582 Heidelberg Road

Town Planning Submission - Issue A

20/12/2017

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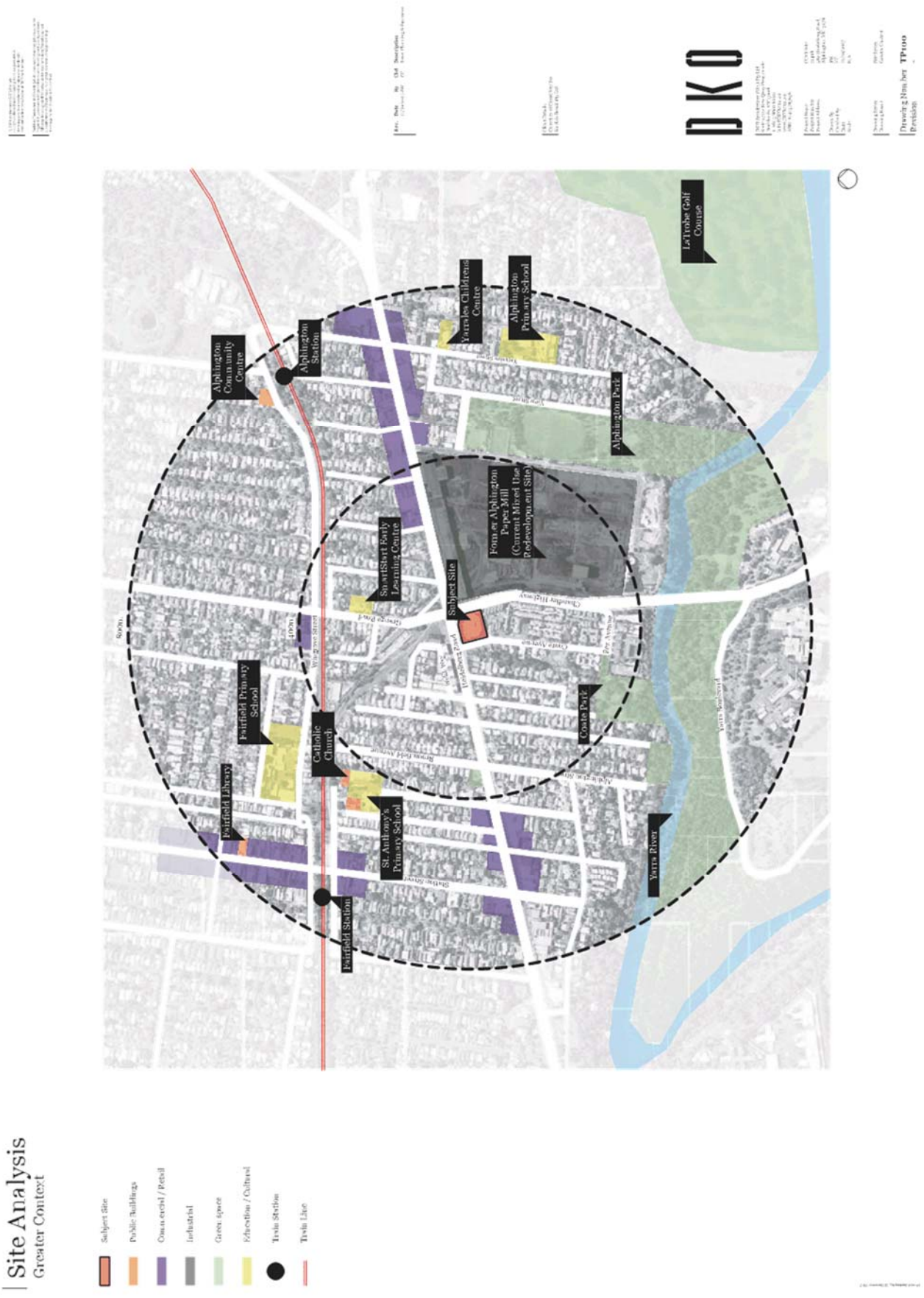
DKO

Drawing Number TP000

Revision A

Attachment 1 - Decision Plans



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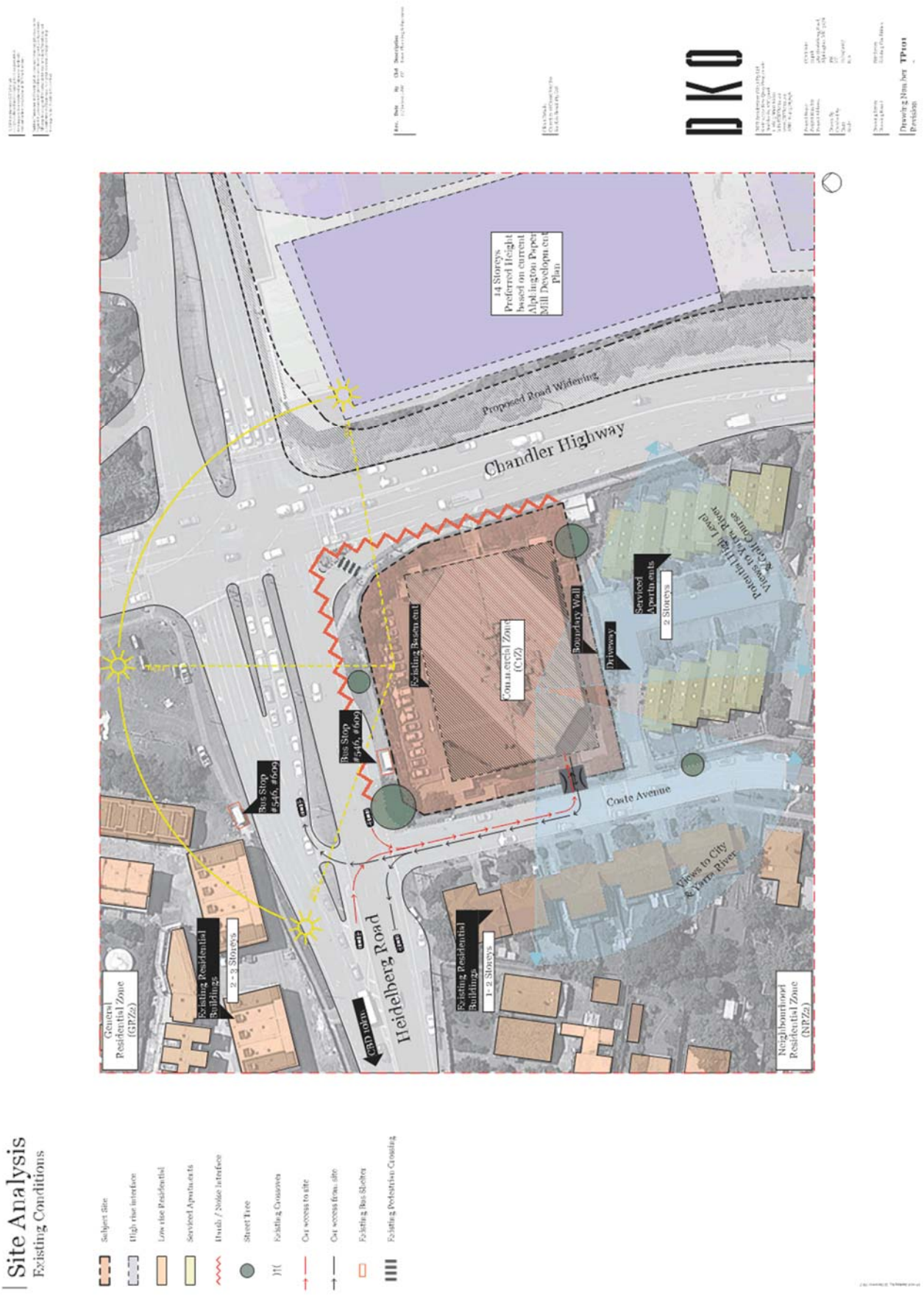

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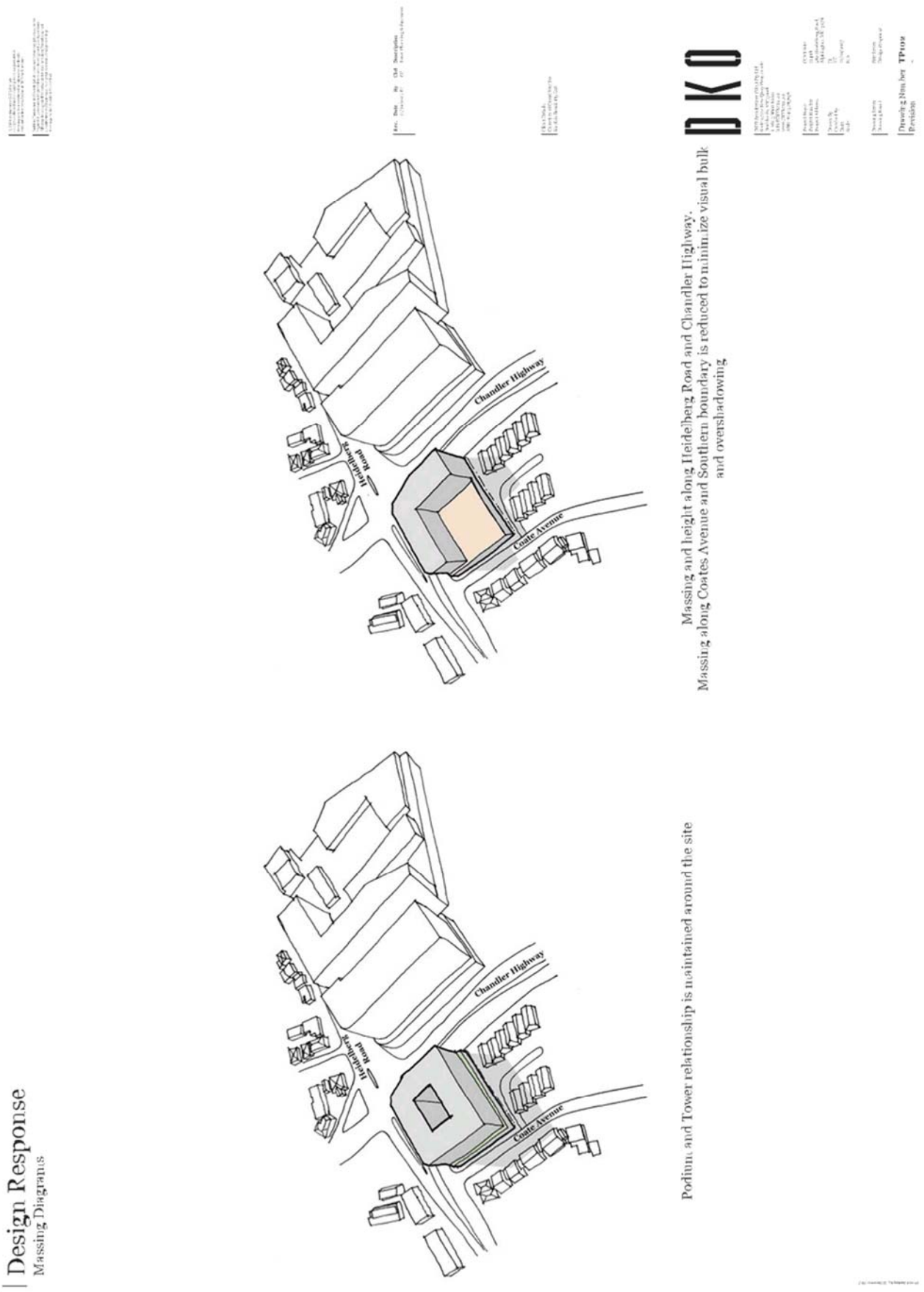

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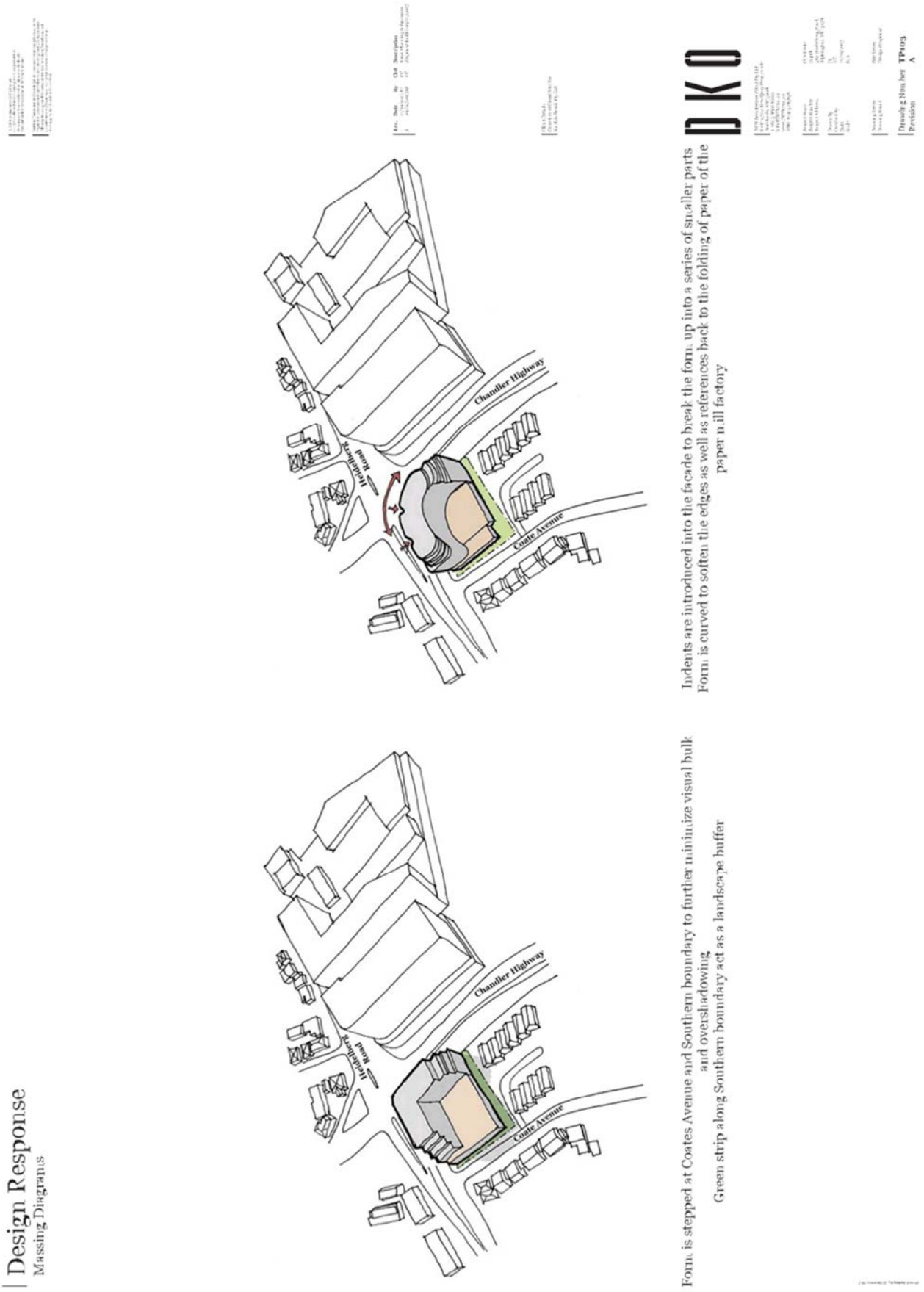

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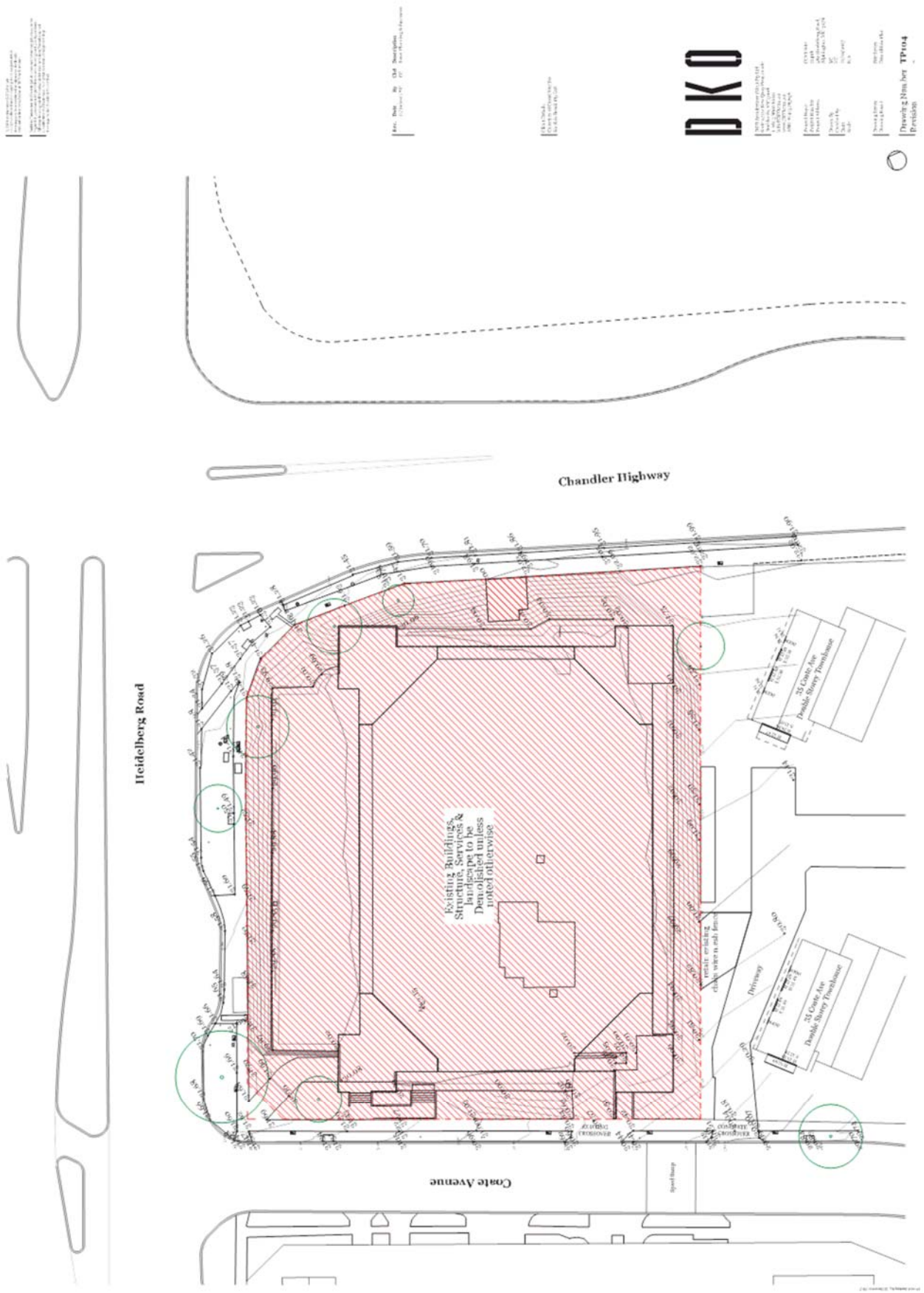

