SHELL COVE BOAT HARBOUR PRECINCT

SECTION 75W MODIFICATION
ADG PRELIMINARY ANALYSIS

June 2018

FRASERS PROPERTY

COX

Contents

Objective	Proposed Development
PART 3: Siting the Development	
3A Site Analysis	
Objective 3A-1 Site analysis illustrates that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context	A site analysis identifies the characteristic of surrounding streets, orientations, solar access and noise, open space and public amenities including transport. The indicative envelopes respond to these opportunities and constraints for a coherent and integrated development.
3B Orientation	
Objective 3B-1 Building types and layouts respond to the streetscape and site while optimising solar access within the development	Indicative envelopes have been orientated to align with their immediate context including proposed street networks and the proposed harbour. All building entries can be located off streets. All indicative envelopes have an appropriate street frontage with height and scale set to respond to surrounding lower height dwellings. Proposed residential buildings typically have been sited as individual blocks and do not front onto other residential apartment buildings to avoid overshadowing. The exception being in the “town center” where recommended ADG building separation distances have been applied
Objective 3B-2 Overshadowing of neighbouring properties is minimised during mid-winter	Predominate building frontages are to the north-east allowing for solar access to living rooms and balconies. Indicative envelopes have been positioned to have minimum impact on adjacent dwellings. Apartment buildings are typically separated from their southern neighbours by a trafficable street. In some cases this allows for building separation greater than the minimum ADG requirement, protecting both solar access and privacy

Objective	Proposed Development
3C Public Domain Interface	
Objective 3C-1 Transition between private and public domain is achieved without compromising safety and security	Subject to further consideration at the detailed design stage.
Objective 3C-2 Amenity of the public domain is retained and enhanced	Buildings will appropriately respond to their public domain interface through their building address and an array of landscape treatments, including a variety of tree species, low planters and mature street planting. Waste storage and other services are located in basement carparks. On grade sub stations are to be suitably integrated into the public domain landscaping Accessibility is provided through carefully located and integrated ramps where necessary.
3D COMMUNAL AND PUBLIC OPEN SPACE	
Objective 3D-1 An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping Design Criteria Communal open space has a minimum area equal to 25% of the site. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid-winter).	The quantum and location of communal open space will be subject to further consideration at the detailed design stage
Objective 3D-2 Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting	
Objective 3D-3 Communal open space is designed to maximize safety	

Objective	Proposed Development
Objective 3D-4 Public open space, where provided, is responsive to the existing pattern and uses of the neighborhood	The Concept Plan provides approximately 43ha of public open space which accommodates a variety of local parks, foreshore open space and walkways. The indicative building envelopes have been located to maximize visual and pedestrian connections to the open space.
3E Deep Soil Zones	
Objective 3E-1 Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality Deep soil zones are to have minimum width of 6m and minimum of 7% of site area	The quantum and location of deep soil will be subject to further consideration at the detailed design stage of each building, having regards to the context of each site within the overall masterplan.
3F Visual Privacy	
Objective 3F-1 Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room Design Criteria Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from habitable rooms and balconies to the side and rear boundaries are as follows: Up to 12m/4 storeys: 6m Up to 25m/5-8 storeys: 9m Over 25m (9+storeys): 12m Separation distances between buildings on the same site should combine required building separations depending on the type of room (see Figure 3F.2 in the ADG).	The indicative building envelopes have been designed to meet the objectives and achieve the required building separation distances. Indicative building layouts and sections are provided to indicate the indicative separation distances. Visual privacy and building separation will be considered in detail as part of the design and development and assesment of future DA`s.

Objective	Proposed Development
3G Pedestrian Access and Entries	
Objective 3G-1 Building entries and pedestrian access connects to and addresses the public domain	The indicative envelopes have been located to address the street and public domain. The exact location of building entries and pedestrian access will be determined as part of the future detailed DA`s.
Objective 3G-2 Access, entries and pathways are accessible and easy to identify	
3H Vehicle Access	
Objective 3H-1 Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes	Subject to further consideration at the detailed design stage.
3J Bicycle and Car Parking	
Objective 3J-1 Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas	Car parking will be provided in accordance with the requirements of the relevant Urban Design Guidelines.
Objective 3J-2 Parking and facilities are provided for other modes of transport	Subject to further consideration at the detailed design stage.
Objective 3J-3 Car park design and access is safe and secure	Subject to further consideration at the detailed design stage.
Objective 3J-4 Visual and environmental impacts of underground car parking are minimised	Car parking will be provided in accordance with the requirements of the relevant Urban Design Guidelines.
Objective 3J-5 Visual and environmental impacts of on-grade car parking are minimised	
Objective 3J-6 Visual and environmental impacts of above ground enclosed car parking are minimised	

