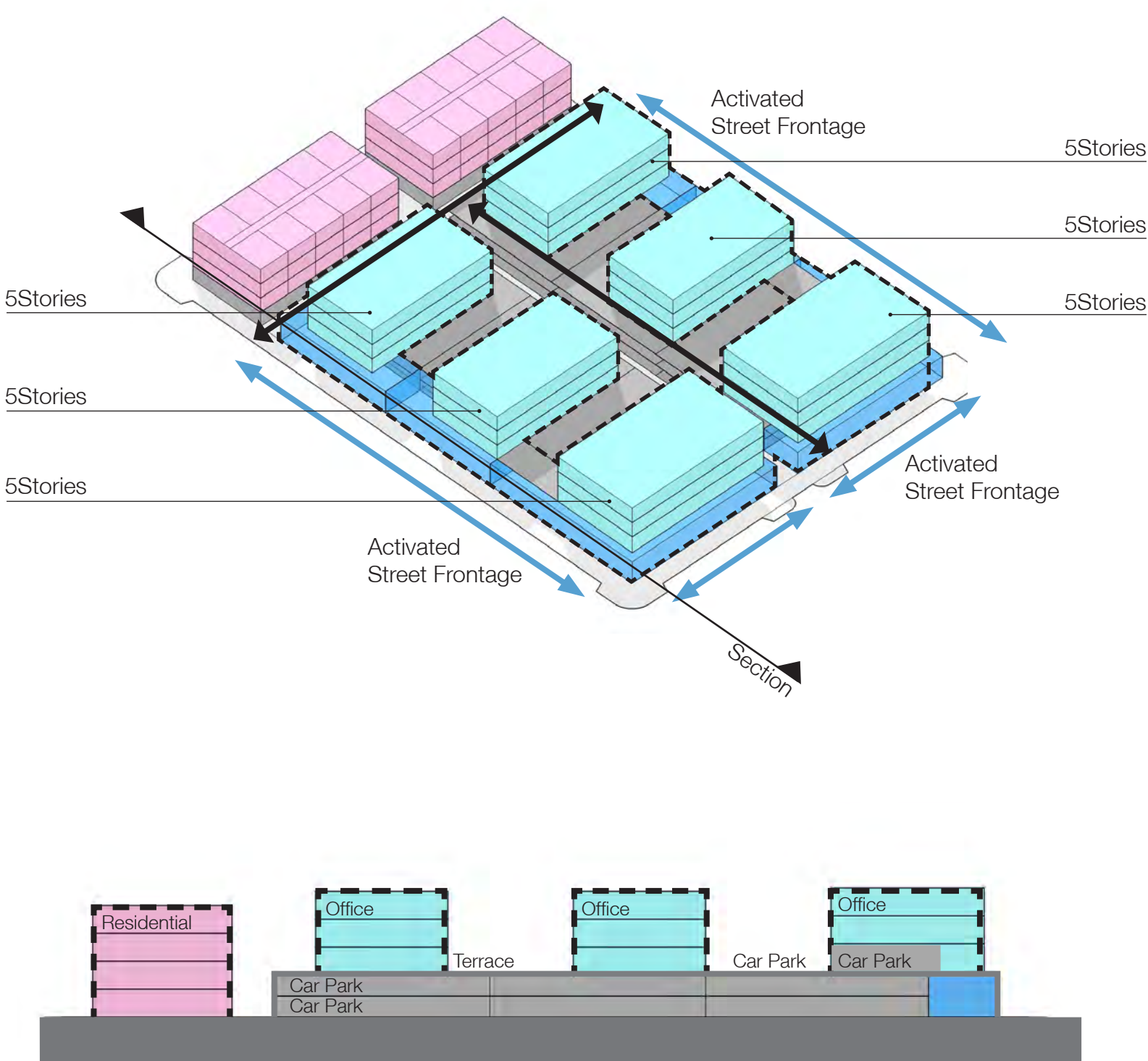
BUILT FORM ANALYSIS - TYPICAL BLOCK BLOCK TYPE 7

Podium Car Park



- Commercial
- Residential
- Carpark

Jobs Provided *	620	Jobs
Office GLA	13600	m ²
Office NLA (80% Efficiency)	10900	m ²
Residential Lot (20%)	2350	m ²
Underground Car Park	N/A	m ²
On-grade Car Park	N/A	m ²
Podium Car Park	N/A	m ²
Multi-Deck Car Park	11600	m ²
Total Car Bays	380	
Access Laneway	190	m