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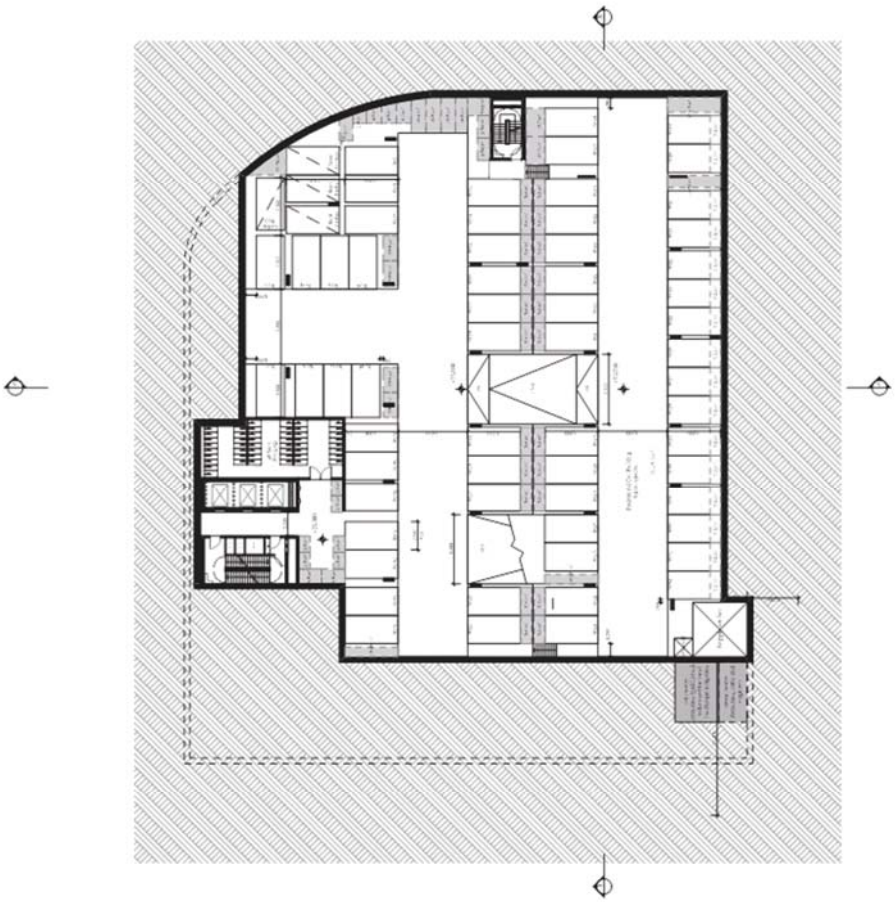

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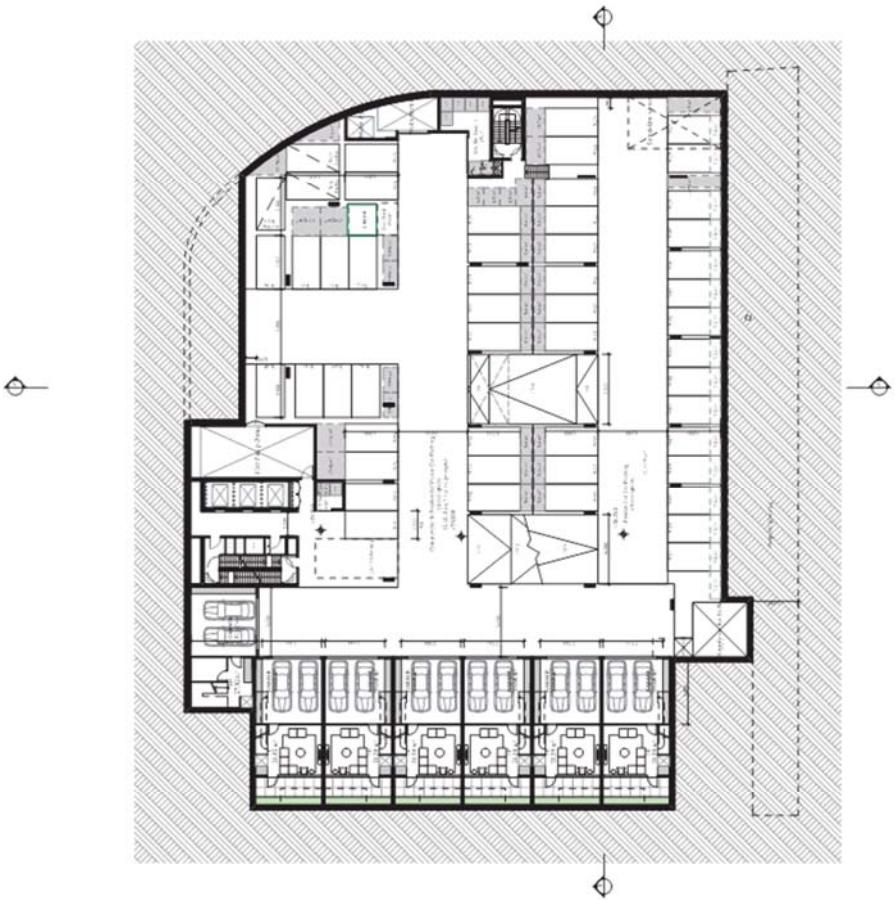

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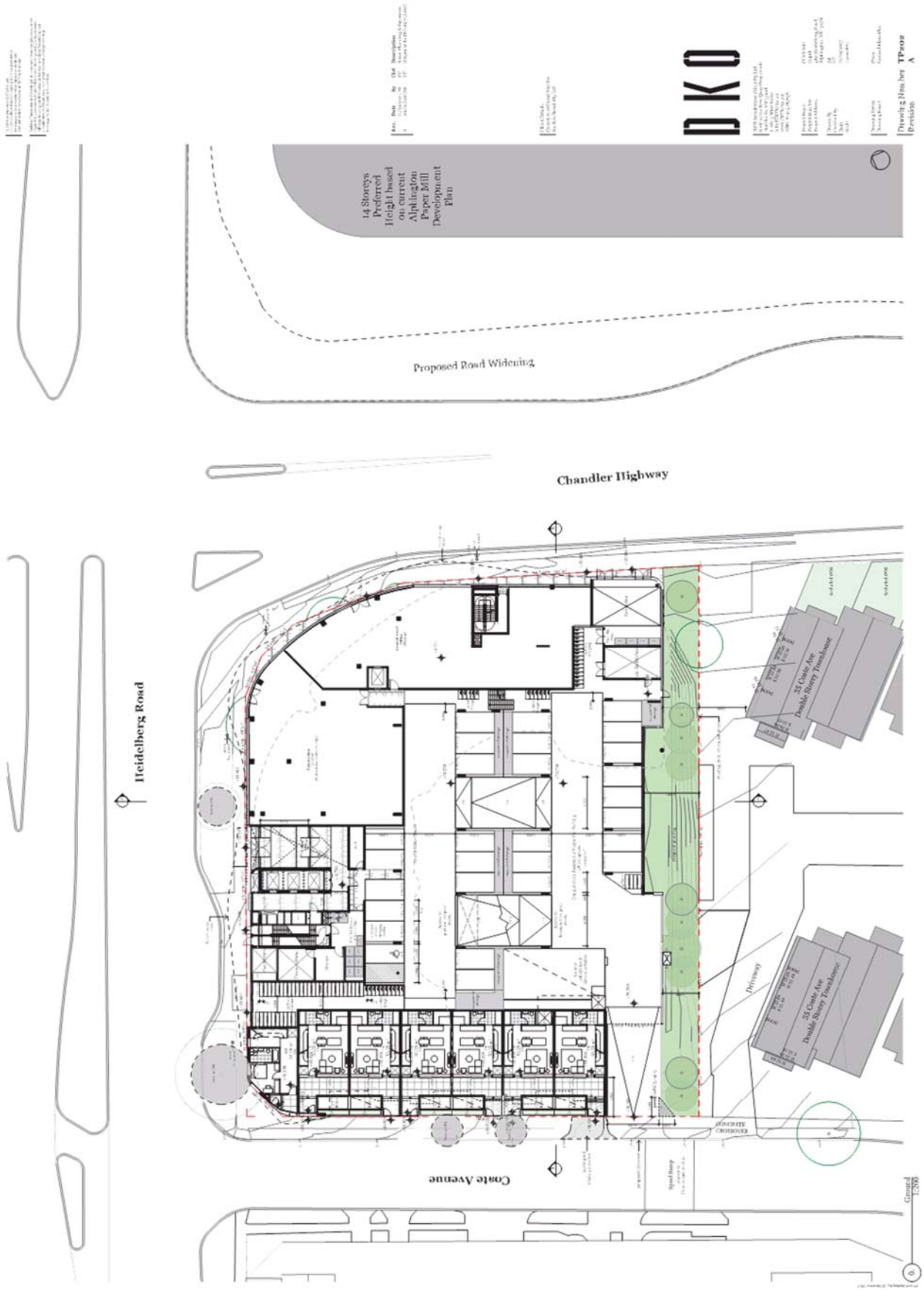

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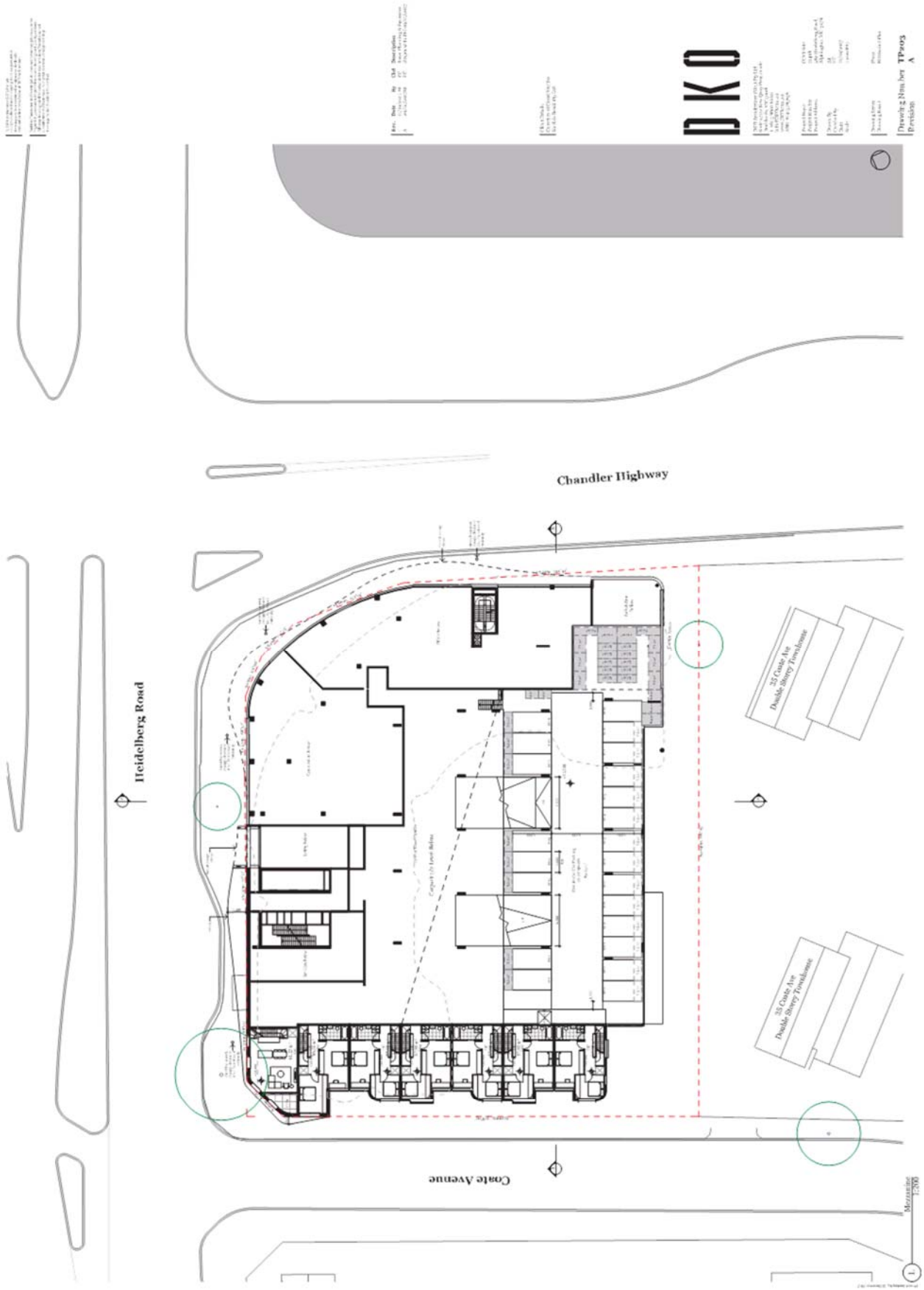

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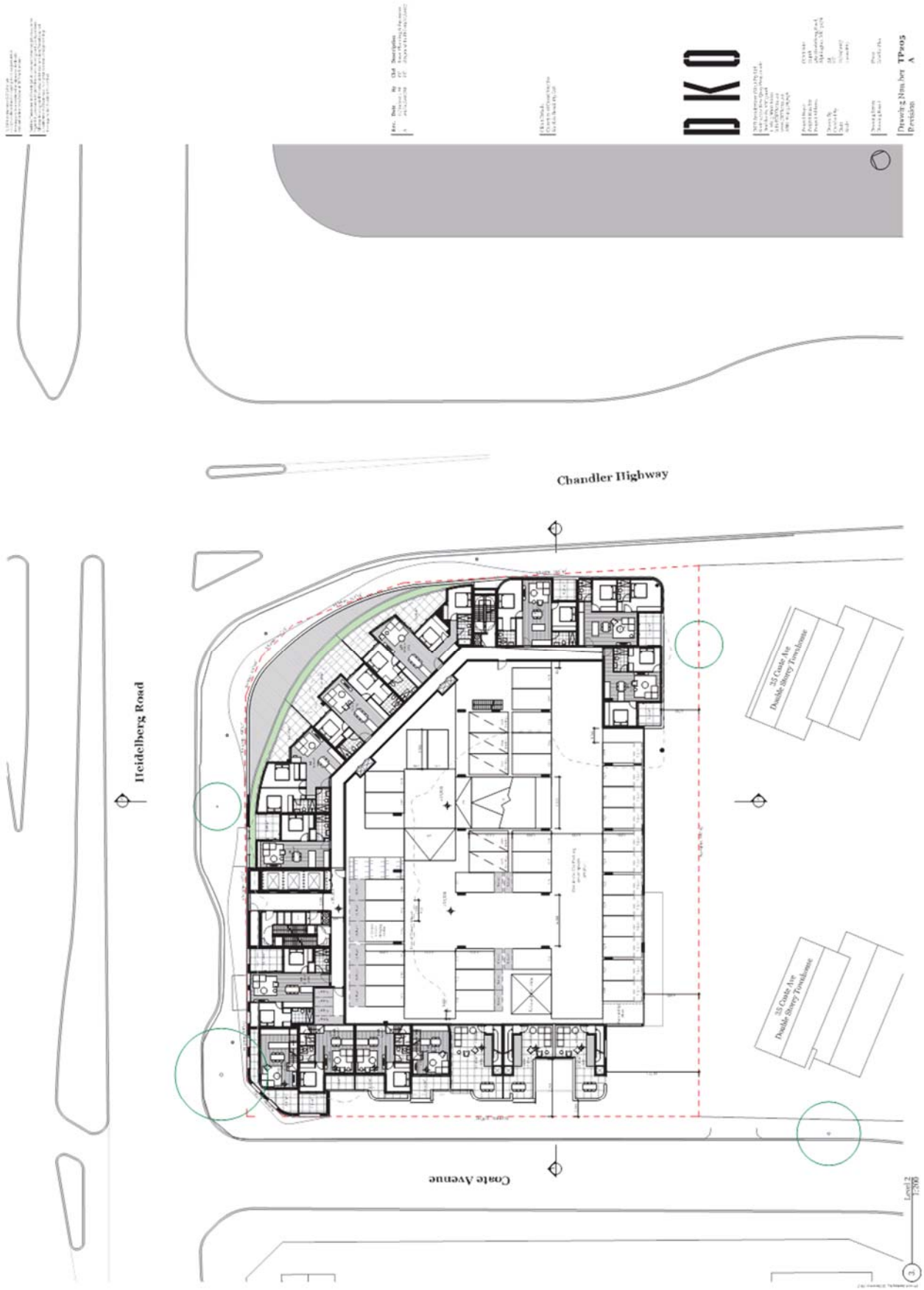

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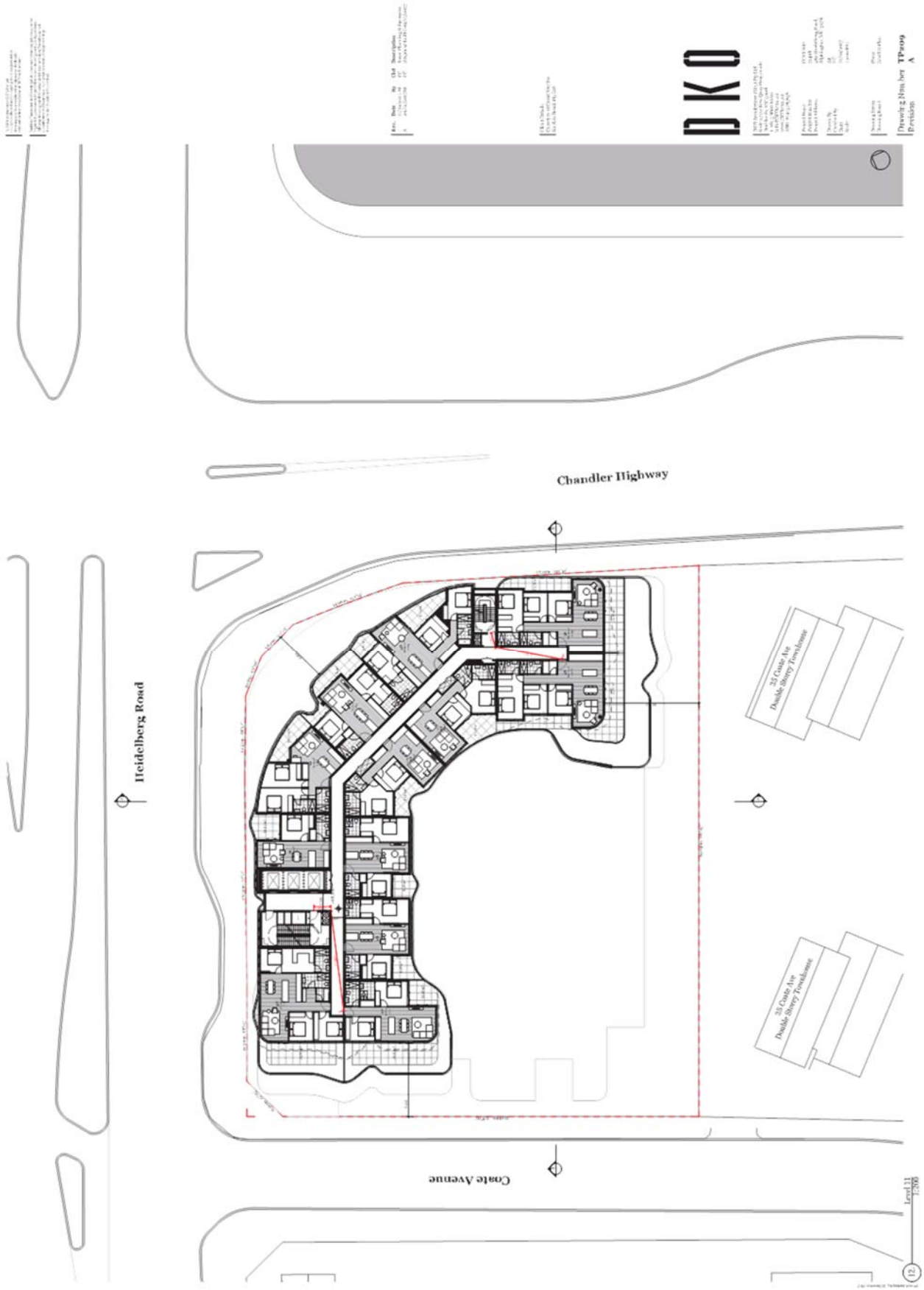