Objective	Proposed Development
PART 4 – DESIGNING THE BUILDING	
Objective 4A-1 To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space Design Criteria Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid- winter.	Indicative building envelopes have been orientated to address the street, public domain and to best maximize solar access. This includes maximizing exposure to north, east and western orientations. South facing facades are proposed where there are opportunities for water views. Dual aspect apartments can be provided where possible to achieve both solar access and water views. Detailed consideration of solar and daylight access will occur during the design and development of the future detailed buildings.
A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.	Subject to further consideration at the detailed design stage.
4B Natural Ventilation	
Objective 4B-3 The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed Overall depth of a cross-over or cross- through apartment does not exceed 18m, measured glass line to glass line	The indicative envelopes have been tested to enable future detailed building design to achieve the objective and design criteria. Indicative layouts are provided to demonstrate how future buildings could provide natural cross ventilation and maintain an appropriate building depth

Objective	Proposed Development
4C Ceiling Heights	
Objective 4C-1 Ceiling height achieves sufficient natural ventilation and daylight access Design Criteria Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Habitable: 2.7m Non habitable: 2.4m Ground/First Floors: 3.3m	The proposed building heights in metres can accommodate the required ceiling heights.
4D Apartment Size and Layout	
Objective 4D-1 The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity Design Criteria Apartments are required to have the following minimum internal areas: Studio: 35sqm 1 bed: 50sqm bed: 70sqm bed: 90sqm The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5sqm each. A fourth bedroom and further additional bedrooms increase the minimum internal area by 12sqm each.	Subject to further consideration at the detailed design stage.
Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms	

Objective	Proposed Development
Objective 4D-2 Environmental performance of the apartment is maximised Design Criteria Habitable room depths are limited to a maximum of 2.5 x the ceiling height In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window	Subject to further consideration at the detailed design stage.
Objective 4D-3 Apartment layouts are designed to accommodate a variety of household activities and needs Design Criteria Master bedrooms have a minimum area of 10sqm and other bedrooms 9sqm (excluding wardrobe space) Bedrooms have a minimum dimension of 3m (excluding wardrobe space) Living rooms or combined living/dining rooms have a minimum width of: 3.6m for studio and 1 bedroom apartments 4m for 2 and 3 bedroom apartments	
The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts	

Objective	Proposed Development
4E Private Open Space and Balconies	
Objective 4E-1 Apartments provide appropriately sized private open space and balconies to enhance residential amenity Design Criteria All apartments are required to have primary balconies as follows: Minimum area: Studio: 4sqm bed: 8sqm bed: 10sqm bed: 12sqm Minimum depth: Studio: - bed: 2m bed: 2m bed: 2.4m The minimum balcony depth to be counted as contributing to the balcony area is 1m	Subject to further consideration at the detailed design stage.
For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15sqm and a minimum depth of 3m.	
Objective 4E-2 Primary private open space and balconies are appropriately located to enhance liveability for residents.	The indicative building envelopes have been designed and located to allow primary open space and balconies are to be located towards outlook, northern, east or western solar exposure and where possible in front of living rooms
Objective 4E-3 Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building.	Subject to further consideration at the detailed design stage.

Objective	Proposed Development
Objective 4E-4 Private open space and balcony design maximises safety.	
4F Common Circulation and Spaces	
Objective 4F-1 Common circulation spaces achieve good amenity and properly service the number of apartments Design Criteria The maximum number of apartments off a circulation core on a single level is eight	Subject to further consideration at the detailed design stage. The indicative layouts provided demonstrate that the indicative envelopes are capable of achieving the design criteria.
Objective 4F-2 Common circulation spaces promote safety and provide for social interaction between residents	Subject to further consideration at the detailed design stage.
4G Storage	
Objective 4G-1 Adequate, well designed storage is provided in each apartment Design Criteria In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: Studio: 4m3 1 bed: 6m3 2 bed: 8m3 2 bed: 10m3 At least 50% of the required storage is to be located within the apartment.	Subject to further consideration at the detailed design stage.
4H Acoustic Privacy	
Objective 4H-1 Noise transfer is minimised through the siting of buildings and building layout.	Subject to further consideration at the detailed design stage. Buildings have adequate separation from neighboring buildings.

Objective	Proposed Development
Objective 4H-2 Noise impacts are mitigated within apartments through layout and acoustic treatments.	Subject to further consideration at the detailed design stage.
4J Noise and Pollution	
Objective 4J-1 In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings.	Subject to further consideration at the detailed design stage.
Objective 4J-2 Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission.	
4K Apartment Mix	
Objective 4K-1 A range of apartment types and sizes is provided to cater for different household types now and into the future.	Subject to further consideration at the detailed design stage.
Objective 4K-2 The apartment mix is distributed to suitable locations within the building	
4L Ground Floor Apartments	
Objective 4L-1 Street frontage activity is maximised where ground floor apartments are located	The indicative envelopes have been orientated to allow where possible street fronts to be activated through direct connection from apartments to the public streets and public open space.
Objective 4L-2 Design of ground floor apartments delivers amenity and safety for residents	Subject to further consideration at the detailed design stage.
4M Facades	
Objective 4M-1 Building facades provide visual interest along the street while respecting the character of the local area	Capable of Compliance – subject to further consideration as part of the future detailed design.