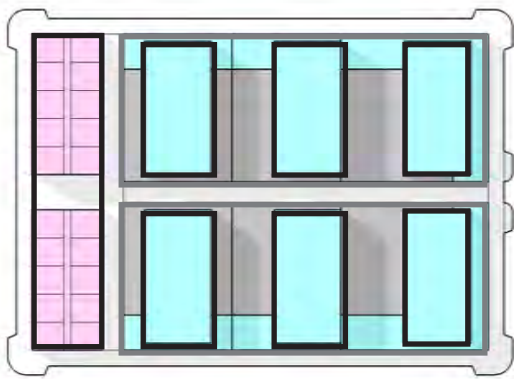


* Job ratio (Office) 1Job/22m² GLA

PRECINCT 1: URBAN CORE

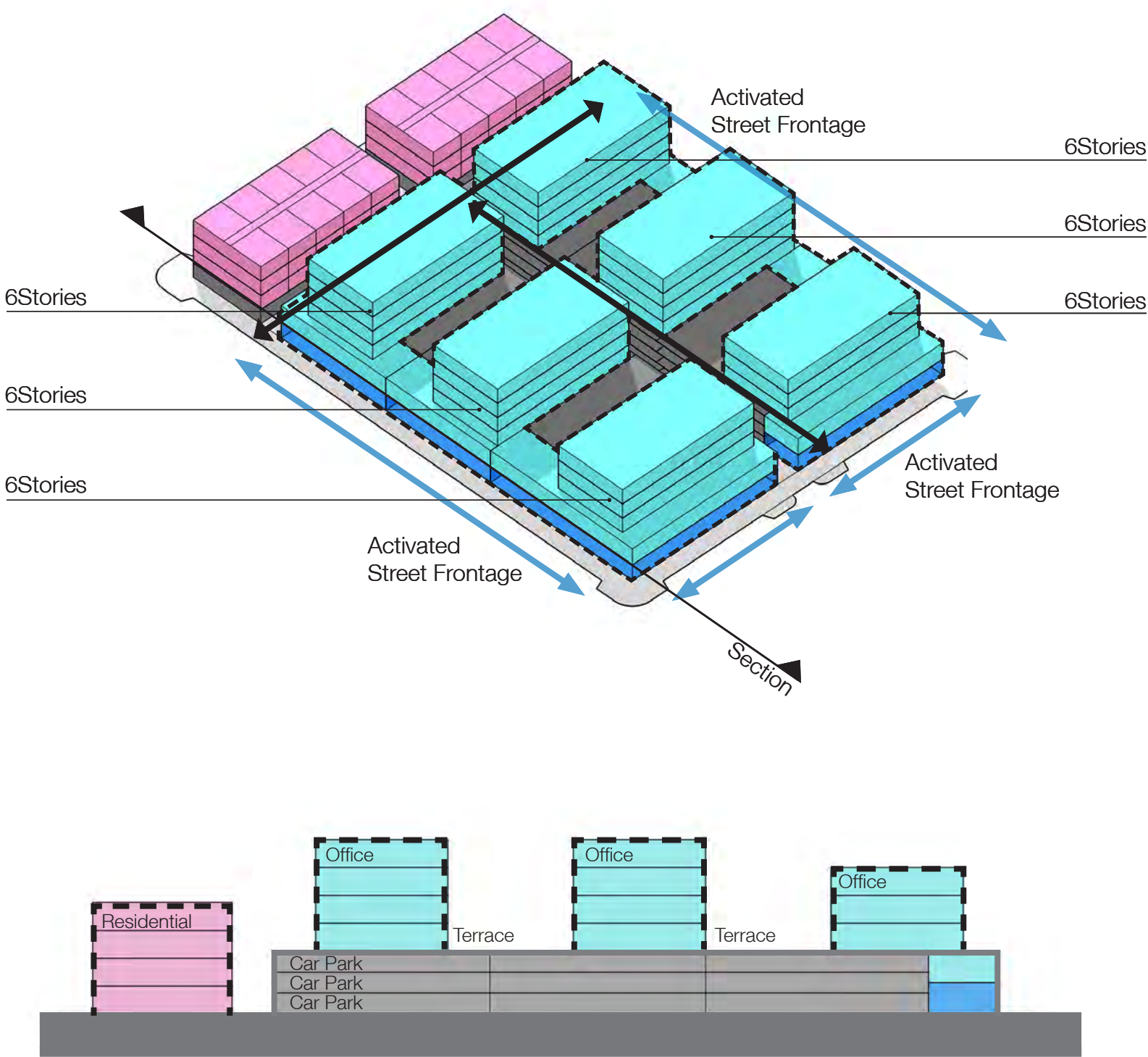
BUILT FORM ANALYSIS - TYPICAL BLOCK BLOCK TYPE 8

Podium Car Park (High Yield)



- Commercial
- Residential
- Carpark

Jobs Provided *	840	Jobs
Office GLA	18400	m ²
Office NLA (80% Efficiency)	14800	m ²
Residential Lot (20%)	2350	m ²
Underground Car Park	N/A	m ²
On-grade Car Park	N/A	m ²
Podium Car Park	15520	m ²
Multi-Deck Car Park	N/A	m ²
Total Car Bays	520	
Access Laneway	190	m



* Job ratio (Office) 1Job/22m² GLA