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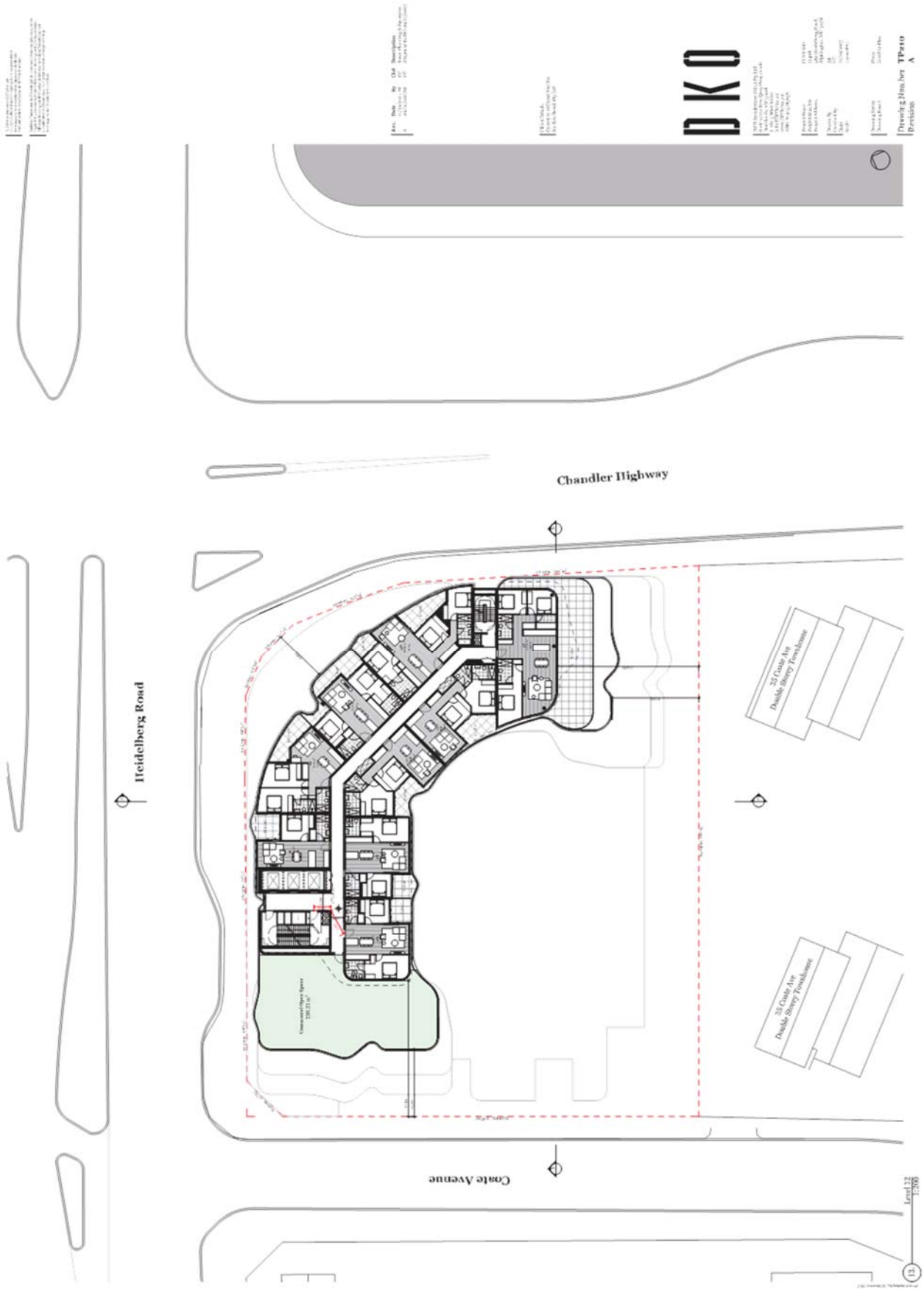

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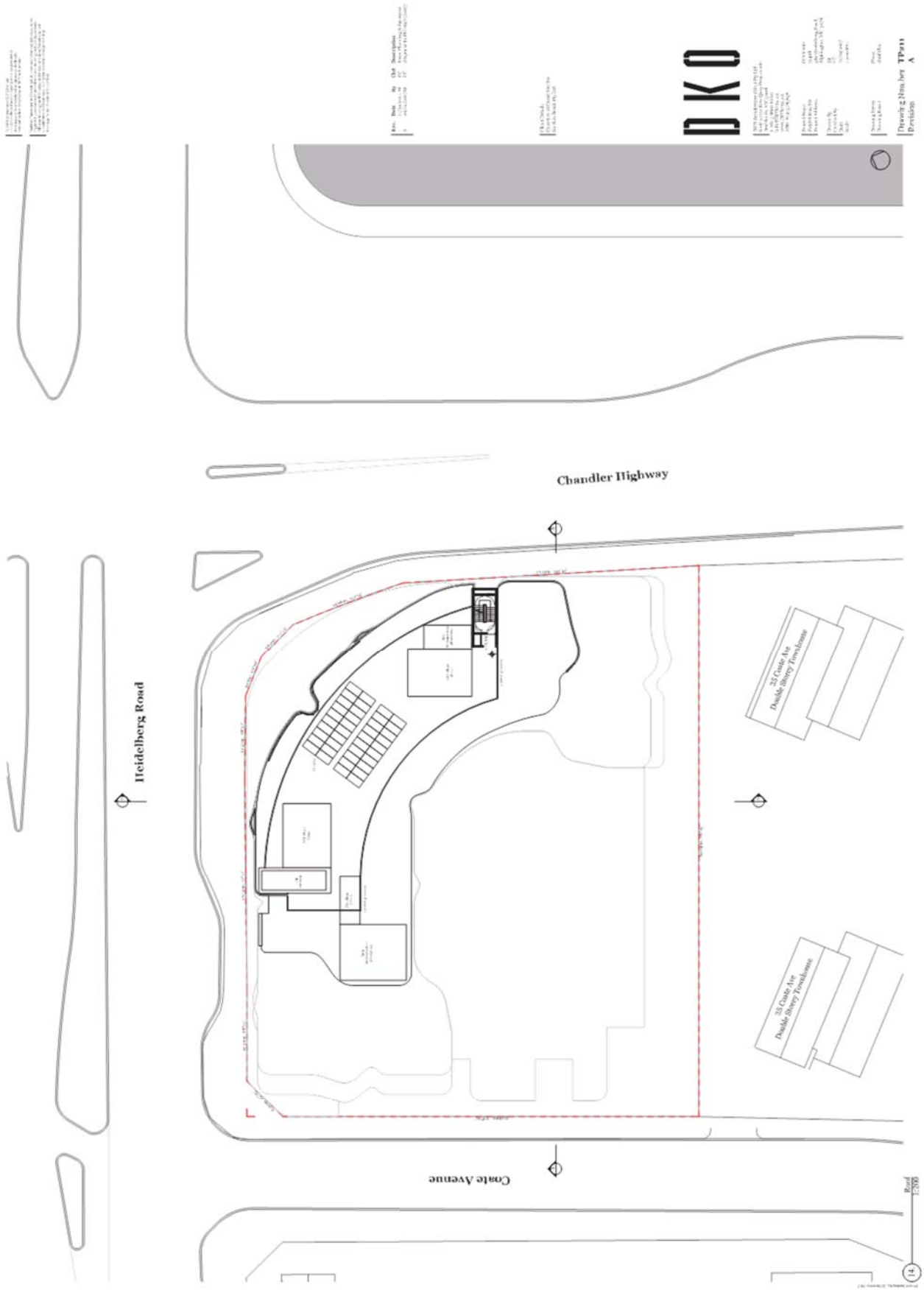

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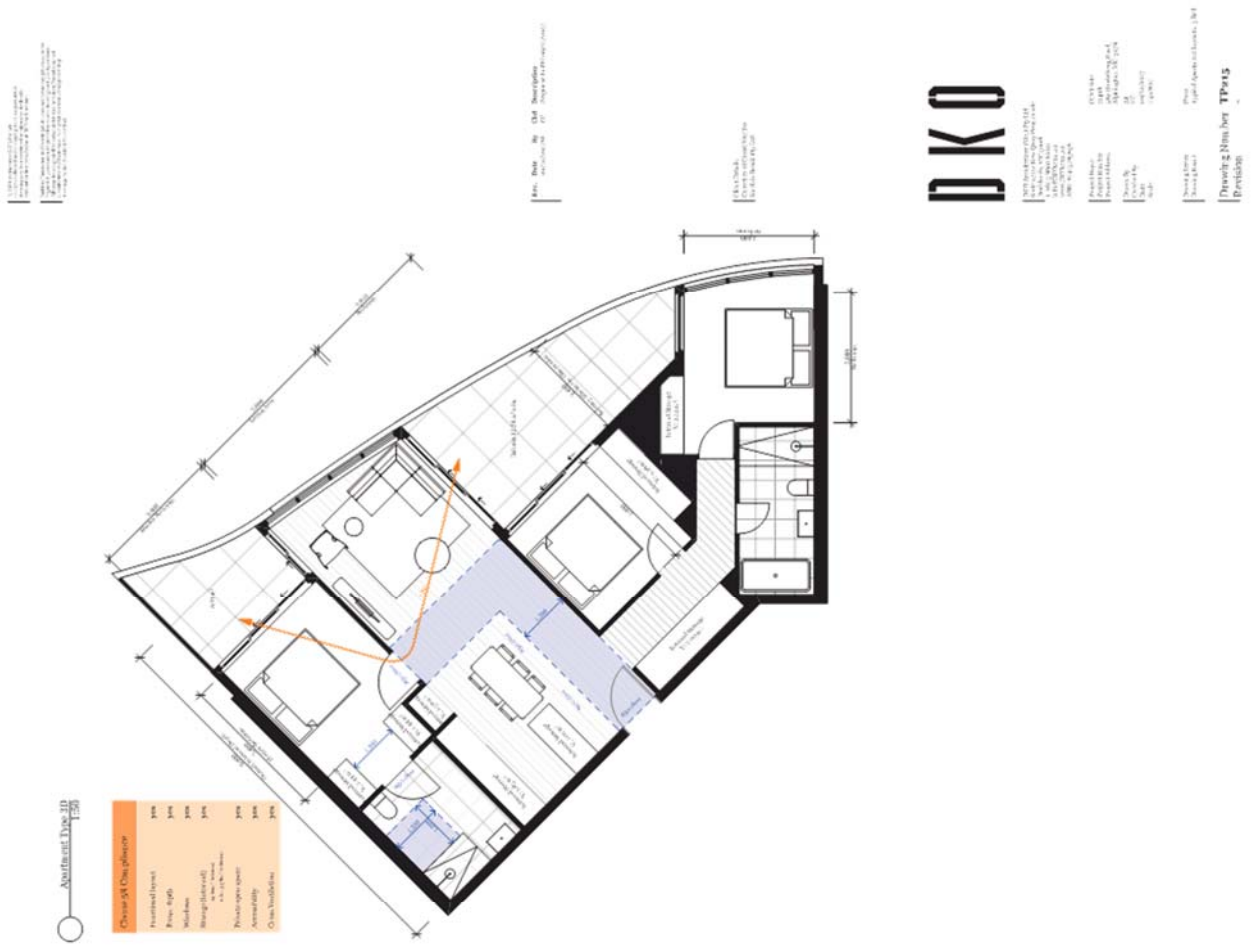

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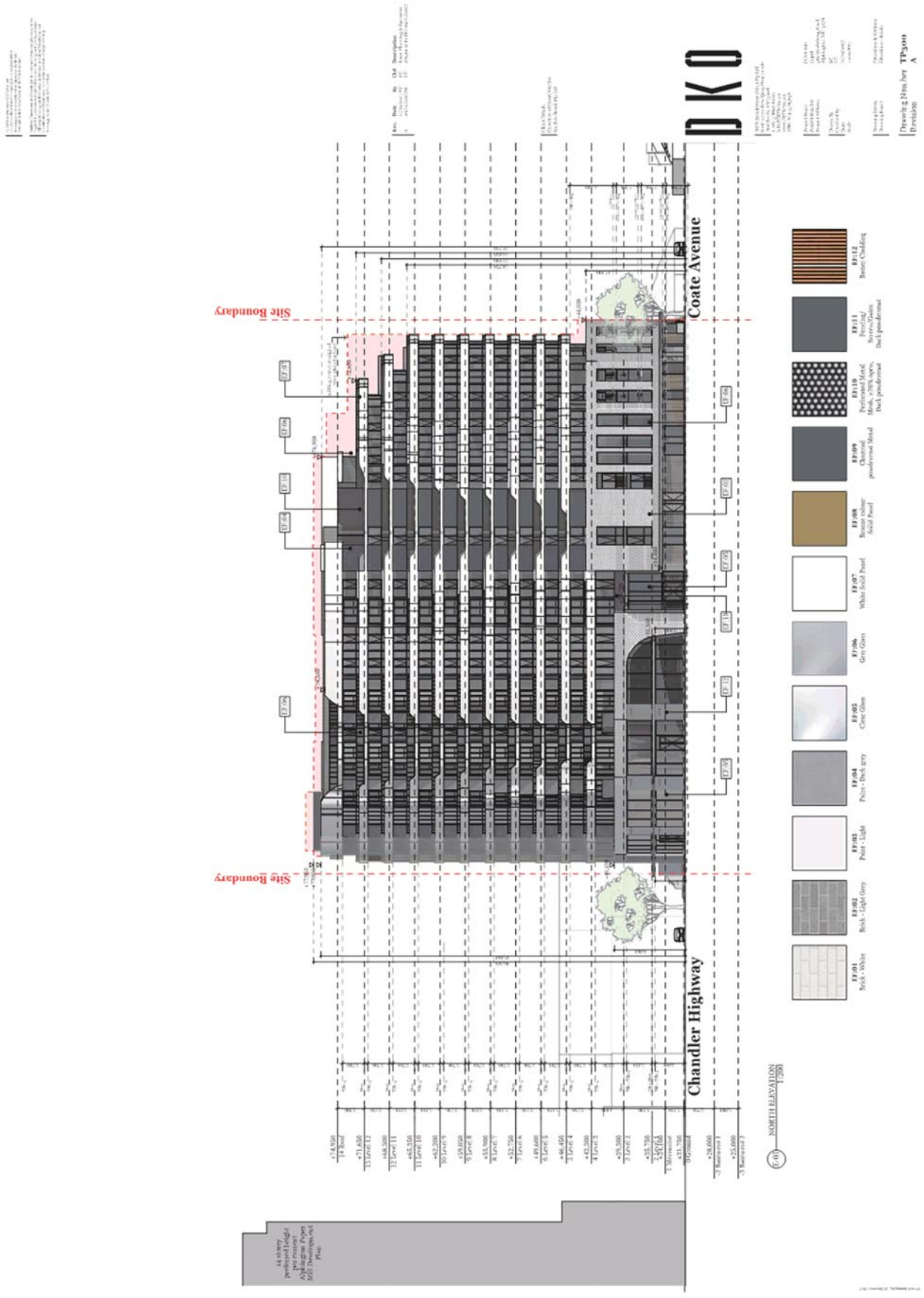

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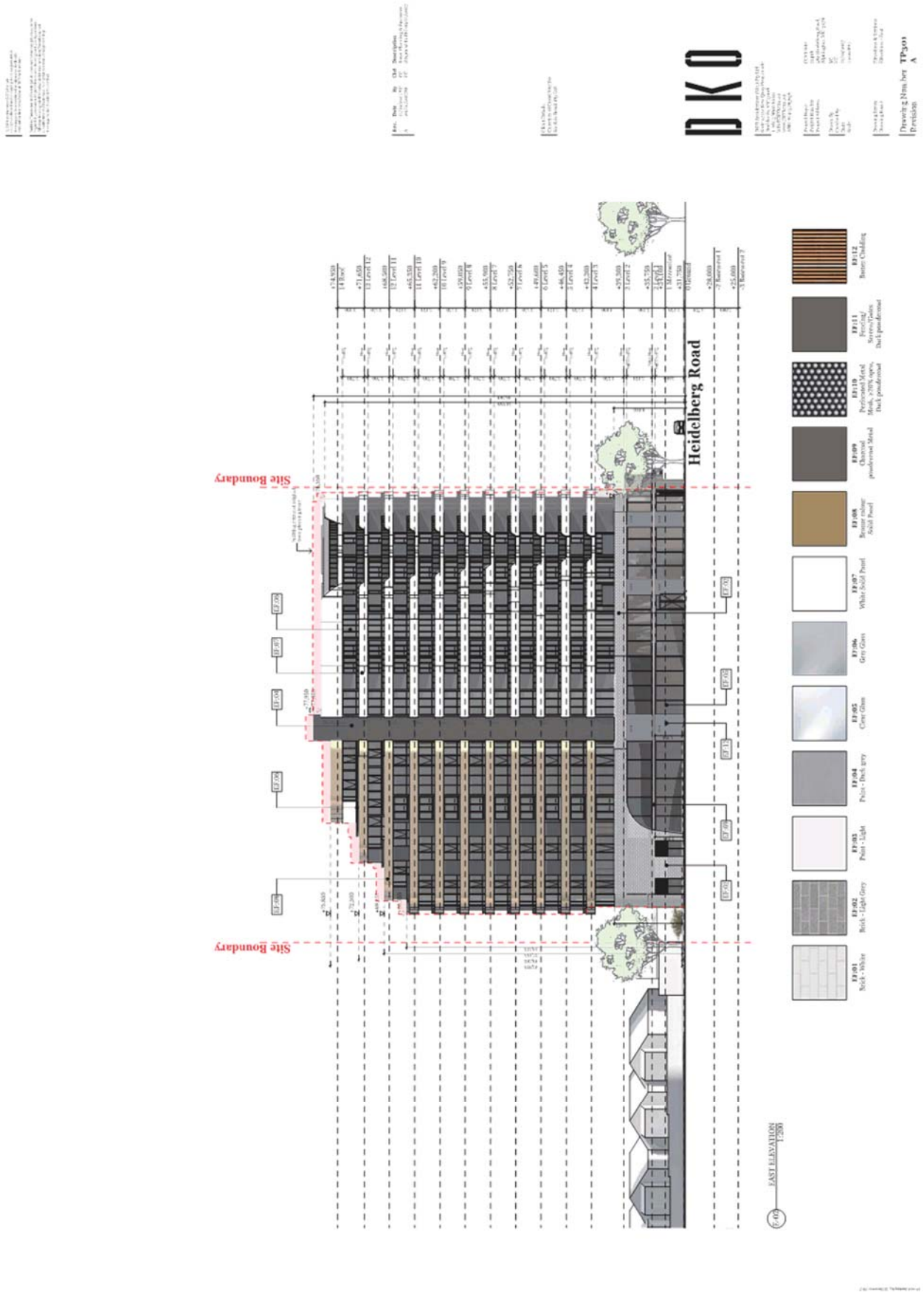