Objective	Proposed Development
Objective 4M-2 Building functions are expressed by the facade	
4N Roof Design	
Objective 4N-1 Roof treatments are integrated into the building design and positively respond to the street	Subject to further consideration at the detailed design stage.
Objective 4N-2 Opportunities to use roof space for residential accommodation and open space are maximised	
Objective 4N-3 Roof design incorporates sustainability features	
4O Landscape Design	
Objective 4O-1 Landscape design is viable and sustainable	Subject to further consideration at the detailed design stage.
4P Planting on Structures	
Objective 4P-1 Appropriate soil profiles are provided	Subject to further consideration at the detailed design stage.
Objective 4P-2 Plant growth is optimised with appropriate selection and maintenance	
Objective 4P-3 Planting on structures contributes to the quality and amenity of communal and public open spaces	
4Q Universal Design	
Objective 4Q-1 Universal design features are included in apartment design to promote flexible housing for all community members	Subject to further consideration at the detailed design stage.
Objective 4Q-2 A variety of apartments with adaptable designs are provided	

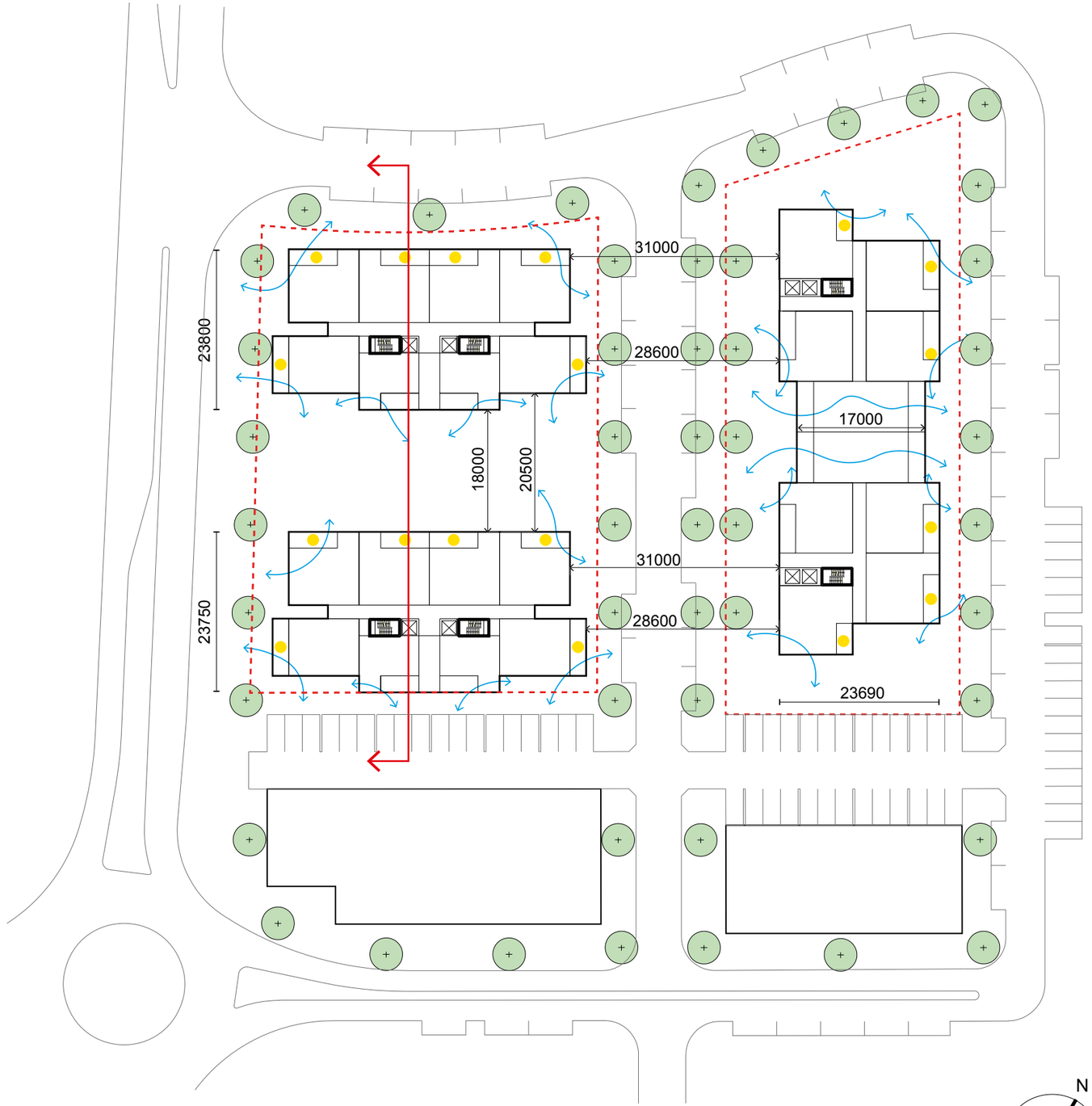
Objective	Proposed Development
Objective 4Q-3 Apartment layouts are flexible and accommodate a range of lifestyle needs	
4S Mixed Use	
Objective 4S-1 Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement	Proposed mixed use buildings are located in the town centre and adjacent to the harbour foreshore.
Objective 4S-2 Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents	Subject to further consideration at the detailed design stage.
4U Energy Efficiency	
Objective 4U-1 Development incorporates passive environmental design	Subject to further consideration at the detailed design stage.
Objective 4U-2 Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer	
Objective 4U-3 Adequate natural ventilation minimises the need for mechanical ventilation	
4V Water Management and Conservation	
Objective 4V-1 Potable water use is minimised	Subject to further consideration at the detailed design stage.
Objective 4V-2 Urban storm water is treated on site before being discharged to receiving waters	
Objective 4V-3 Flood management systems are integrated into site design	