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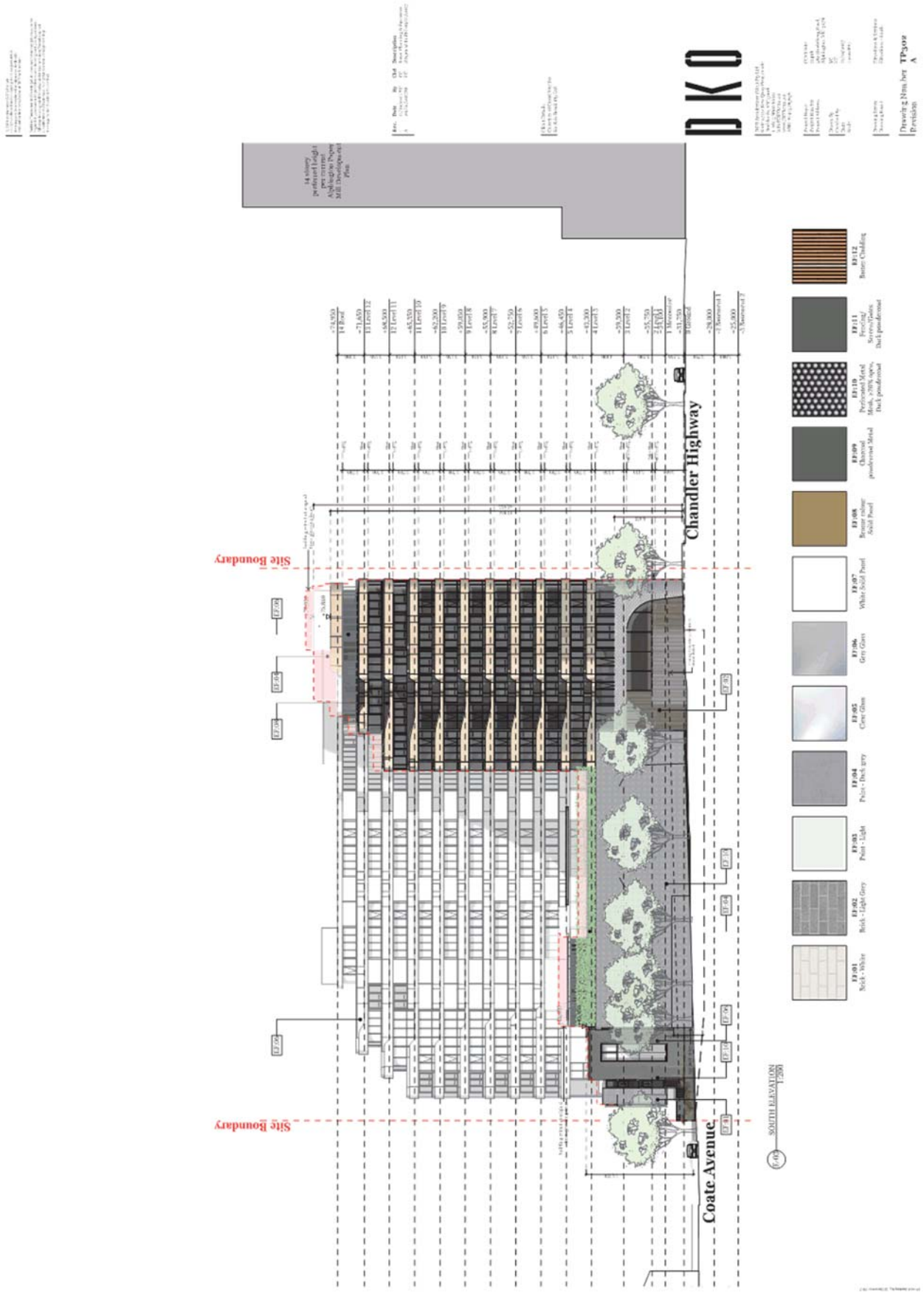

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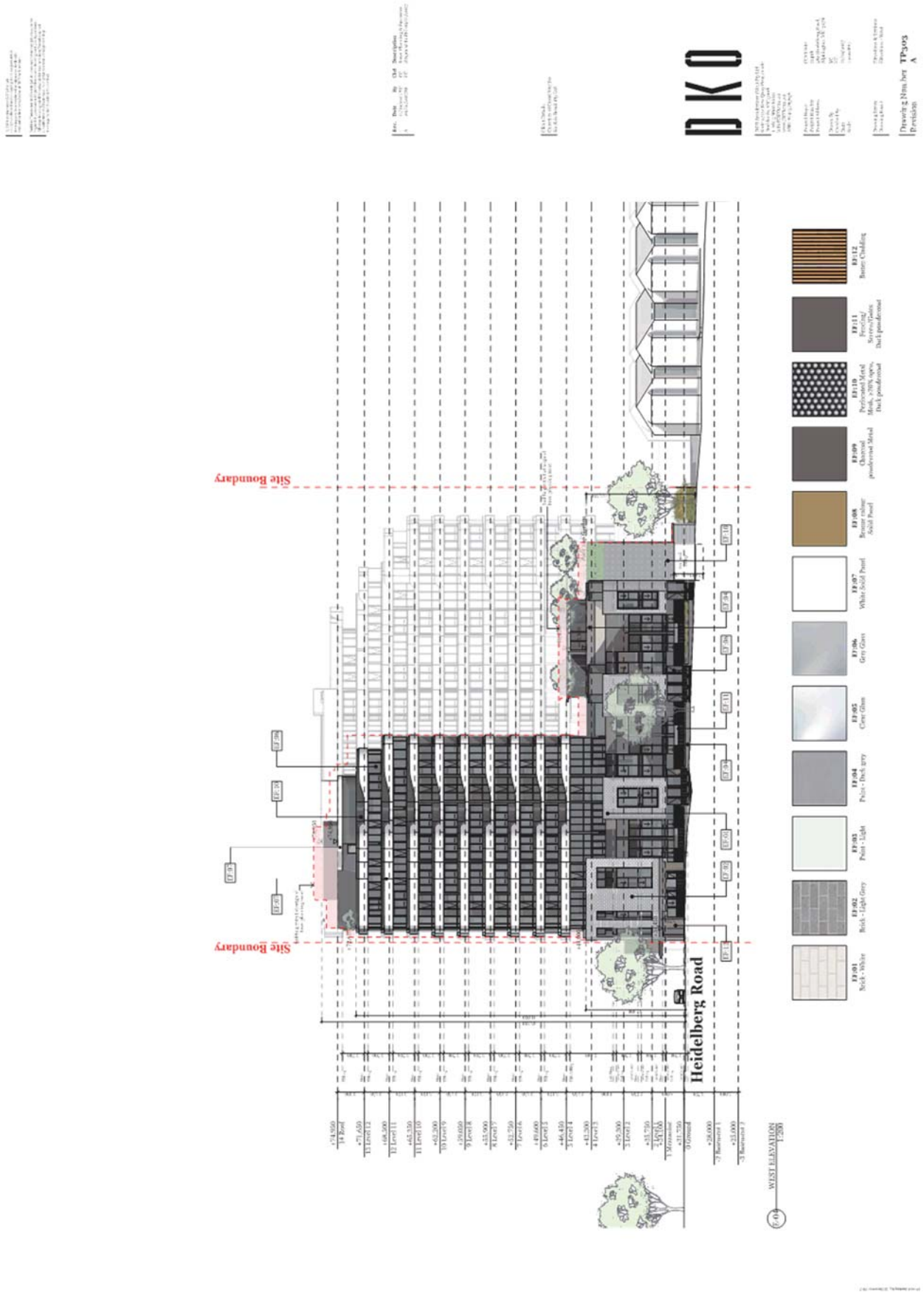

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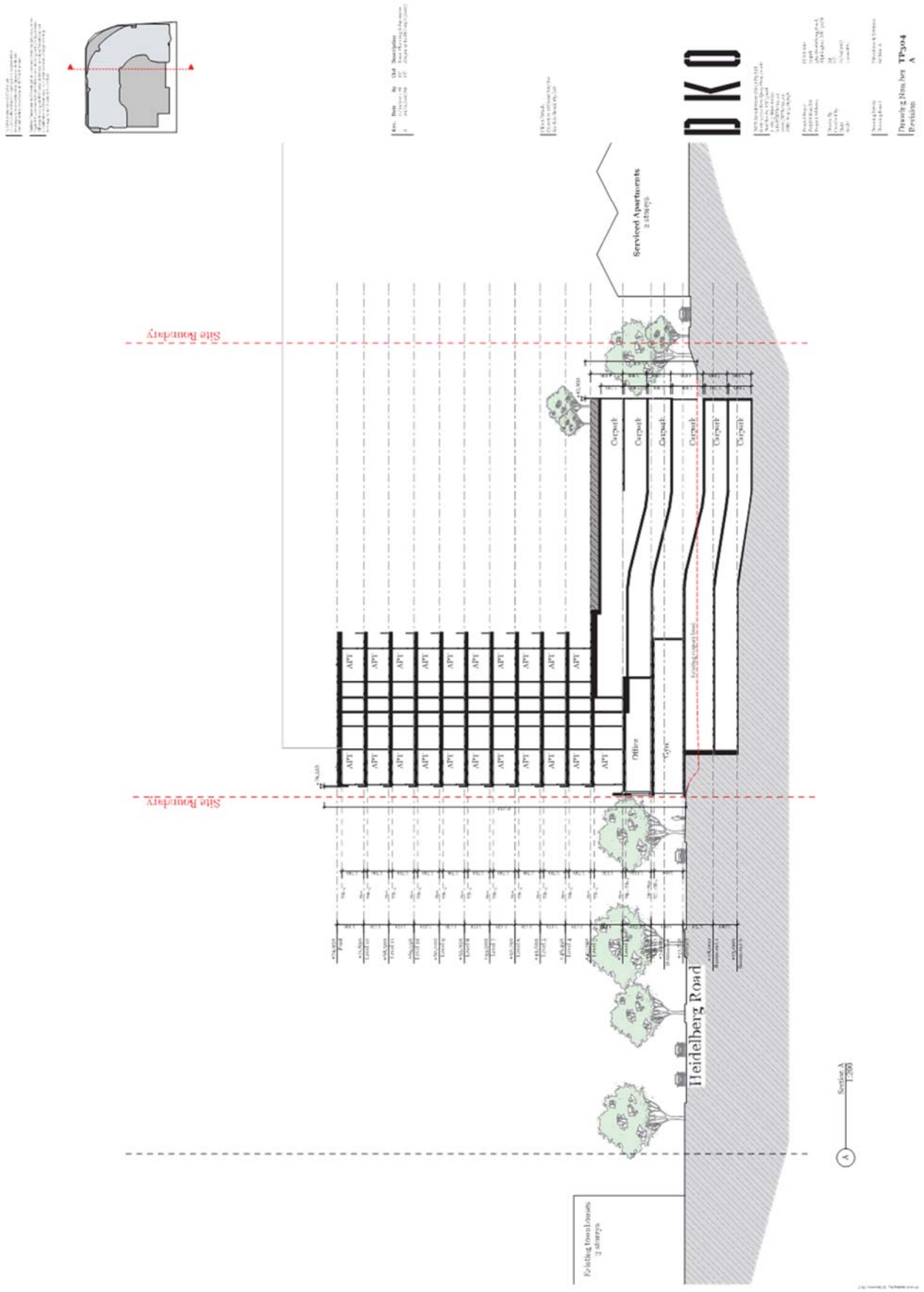

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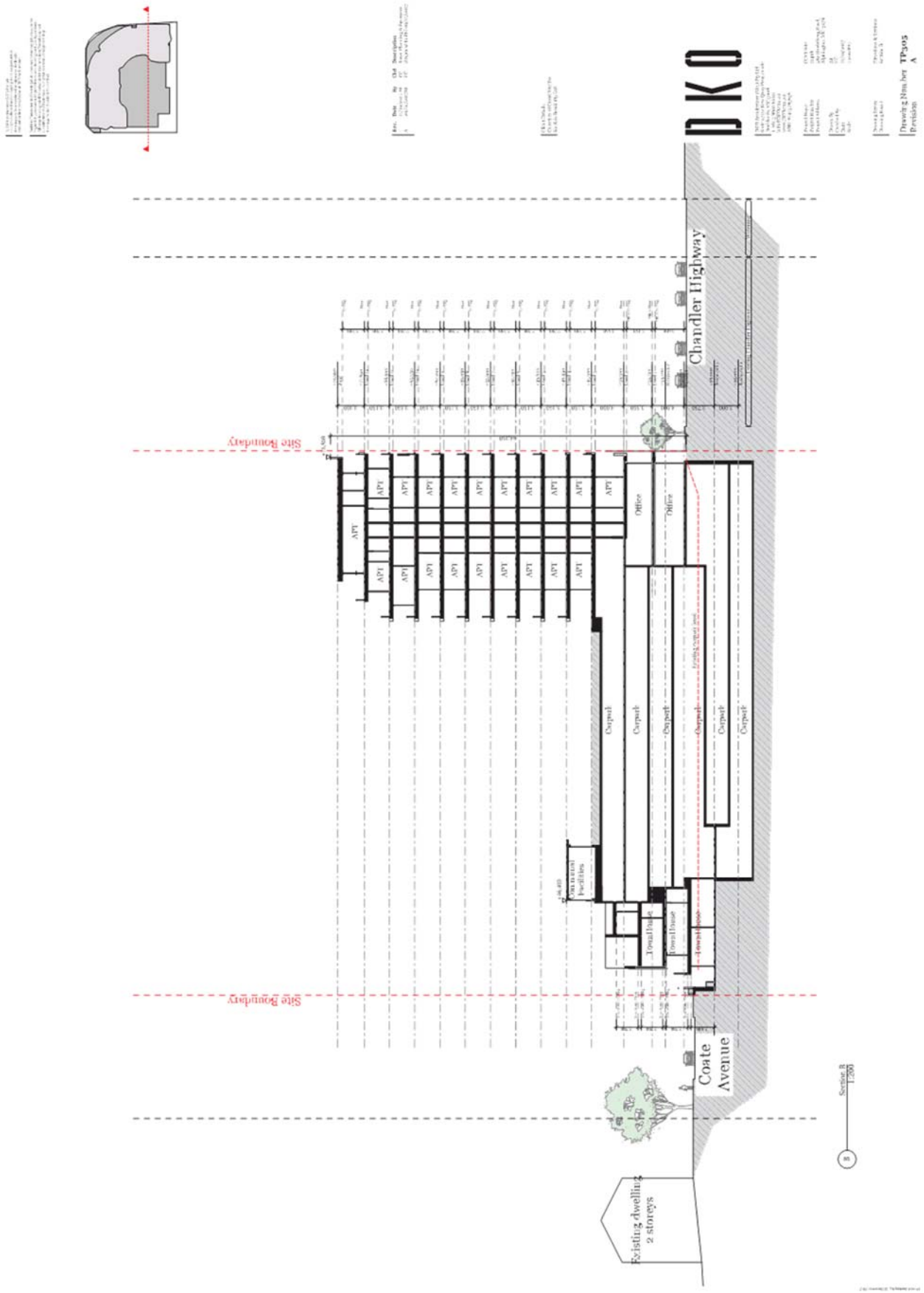

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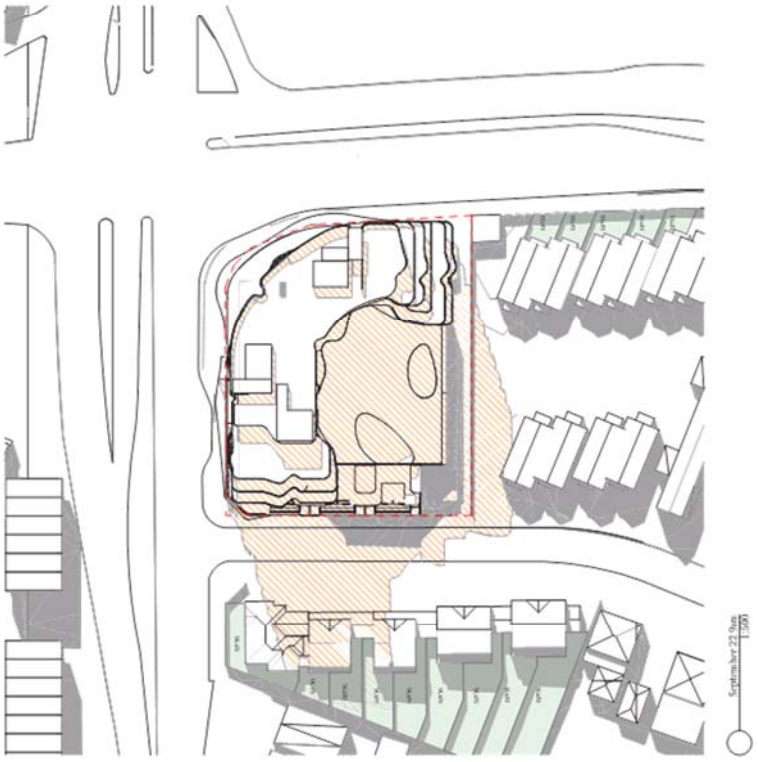

Proposed Shadows

Existing Shadows

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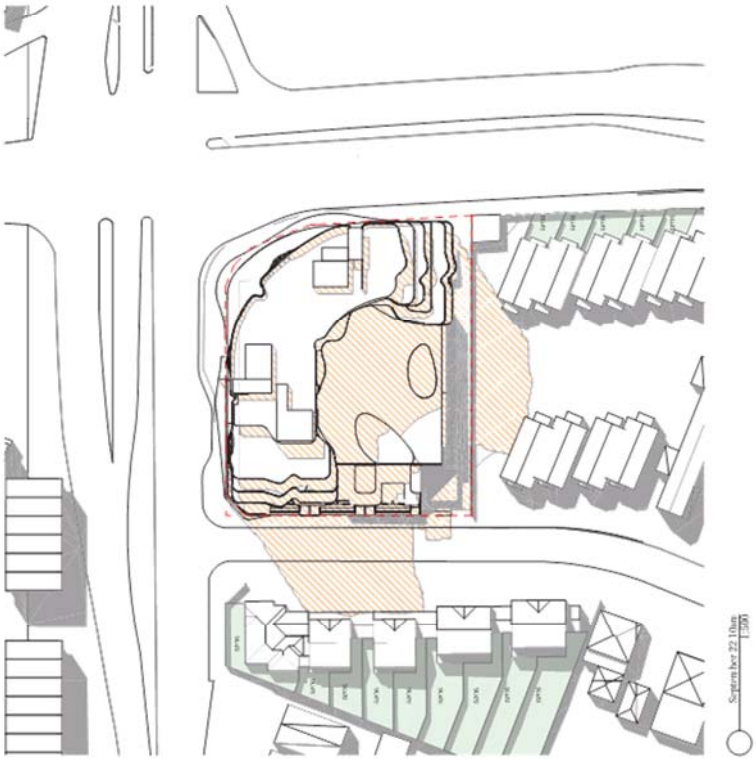

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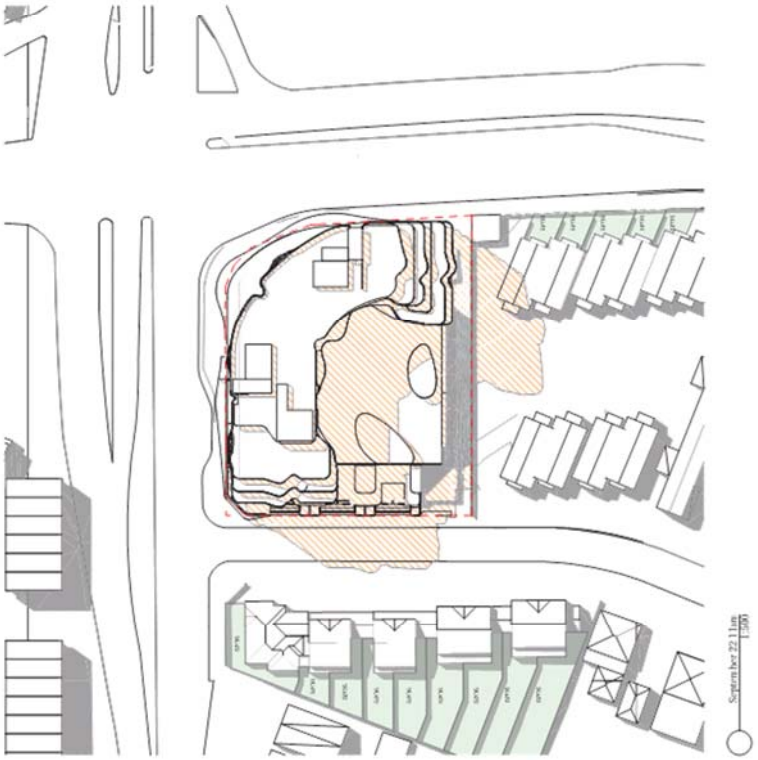