Objective	Proposed Development
4W Waste Management	
Objective 4W-1 Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	Subject to further consideration at the detailed design stage.
Objective 4W-2 Domestic waste is minimised by providing safe and convenient source separation and recycling	
4X Building Maintenance	
Objective 4X-1 Building design detail provides protection from weathering	Subject to further consideration at the detailed design stage.
Objective 4X-2 Systems and access enable ease of maintenance	
Objective 4X-3 Material selection reduces ongoing maintenance costs	

Indicative ADG Compliance Diagrams

Precinct D

Plan - Typical Level



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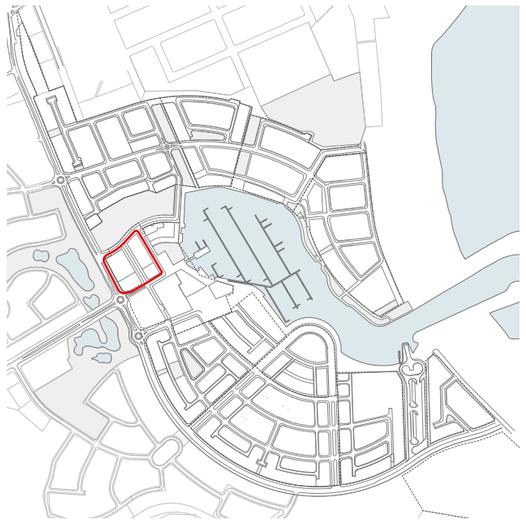

KEY

- Potential solar access
- Potential cross ventilation

Indicative plan only. Subject to design development and individual DA.

Precinct D

Section

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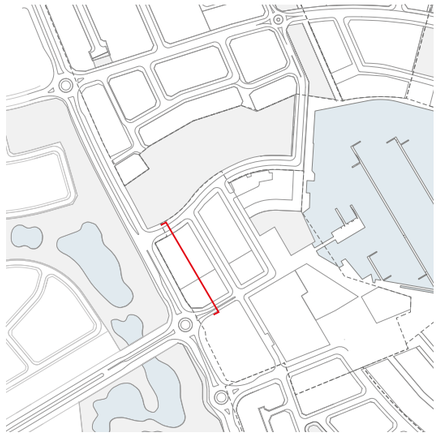