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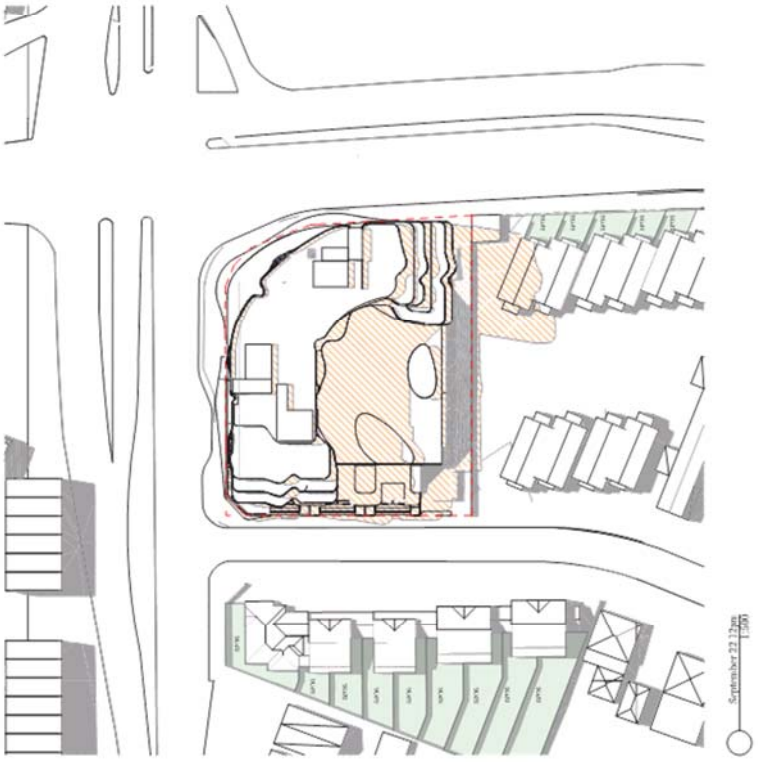

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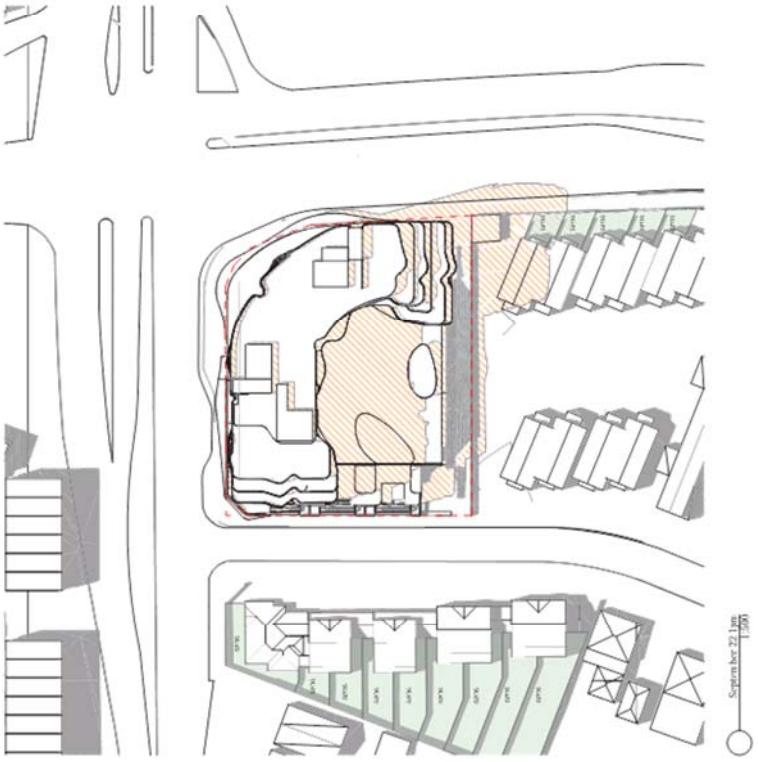

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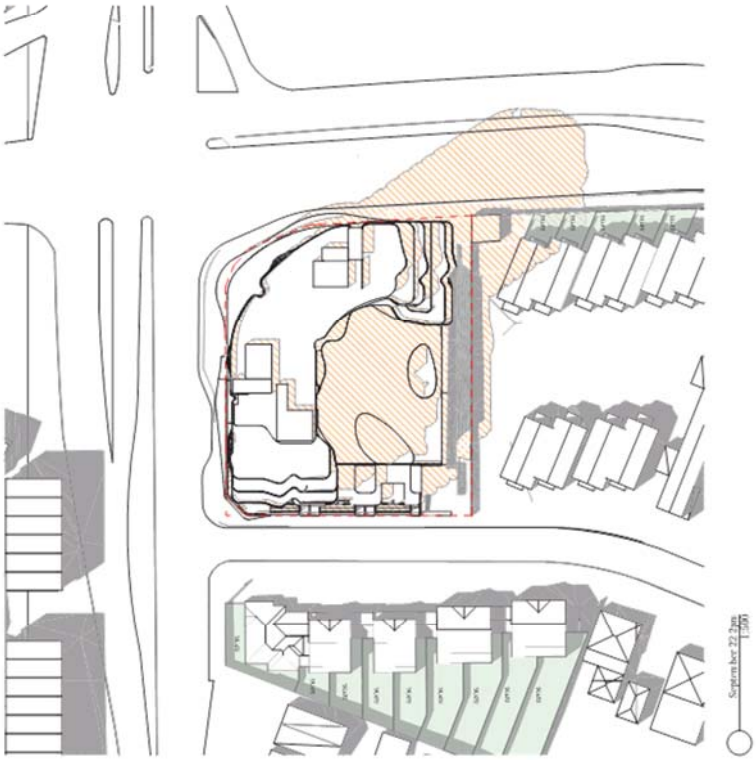

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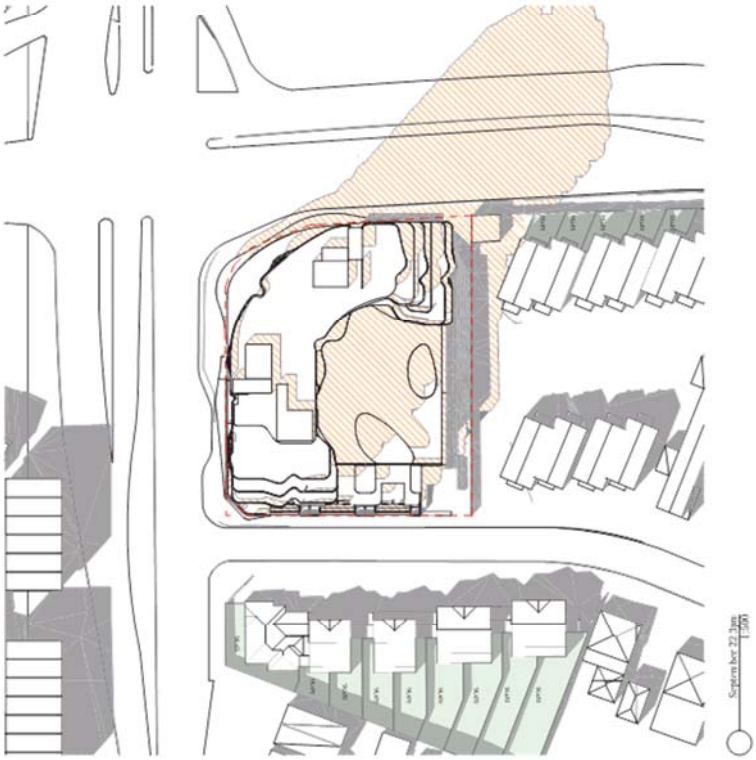

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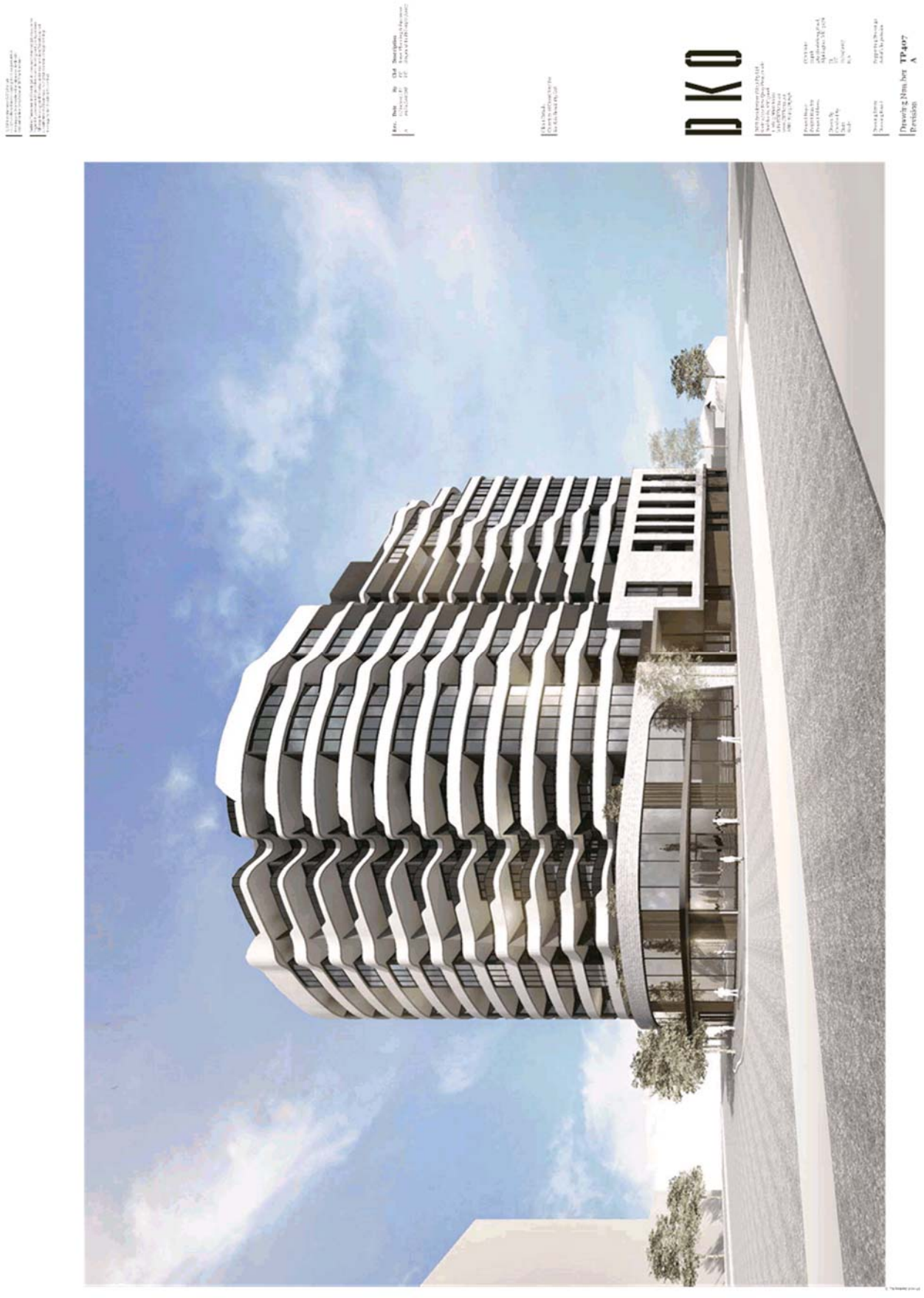

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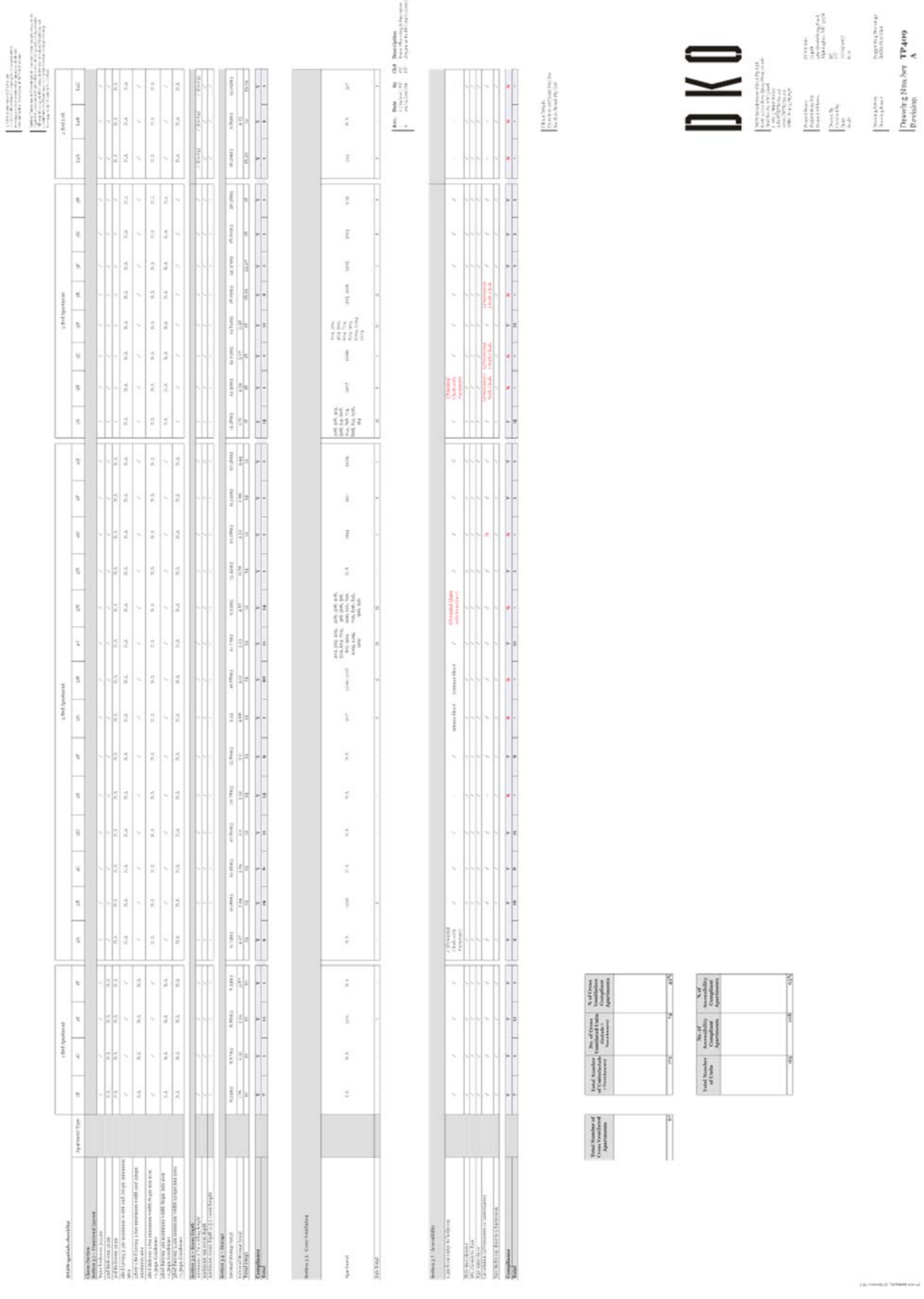

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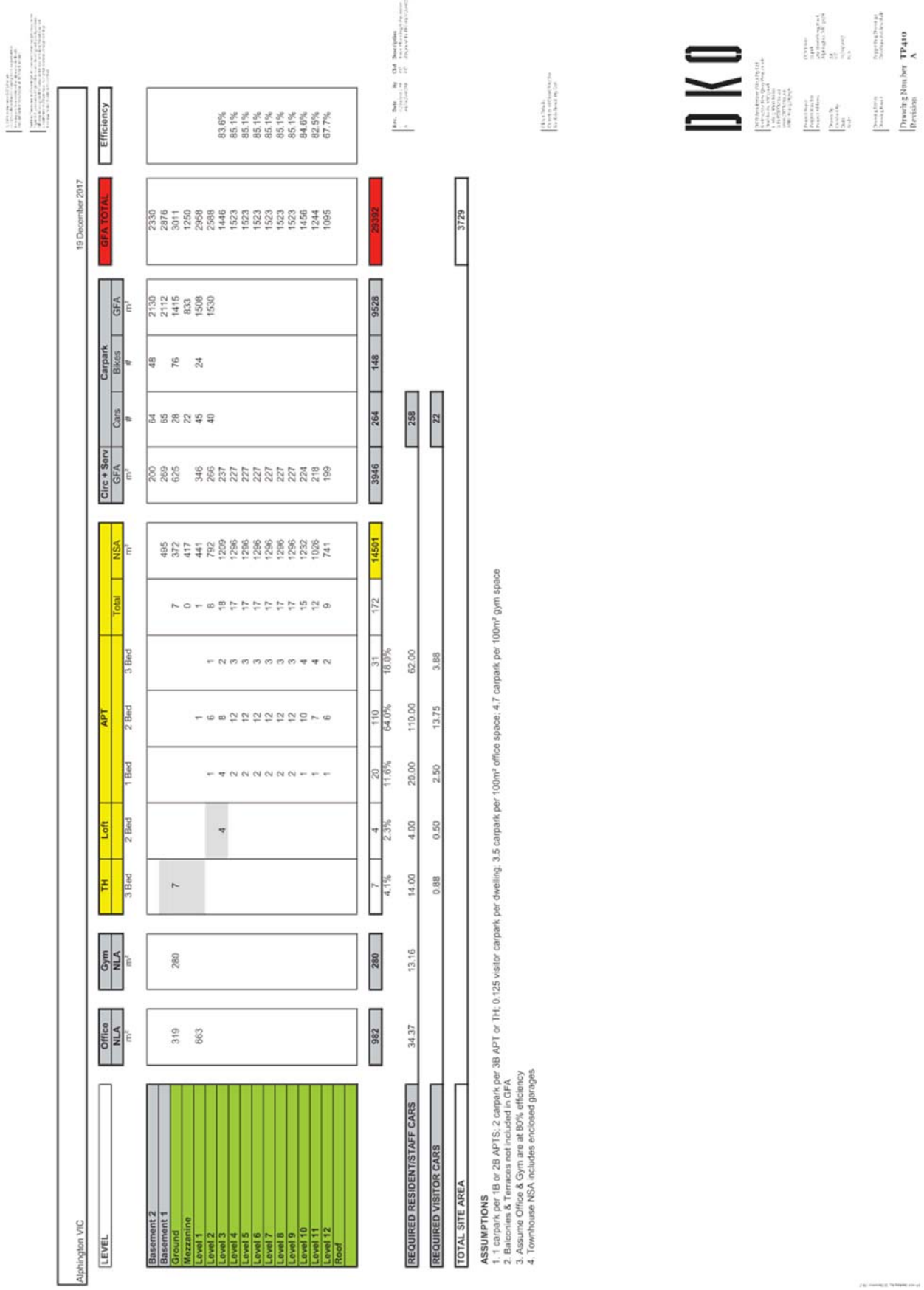

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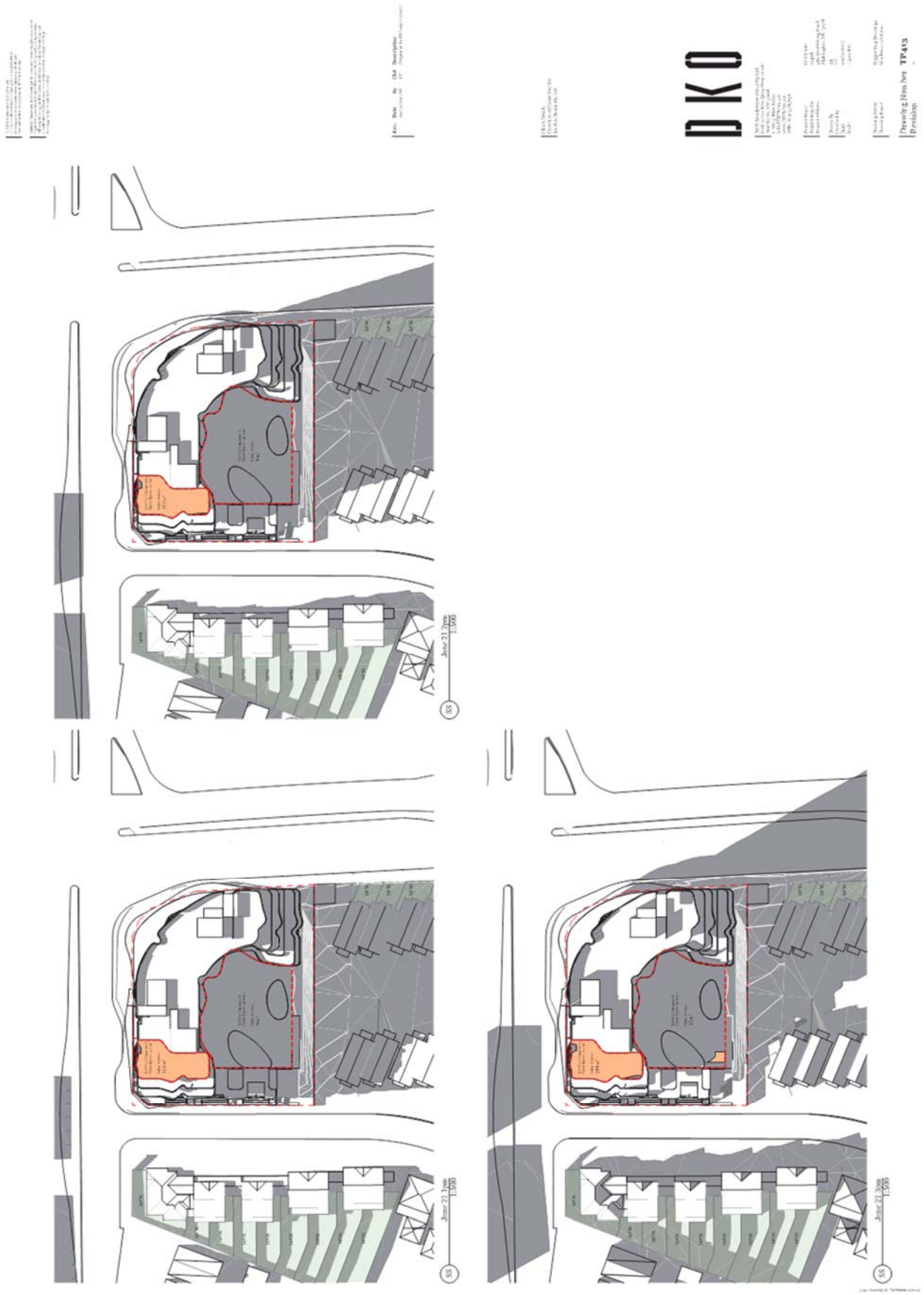

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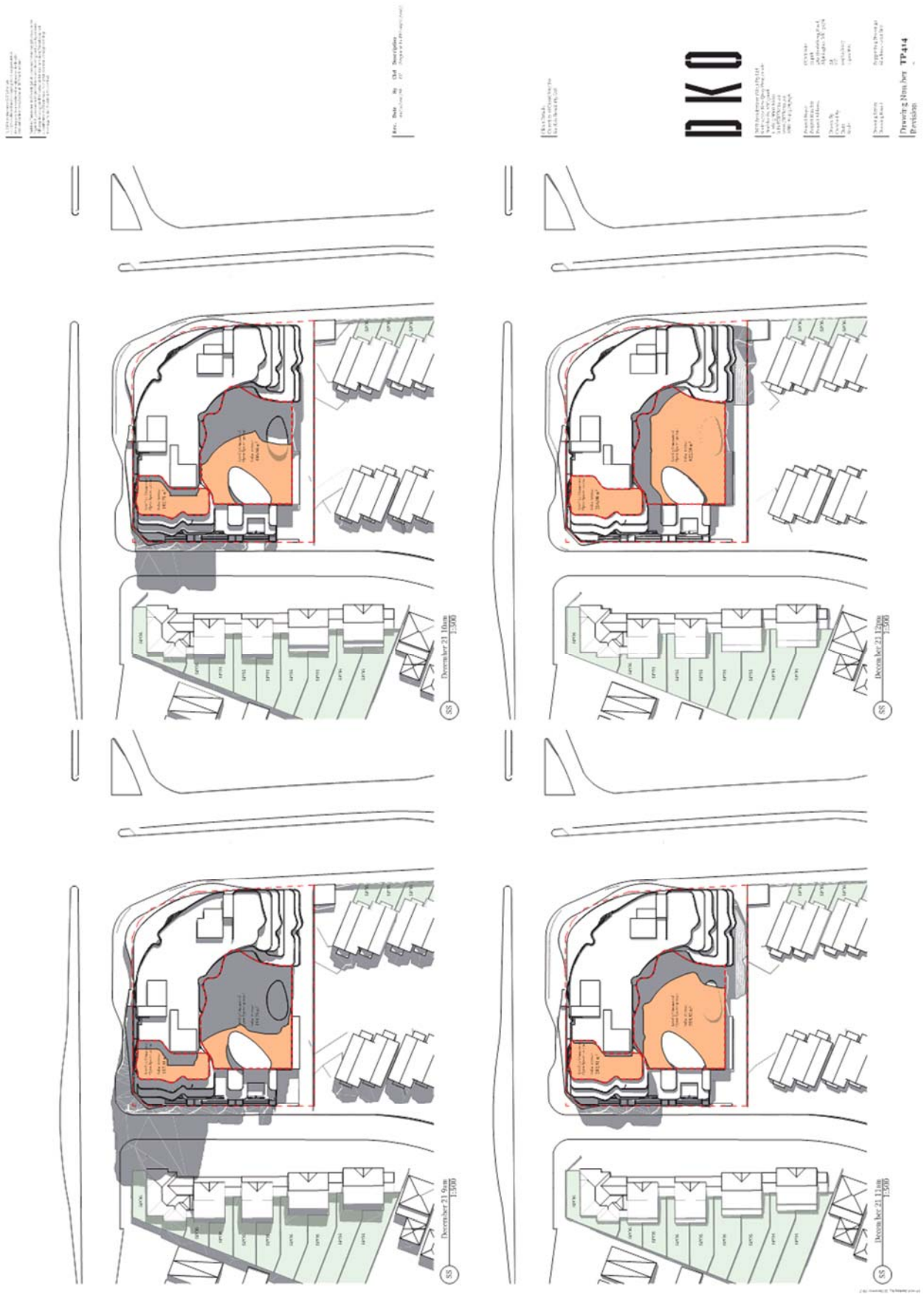

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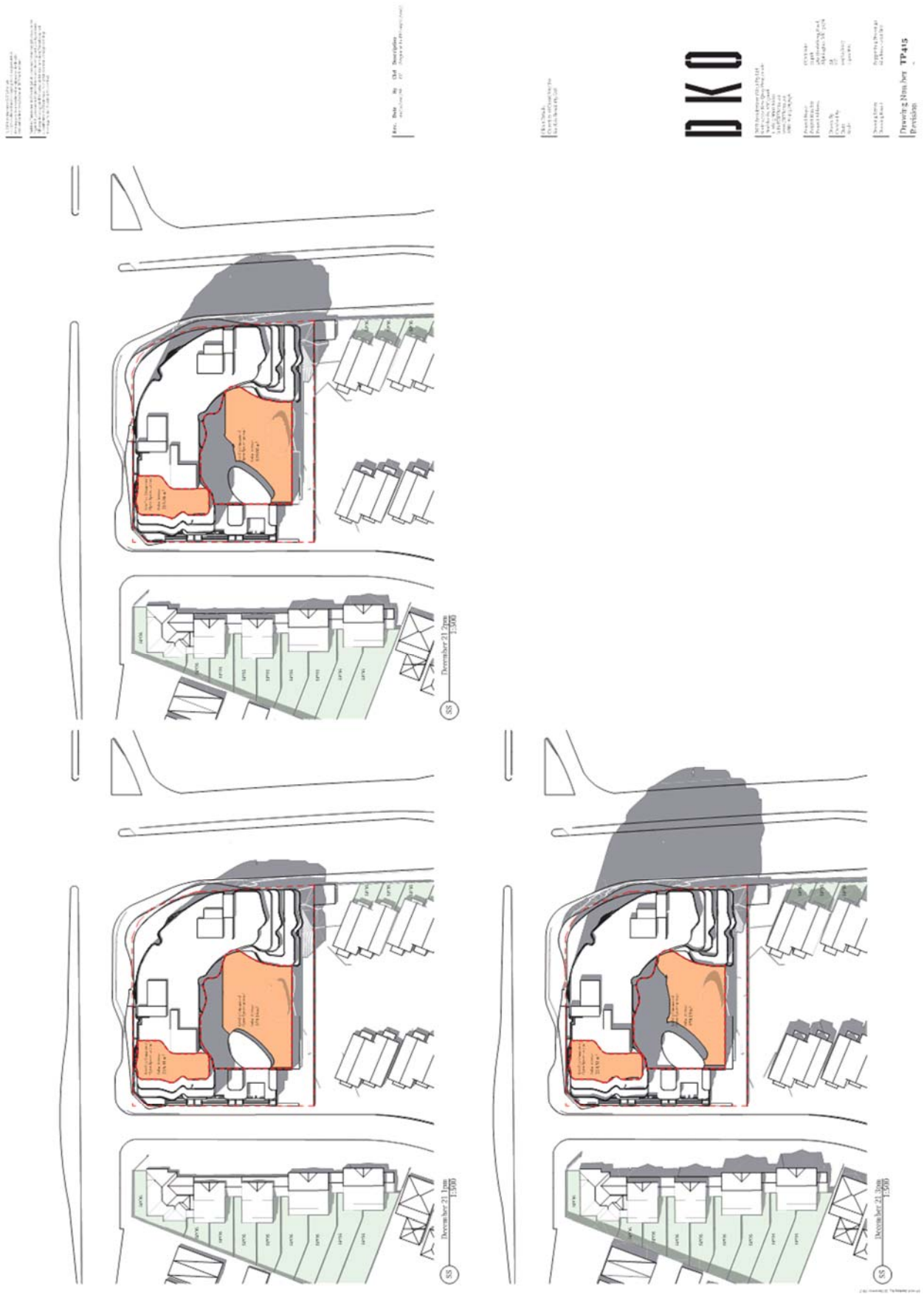
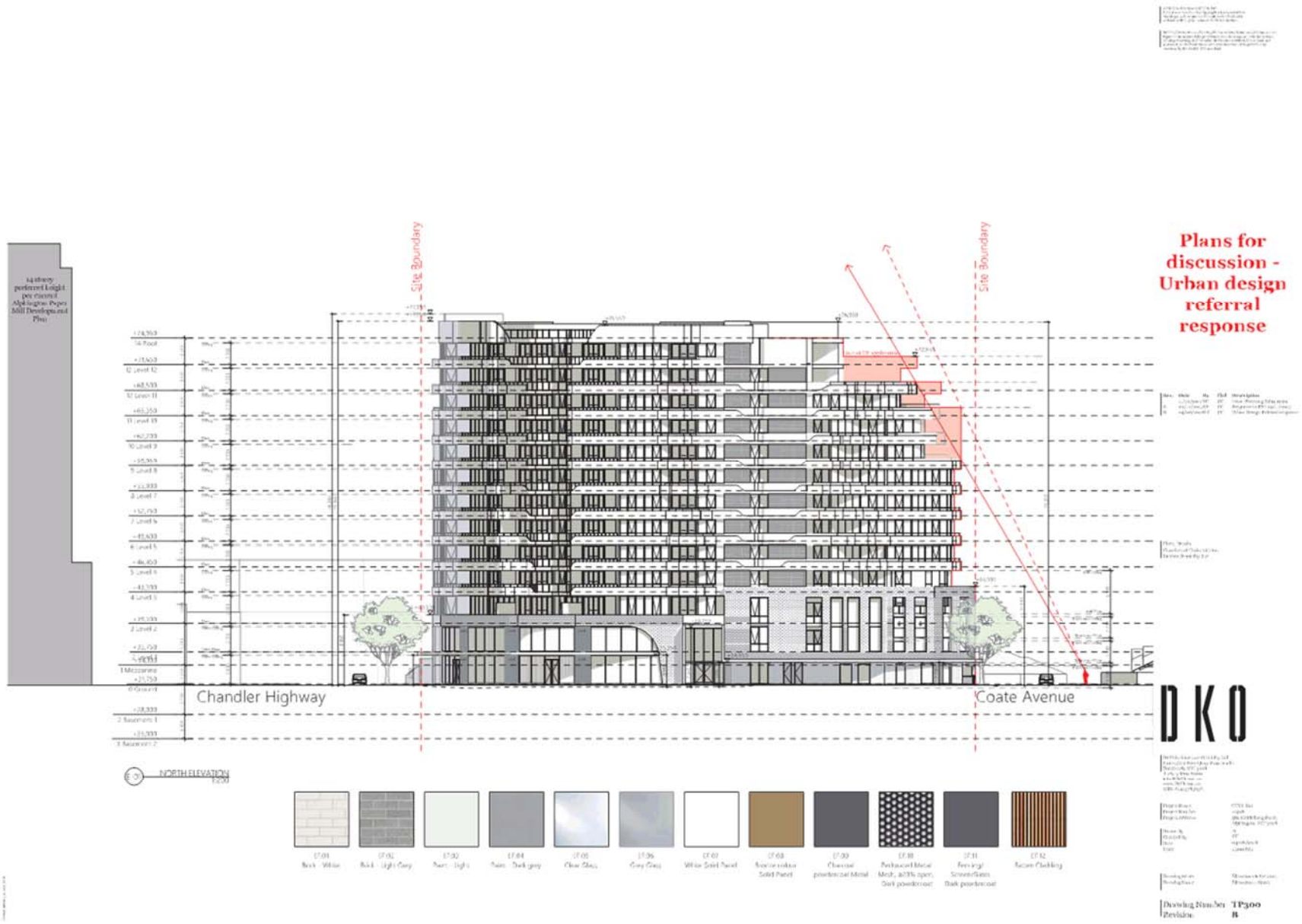


Attachment 2 - Sketch plans



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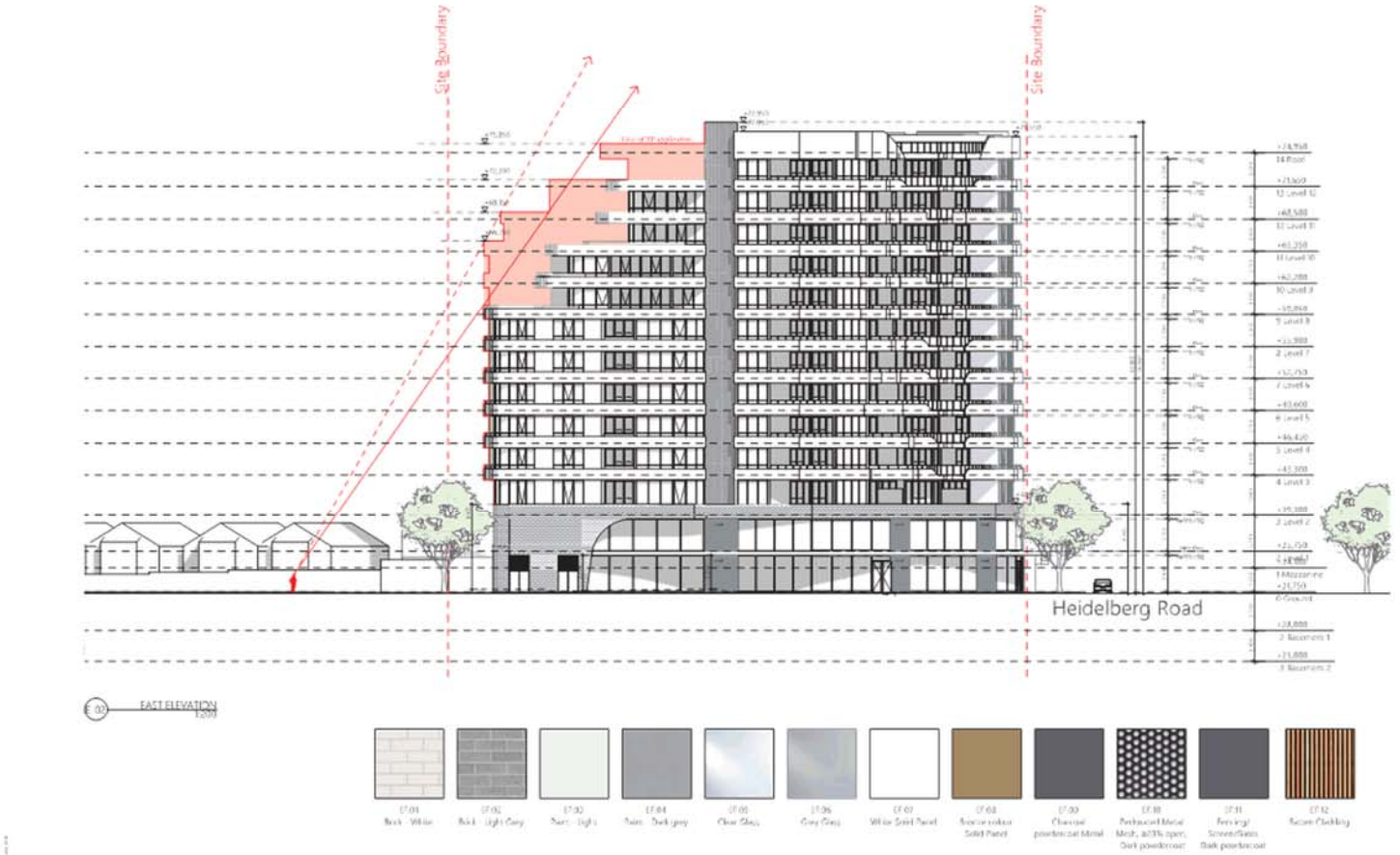