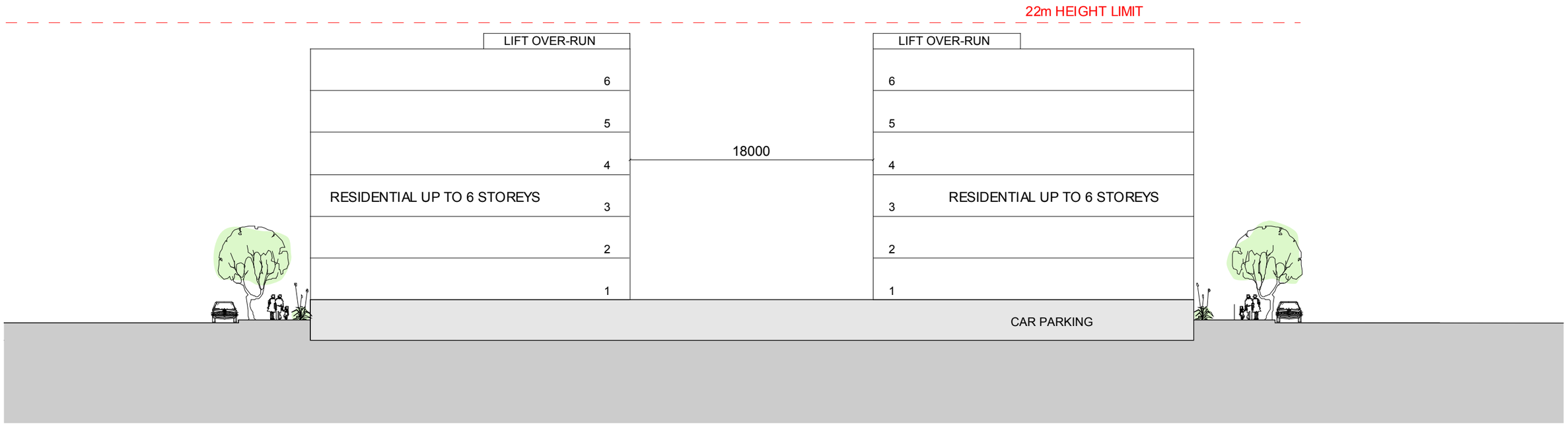

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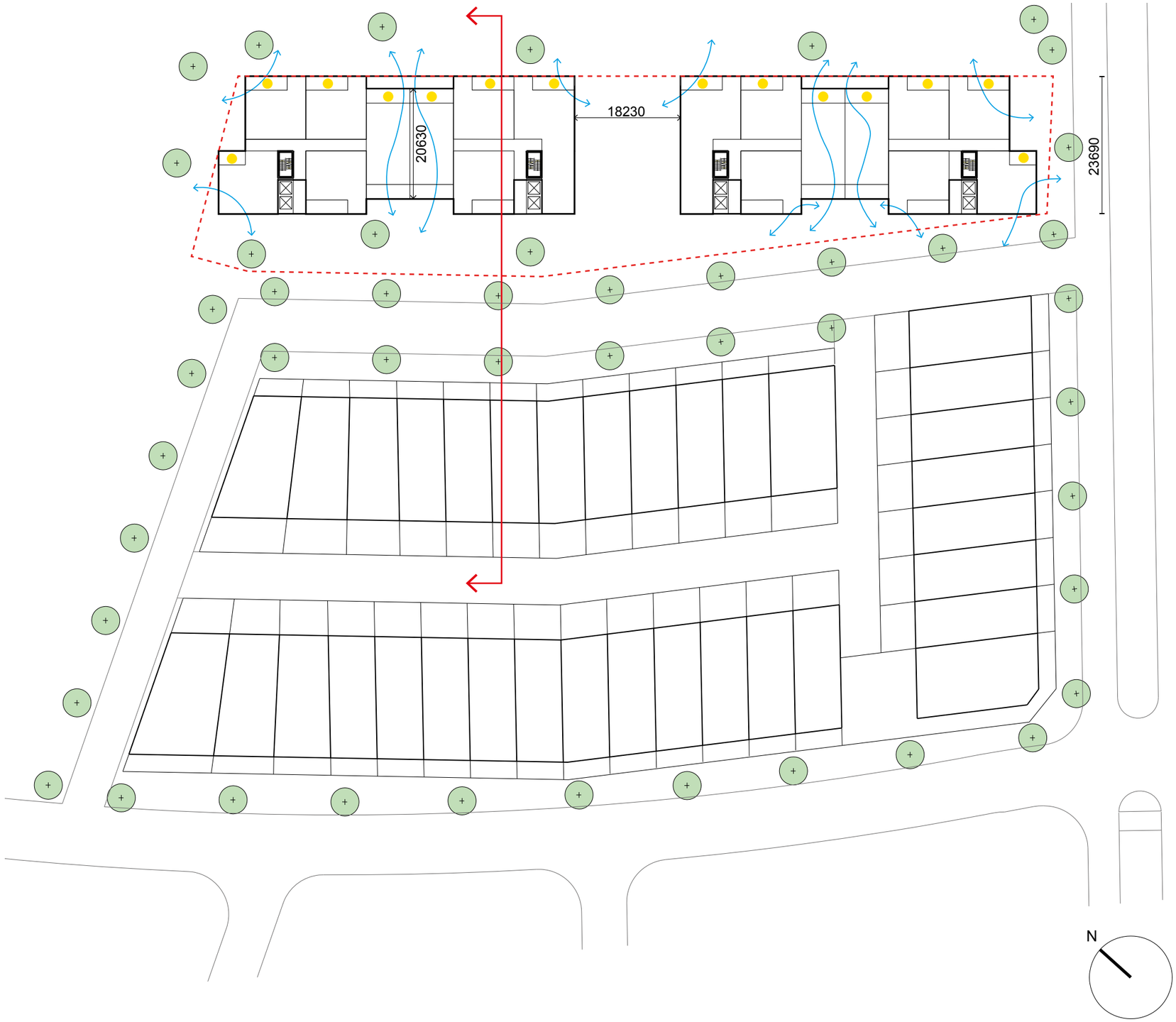
Precinct C2

Plan - Typical Level



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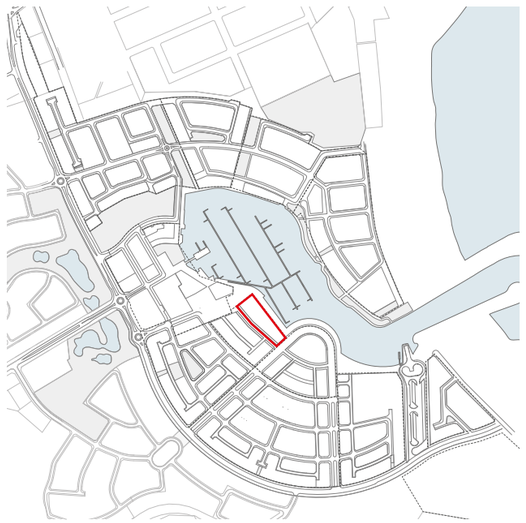

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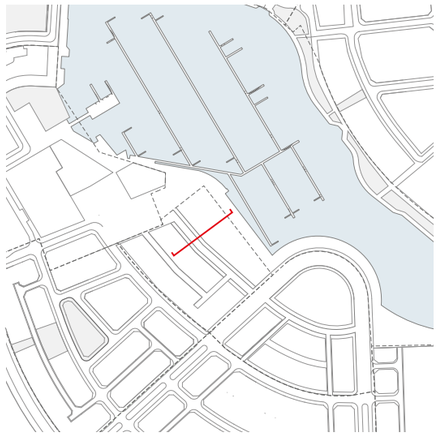

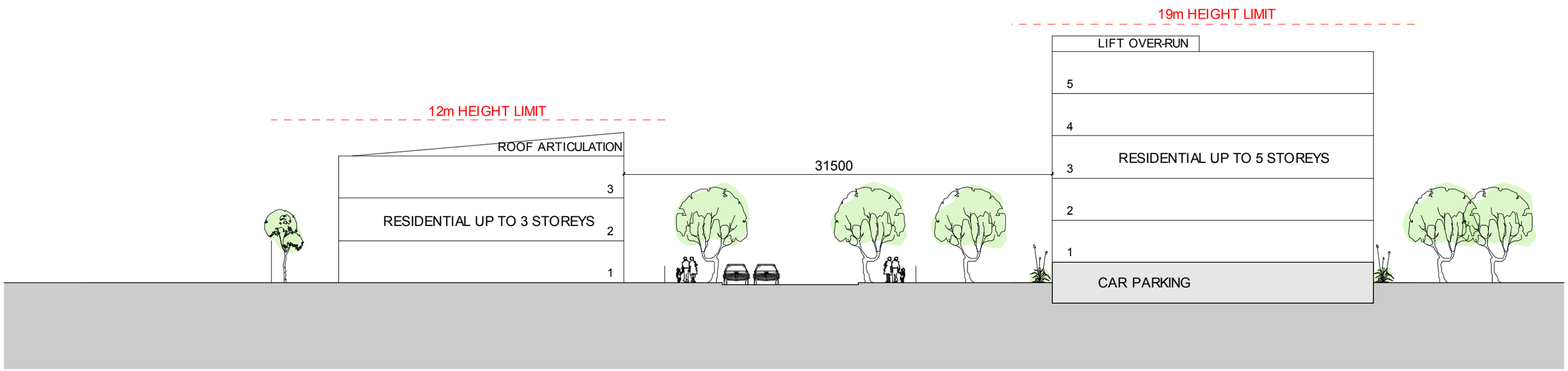

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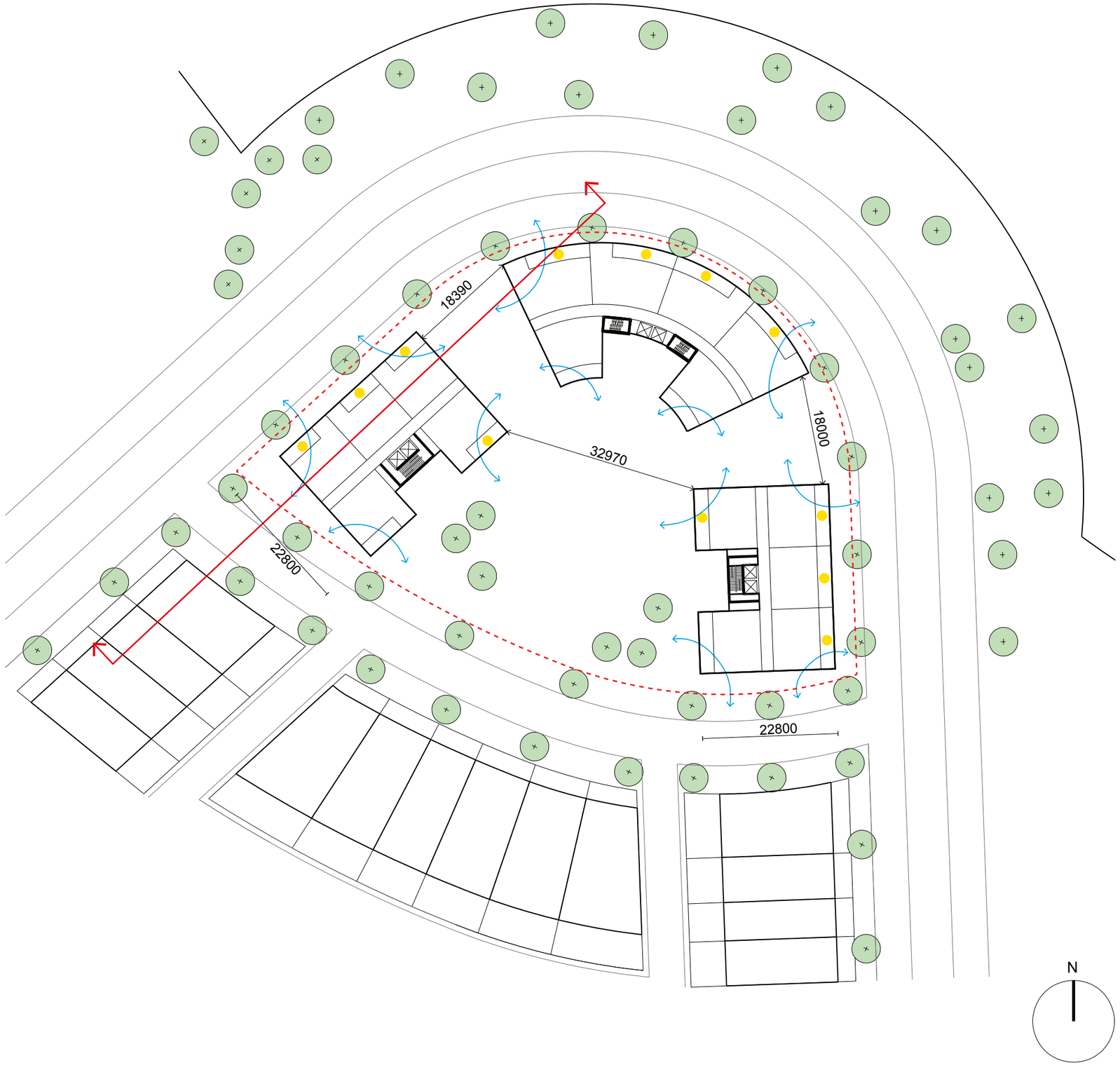
Precinct B2