Plans for discussion - Urban design referral response

DKO

Drawing Number TP301
Revision B

Attachment 2 - Sketch plans

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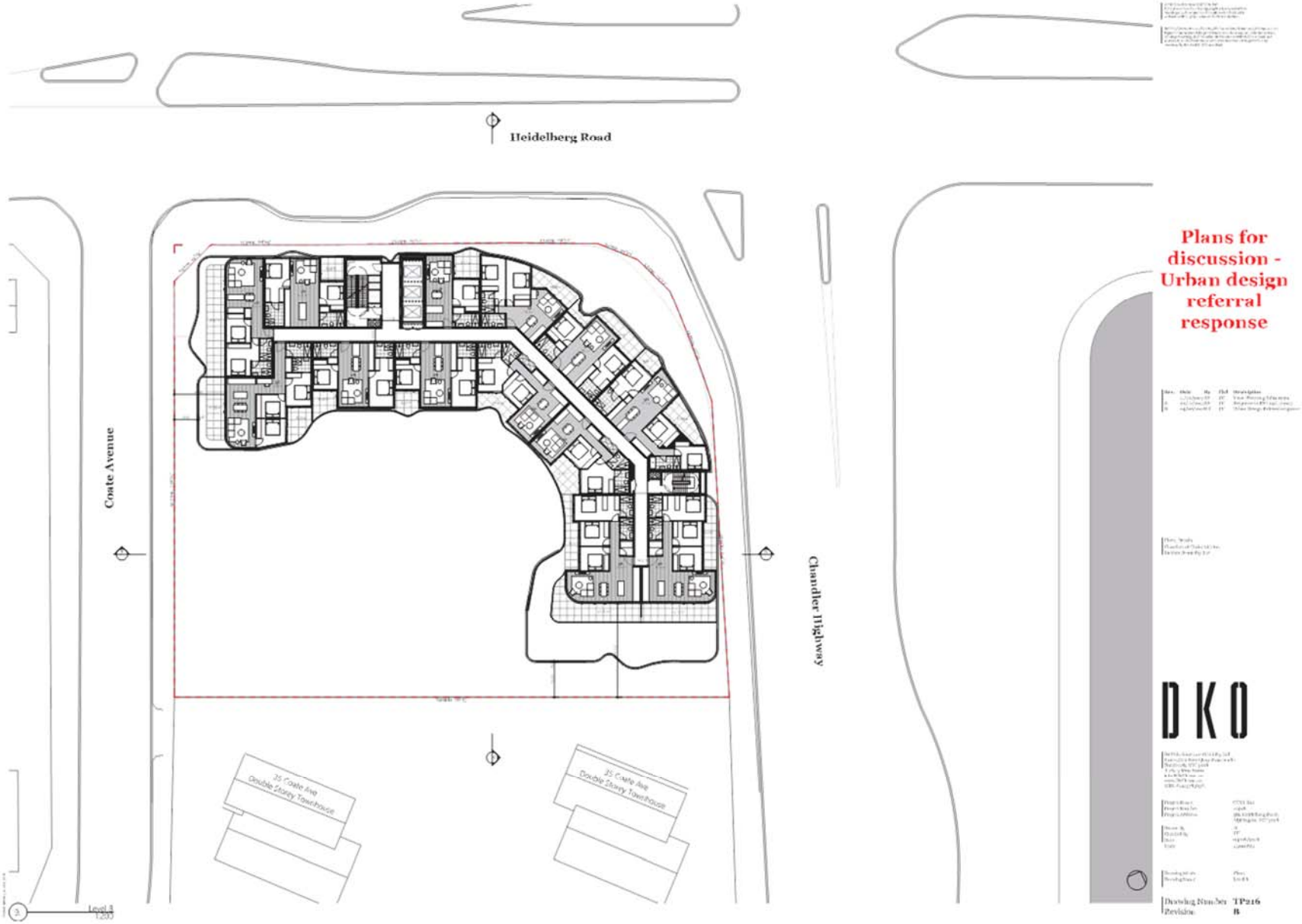

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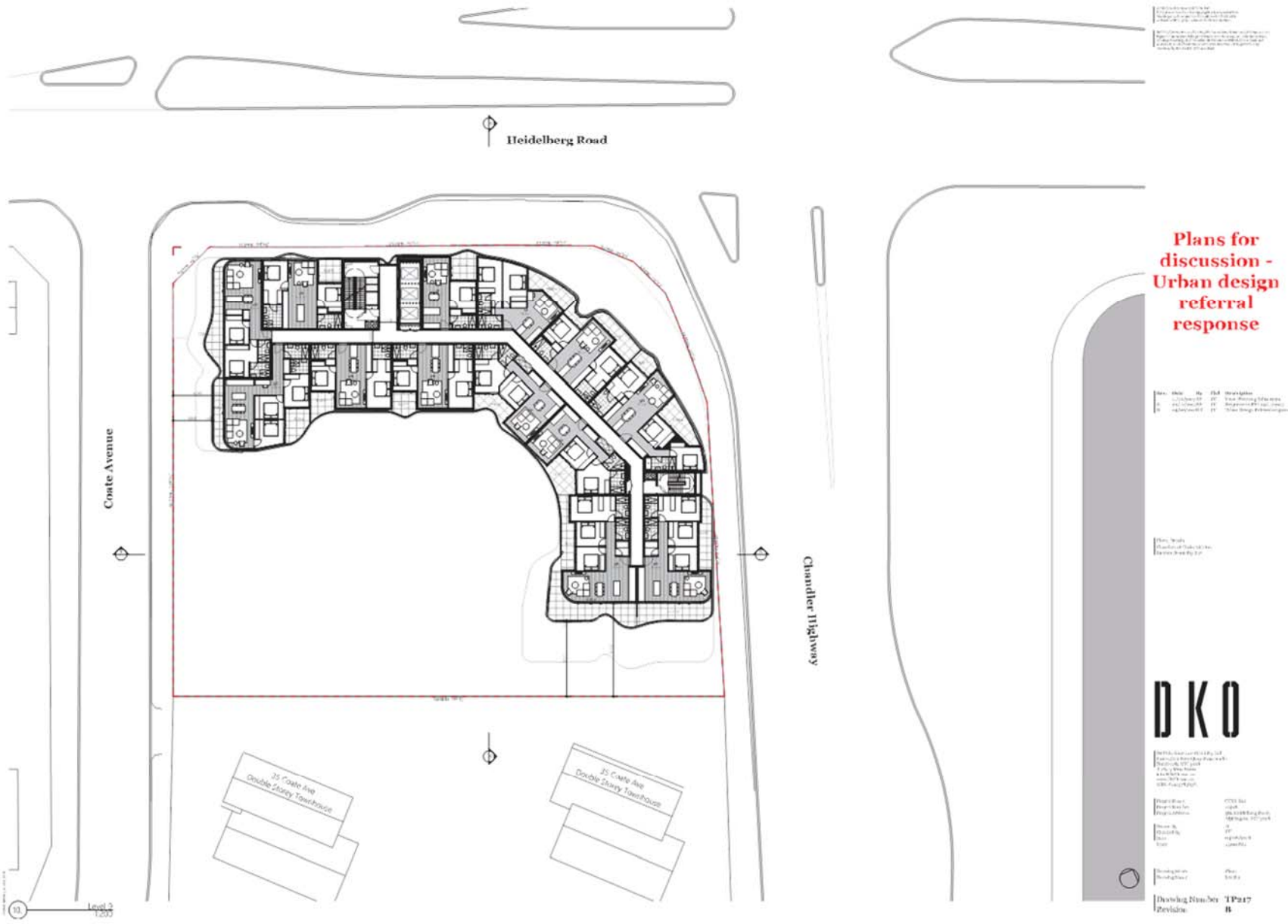

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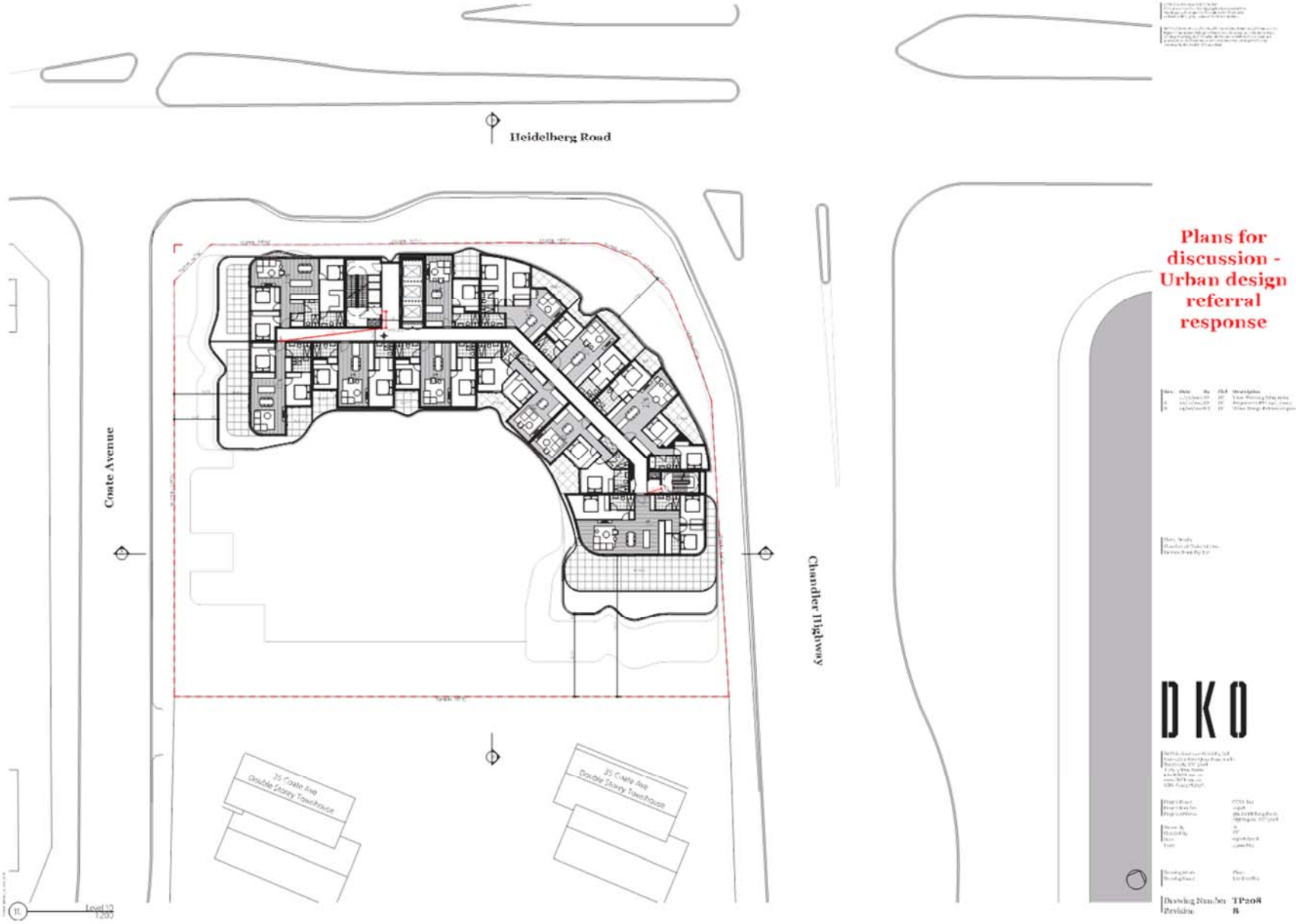

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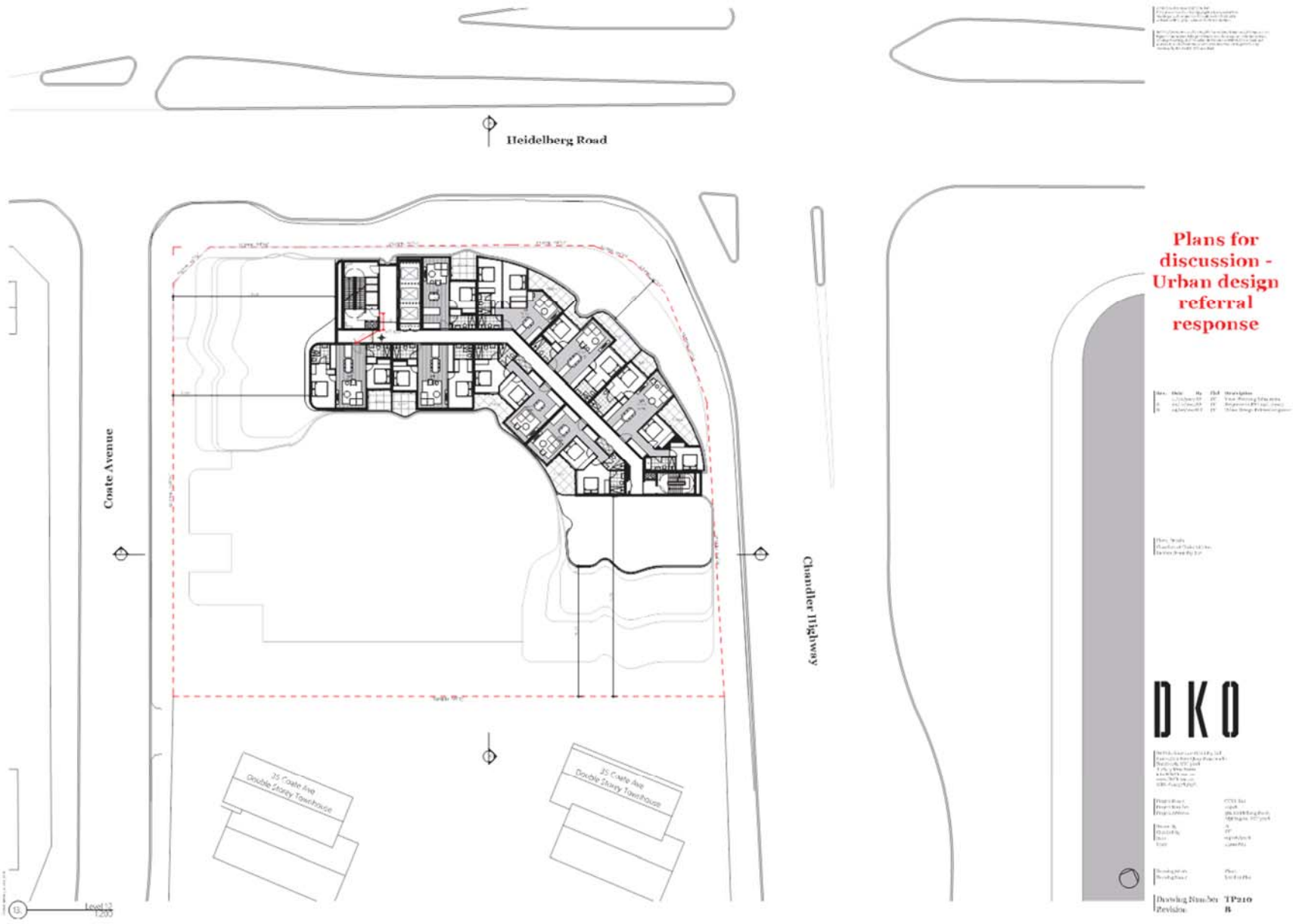


Attachment 2 - Sketch plans

Plans for discussion - Urban design referral response

DKO

Drawing Number TP407
Revision B

Attachment 2 - Sketch plans

Plans for discussion - Urban design referral response

DKO

Drawing Number TP408
Revision B

Attachment 2 - Sketch plans

LEVEL	Office NLA m²	Gym NLA m²	TH 3 Bed	Loft 2 Bed	APT 1 Bed	APT 2 Bed	APT 3 Bed	Total	NSA m²	Circ + Serv GFA m²	Carpark Cars #	Carpark Bikes #	Carpark GFA m²	GFA TOTAL
Basement 2									495	200	64	48	2130	2330
Basement 1									372	269	65		2112	2876
Ground	319	280	7					7	417	625	28	76	1415	3011
Mezzanine								0	441		22		833	1250
Level 1	663					1		1	792	346	45	24	1508	2958
Level 2				4	1	6	1	8	1209	266	40		1530	2588
Level 3					4	8	2	18	1296	237				1446
Level 4					2	12	3	17	1296	227				1523
Level 5					2	12	3	17	1296	227				1523
Level 6					2	12	3	17	1296	227				1523
Level 7					2	12	3	17	1296	227				1523
Level 8					1	8	4	13	1096	220				1316
Level 9					1	8	4	13	1096	224				1320
Level 10					1	7	3	11	934	210				1144
Level 11					1	6	2	9	740	199				939
Level 12					1	6	1	8	620	199				974
Roof														
	982	280	7	4	18	98	29	156	13396	3903	264	148	9528	28244
			4.5%	2.6%	11.5%	62.8%	18.6%							
REQUIRED RESIDENT/STAFF CARS	34.37	13.16	14.00	4.00	18.00	98.00	58.00				240			
REQUIRED VISITOR CARS			0.88	0.50	2.25	12.25	3.63				20			
TOTAL SITE AREA														3729

ASSUMPTIONS

1. 1 carpark per 1B or 2B APTS; 2 carpark per 3B APT or TH; 0.125 visitor carpark per dwelling; 3.5 carpark per 100m² office space; 4.7 carpark per 100m² gym space
2. Balconies & Terraces not included in GFA
3. Assume Office & Gym are at 80% efficiency
4. Townhouse NSA includes enclosed garages

Plans for discussion - Urban design referral response

DKO

Drawing Number TP410
Revision C

Attachment 3 - Landscape Plans

582 HEIDELBERG ROAD, ALPHINGTON VIC 3078

LANDSCAPE CONCEPT

TOWN PLANNING REPORT

OCTOBER 2017

T.C.L

Attachment 3 - Landscape Plans

GROUND FLOOR PLAN

The development site of 582 Heidelberg Road, Alphington is bound by Heidelberg Road to the North, Coates Avenue to the West and Chandler Highway to the East.

To the South lies the Alphington Serviced Appartments. On this southern edge, the development is setback 4.5m (min) from the property boundary. A row of shade tolerant *Corymbia maculata* (Spotted Gums) will provide a green edge to the development and screen the car park and service vents. An understory of low-lying *Calochlaena dubia* (Soft Bracken) will cloak the embankment in lush green whilst leaving the midstory open for visual surveillance.

Townhouses along the Coates Avenue edge of the development have private sunken courtyards. A dense hedge of *Phyllostachy aureosulcata 'spectabilis'* (Yellow Grove Bamboo) growing from the lower level will create a visually appealing outlook for the residents, reduce pedestrian views from the footpath above and allow dappled light through to the living area below. This hardy bamboo can be pruned and tied to maintain the desired vertical form.

At the footpath level a hedge of *Syzyguium australe 'Bush Christmas'* will further add to the residents privacy whilst adding a soft edge to the public realm.