Plan - Typical Level



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- Potential cross ventilation

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Precinct B2

Section

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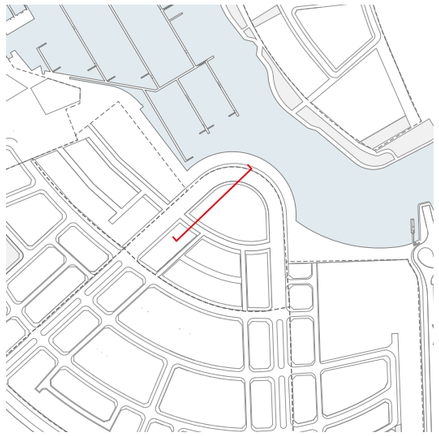

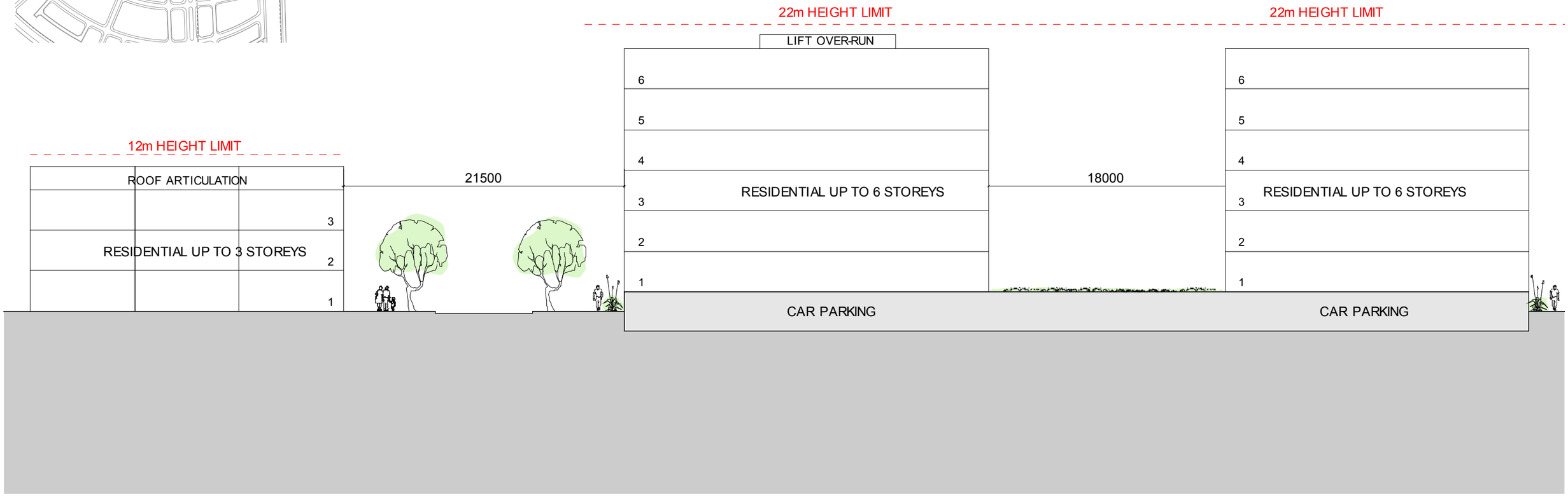

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Precinct E

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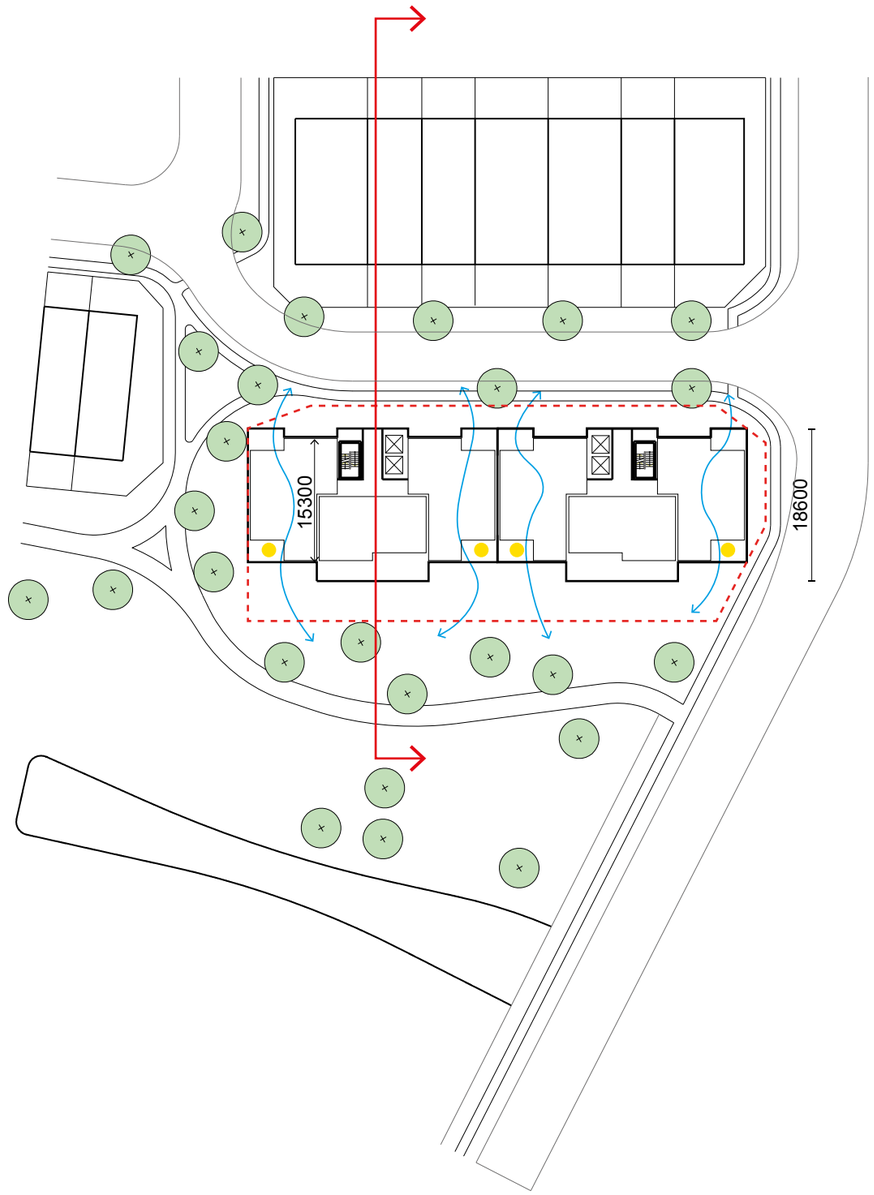

KEY PLAN

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- Potential cross ventilation

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Precinct E

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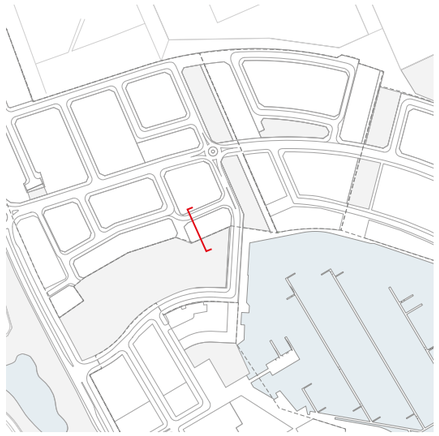

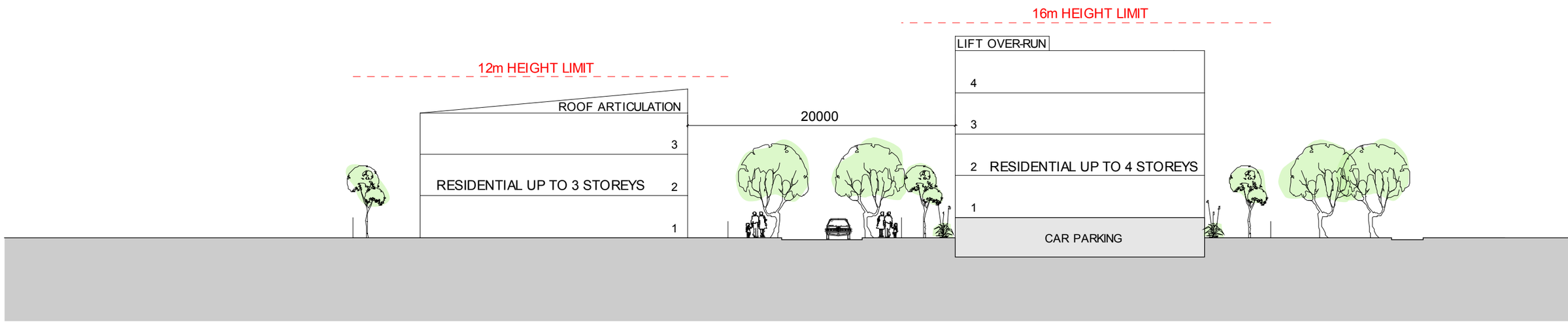

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