01 Southern deep soil zone
02 Sunken courtyards

Attachment 3 - Landscape Plans

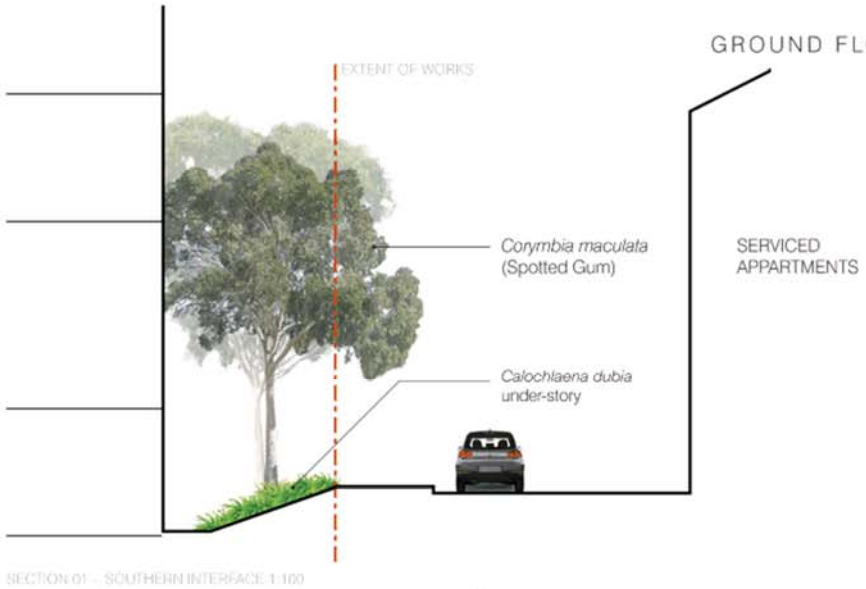
Corymbia maculata (Spotted Gum)

Calochlaena dubia (Soft Bracken)

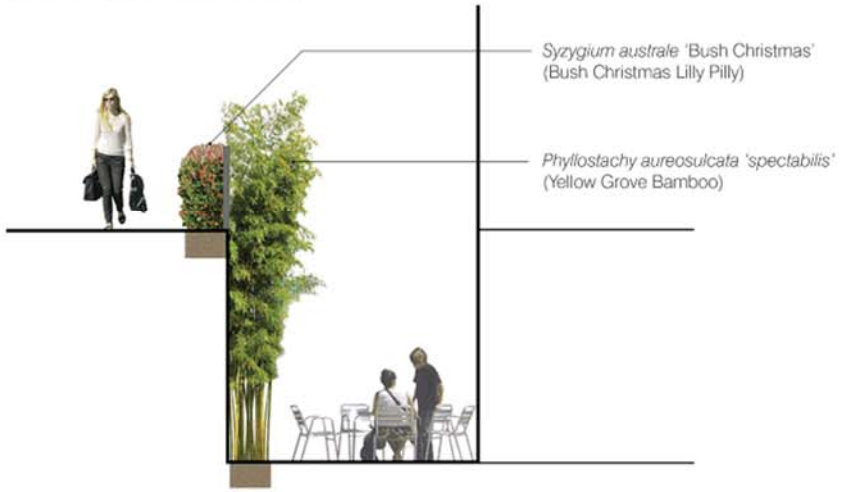
Phyllostachy aureosulcata 'spectabilis'
(Yellow Grove Bamboo)

582 HEIDELBERG ROAD, ALPHINGTON

GROUND FLOOR SECTIONS



SECTION 01 - SOUTHERN INTERFACE 1:100



SECTION 02 - SUNKEN COURTYARD 1:50

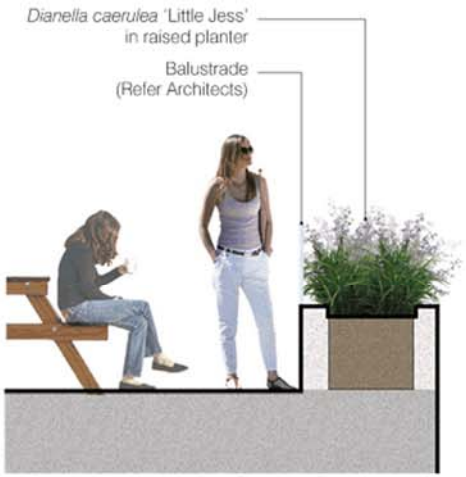
T.C.L 3

Attachment 3 - Landscape Plans

LEVEL 2 BALCONY PLANTING

A raised planter edging the balconies of level 2 apartments, in the north-eastern corner of the development, provides a green screen between the residences and the rooftop and traffic below.

Low maintenance and drought tolerant *Dianella caerulea* 'Little Jess' has been selected for its deep green strappy foliage and masses of spring flowers. In addition its low lying nature will allow open views and sunlight access.



SECTION 01 - LEVEL 2 BALCONY PLANTING 1:25

Dianella caerulea 'Little Jess'

1:200 @A3

Attachment 3 - Landscape Plans

PODIUM LEVEL CHARACTER

Pyrus calleryana Chanticleer

Pyrus 'Bursnozam' - Burgundy Snow

The level 3 podium landscape terrace offers an immersive outdoor space for residents and their guests.

The dynamic deck and garden bed form is design both to be viewed from the apartments above and also to offer multiple spaces and experiences within. The curving garden bed walls with inset timber seating provides opportunities for private and small social gatherings.

The central communal deck area is sunken 500mm below the garden bed and adjacent private terraces. The change in level in addition to dense planting will offer the surrounding apartments increased privacy whilst allowing them a visually appealing garden outlook.

To take advantage of strong views over the Yarra River and to the City, and to minimise potential disturbances to residence, the infinity spa is located in the far south-western corner of the podium. Only accessible via the common building, the spa area will be screened with a dense bamboo hedge along the pool fence.

The event shelter with outdoor cooking facilities will provide opportunities for large social gatherings.

The podium's south-western aspect requires a diverse, low-maintenance planting palette, tolerant of a range of light conditions from full-shade to full-sun. A shade loving palette in the north and north-east of the podium will transition to a Mediterranean plant selection to the south south-west.

Hardy small to medium deciduous trees, such as ornamental pears, will provide shade in summer, colourful autumn foliage and vibrant spring blossoms.

582 HEIDELBERG ROAD, ALPHINGTON

T.C.L

Attachment 3 - Landscape Plans

Attachment 3 - Landscape Plans

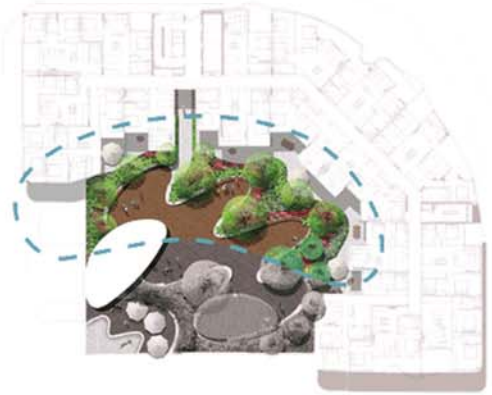
PODIUM PLANT PALETTE

SHADE-LOVING PLANTING

Alocasia sp.

Molineria capitulata

Colocasia sp.



MEDITERRANEAN PLANTING

Agave sp.

Agave sp.

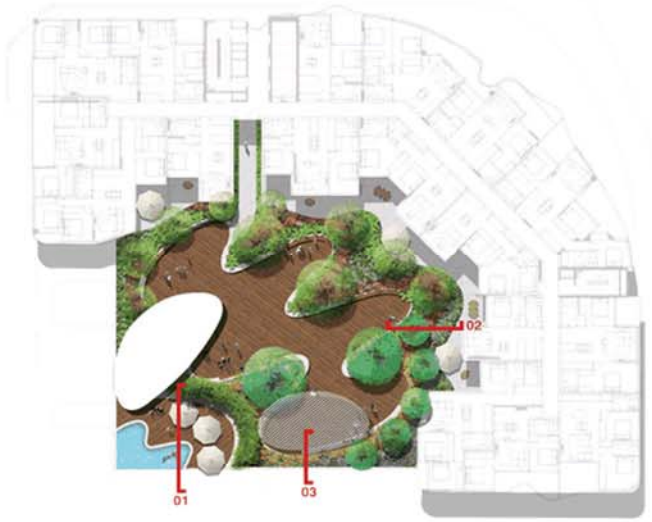
Cordyline sp.

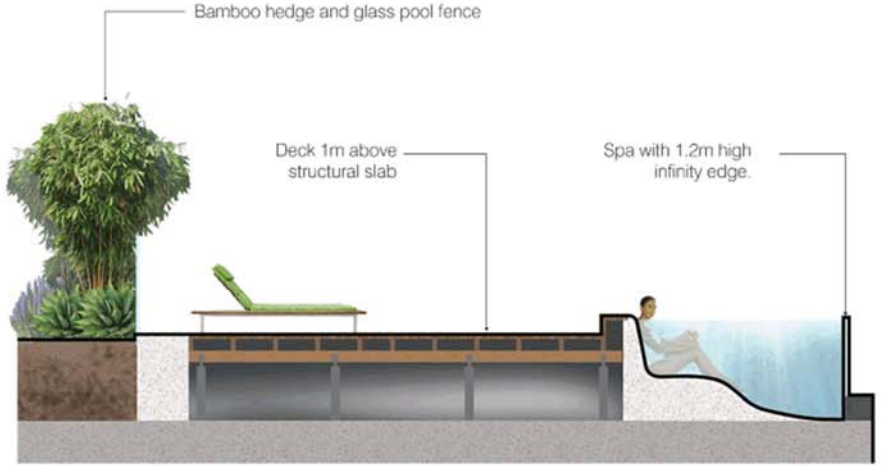
582 HEIDELBERG ROAD, ALPHINGTON

T.C.L 7

Attachment 3 - Landscape Plans

PODIUM LEVEL SECTIONS





SECTION 01 - INFINITY SPA 1:50

Attachment 3 - Landscape Plans

PODIUM LEVEL SECTIONS

SECTION 02 - PUBLIC - PRIVATE TERRACE 1:50

SECTION 03 - EVENT SPACE 1:50

582 HEIDELBERG ROAD, ALPHINGTON

T.C.L

Attachment 4 - Transport for Victoria (formally PTV) Referral Comments

TRANSPORT FOR VICTORIA
Economic Development, Jobs, Transport and Resources

GPO Box 4509
Melbourne VIC 3001 Australia
Telephone: 03 9651 9999
transport.vic.gov.au
DX 210074

File: FOL/18/2759
HTFV: HTFV2018/0133

Amy Hodgen
Town Planner
Yarra City Council
PO Box 168
RICHMOND VIC 3121

Info@yarracity.vic.gov.au

Dear Ms Hodgen,

YARRA PLANNING PERMIT APPLICATION NO.: PLN17/0858
ADDRESS: 582 Heidelberg Road, Alphington
PROPOSAL: Mixed use development with 172 residential dwellings

Thank you for your email dated 21 February 2018 referring the above application to Public Transport Victoria (now Transport for Victoria) pursuant to Section 55 of the *Planning and Environment Act 1987*.

Please be aware that on 19 September 2017 Amendment VC132 to the Victoria Planning Provisions came into effect, which changed the referral authority for Integrated Public Transport Planning (Clause 52.36) from Public Transport Victoria (PTV) to the Head, Transport for Victoria (TfV).

The Head, Transport for Victoria, pursuant to Section 56(1) of the *Planning and Environment Act 1987*, does not object to the grant of a planning permit **subject to the following conditions** being placed on any permit issued:

1. The permit holder must take all reasonable steps to ensure that disruption to bus operation along both Heidelberg Road and Chandler Highway are kept to a minimum during the construction of the development. Foreseen disruptions to bus operations and mitigation measures must be communicated to Public Transport Victoria eight (8) weeks prior by telephoning 1800 800 007 or emailing customerservice@ptv.vic.gov.au.

2. The existing bus stop and associated infrastructure on Heidelberg Road must not be altered without the prior consent of Public Transport Victoria. Any alterations including temporary works or damage during construction must be rectified to the satisfaction of Public Transport Victoria and at the cost of the permit holder

VICTORIA State Government

Attachment 4 - Transport for Victoria (formally PTV) Referral Comments

Should you have any queries regarding the above, please contact Kelly-Rose Kloester by telephone on 8392 9057 or by email on kelly-rose.kloester@ecodev.vic.gov.au.

Yours sincerely

MARK BURTON
Manager, Place Planning and Referrals
Delegate of the Head, Transport for Victoria

1/3/2018

CC: rbutler@tract.net.au

Attachment 5 - Urban Design Peer Review (Message Consultants)

PLANNING
URBAN DESIGN
COMMUNICATION

MESSAGE

Memorandum

Date: 18 April 2018 **Our ref.:** 18037

To: Amy Hodgen, City of Yarra

From: Message Consultants

Re: **Urban Design Review - 582 Heidelberg Road, Alphington**

Dear Amy

We refer to your instruction for Message Consultants to provide an urban design review of the proposed development at 582 Heidelberg Road, which is the subject of current permit application PLN17/0658.

We have now visited the site and reviewed the plans and relevant planning controls and policy relating to the site and the surrounding area.

This review is based on the plans prepared by DKO Architecture identified as Issue B dated 16 January 2018 and the Urban Context Report dated 8 February 2018.

A summary of our findings is set out below.

Subject site and context

The site is located on the south-west corner of Heidelberg Road and Chandler Highway, with a third frontage to Coate Avenue to the west. It is broadly rectangular in shape, save for the chamfered corner to the Heidelberg Road/Chandler Highway intersection, and has a site area of approximately 3720sqm.

The site is located within a Commercial 1 Zone (C1Z), which applies only to this site. It abuts land in the Neighbourhood Residential Zone (NRZ2) to the south and to the west across Coate Avenue. It is not affected by any overlays.

To the east across Chandler Highway is the former Amcor paper mill site which is contained within the Mixed Use Zone (MUZ) and covered by a Development Plan Overlay (DPO) to guide its redevelopment. To the north across Heidelberg Road is the City of Darebin. Land to the north is mainly within the General Residential Zone (GRZ2) save for some Public Use Zone land (PUZ4) immediately west of Grange Road currently being used as part of the Grange Road level crossing removal project .

The physical context is one in which the site has a series of distinct interfaces to which a development must respond. In particular the site addresses a major highway intersection to the north and east, the higher density comprehensive redevelopment proposed on the Amcor site to the east and an established low rise residential area to the south and west within the NRZ.

It is a context in which substantial built form change is envisaged on the paper mill site alongside major infrastructure works on the Chandler Highway upgrade and Grange Road level crossing removal.

MESSAGE CONSULTANTS AUSTRALIA PTY LTD
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info@messageconsultants.com www.messageconsultants.com

Attachment 5 - Urban Design Peer Review (Message Consultants)

Figure 1: Site and surrounding zones

The size and configuration of the site, its two main road frontages and proximity to the transformative redevelopment under way to the east make this a location where there is clearly an opportunity for mixed use development at a higher density than the existing low-rise commercial building on the site. However, this potential is tempered by the site's 'stand-alone' nature, separated from the Amcor site by the Chandler Highway, and its abuttal to residential properties and the NRZ.

This advice considers the proposal's response to context in relation to the following:

- The overall site planning and form of the building;
- Building height and massing;
- Ground plane and landscaping;
- Architecture and design quality; and
- Amenity.

Site planning and building form

The site is not subject of any specific built form guidance in the form of a DDO or similar control and therefore, the applicant's architects have sought to derive a site planning and building form approach from the site's context, as set out in the urban context report prepared by DKO.

In general terms the site planning approach is considered sound and logical, in that:

- Commercial space (office and gym) is provided over two storeys wrapping around the Chandler Hwy/Heidelberg Rd Corner;
- The main pedestrian entry to upper level apartments is centrally located on the Heidelberg

Attachment 5 - Urban Design Peer Review (Message Consultants)

Road frontage, close to a bus stop and pedestrian crossings;

- Townhouse dwellings with direct pedestrian entry from the street provide a residential interface to Coate Avenue;
- Vehicle access is provided in a single location towards the southern end of the Coate Avenue frontage with parking located within basement levels or is 'sleeved' by commercial or residential floorspace to the three street frontages where above ground;
- A landscape buffer of at least 4.5m width is provided along the southern boundary, with basement levels set back to enable deep soil planting at this interface.

In terms of building massing, the rationale for the approach taken is clearly articulated in the application documents and is, in principle, a sound one which:

- Establishes a 2-4 storey (allowing for the variation between townhouses and commercial space) 'podium' element which extends to the three street frontages, with a landscape setback from the south; and
- Adopts a C-shaped 'tower' plan above this base which extends along the two main frontages, holding and defining the corner at the major intersection and recessing the upper levels from the south-west.

Generally, this approach is supported as a response to the site's differing interfaces. However, the overall building height and the way in which this scale is moderated towards the site's sensitive interfaces requires further consideration, as discussed below.

Building height and massing

In terms of overall building height of 13 storeys, there is a rationale and some validity in urban design terms to the concept of a building height at the Chandley Highway/Heidelberg Road corner that responds to the scale expected on the opposite corner as part of the Amcor development.

The approved Development Plan for the paper mill site includes a preferred building height of 14 storeys for the corner site with an opportunity for 'landmark built form', stepping down to 5 storeys further south along Chandler Hwy and 6-8 storeys further east along Heidelberg Road.

While we understand that an application has recently been lodged for a 17 storey building on the corner it is not known whether it will be approved at this height. However, it seems sensible to assume a height of at least 14 storeys at the Amcor site corner and stepping down in scale further west and south.

In this context, the question is whether the overall building height on the subject site should reflect the anticipated building scale on the opposite corner or whether it should sit lower as part of a transition in building scale to the NRZ land to the west and south.

Our conclusion is that at 13 storeys (including two taller commercial storeys) at the corner the overall height of the proposal is supportable because:

- It will respond to the scale likely to emerge on the opposite corner to form a strong sense of definition to the southern side of this major intersection, signalling entry to the City of Yarra and a major river crossing;

MESSAGE

- The site is of sufficient size to enable the scale to be moderated along its principal frontages to provide a transition in scale to the established residential area; and
- The architecture of the building is of a high quality and sufficiently well resolved across its various facades to provide interest and engagement in longer views on the approach.

Given the nature of the main road environment to the north and east, and the width of these roads, it is considered appropriate for the building to strongly mark and define the corner and that no additional setbacks are necessary.

However, if the overall height is to be accepted at the corner, we consider that a more purposeful transition in scale is needed towards the west and south, to articulate a clearer stepping down in scale to the residential hinterland in a 'townscape' sense and to reduce visual dominance and associated shadow effects for nearby residents. While there are some setbacks at the upper levels from the south and west, we consider these to be somewhat 'token' and insufficient.

The vertical segmentation of the tower form with its undulating balcony edges and the location of the two circulation cores break the upper level form into a series of component volumes when viewed from the two main roads. In creating an improved scale transition, this approach could be developed so that the tower more obviously comprises of three main elements, a central section which emphasises the main road corner, and two wings to the south of the stair core and west of the lift core respectively which are 'subservient' in their massing to the main volume and further eroded towards their edges.

There are various was in which this could be achieved, through a reduction in the height of these wings and/or increase setbacks at the upper levels.

Our recommendation, based on the floorplates proposed is that:

For the southern wing-

- Level 13 south of the stair core is removed
- Levels 11 & 12 south of the stair core are removed and replaced with the floorplate of Level 13
- Level 9 & 10 south of the stair core are removed and replaced with the floorplate of Level 12.

Figure 2: Recommended changes east elevation

The effect of this change is shown on the eastern elevation drawing in **Figure 2**. The result will be a clearer stepping of form down from the main corner volume and a mass which reads at 8 storeys rather than 10/11 storeys when viewed from the private open space of the nearest townhouses to the south.

For the western wing-

- Level 12 west of the lift core is removed
- Levels 10 & 11 are removed and replaced with the floorplate of Level 12
- Level 9 is removed and replaced with the floorplate of level 11.

The effect of this change is shown on the northern elevation drawing below. The result will be a clearer stepping down of form from the main corner volume and a principal mass which reads at 8 storeys rather than 10 storeys when viewed from the opposite side of Coate Avenue. **Figure 3** illustrates this suggestion.

Figure 3: Recommended changes north elevation

Ground plane and landscaping

Generally, the proposed relationship with the adjoining streets at the ground plane is well resolved.

Extensive double-height glazed frontages to the main intersection provide the potential to activate this somewhat hostile environment and are of a scale that will be able to be read from a moving vehicle.

The main pedestrian entry is clearly signalled within the building's architecture on the principle frontage and the finer grain townhouses with individual entries are well suited to the residential side street environment along Coate Avenue. As ever, the success of the ground plane treatment will depend on close attention to detail in the resolution of elements such as service cupboards and substations. While these appear to have been addressed in the plans, greater detail at a more readable scale should be required by condition if a permit is issued to ensure the overall quality of the development is not diluted by these elements at the street edge.

Attachment 5 - Urban Design Peer Review (Message Consultants)

The landscape approach articulated in the proposals prepared by TCL appears appropriate and well thought out, providing in particular a planted buffer to the south and integrated planting to the townhouse courtyards to the west.

Design quality

The overall design quality and architecture is of a high standard and, subject to an appropriate moderation of the overall scale/massing recommended previously, would be a positive addition to this area.

The proposal demonstrates a sophisticated approach to the management of the overall form, with solid brick elements to the lower levels and elegant sculpted balcony banding to the upper levels.

The horizontal banding to the tower is offset by vertical recesses and the changing profile of balcony upstands across the main facades to achieve a dynamic overall effect and balance of vertical and horizontal proportions.

Care should be exercised in the final selection of materials to ensure that the finishes are robust and durable and elements such as the white coloured balcony undersides are treated to avoid any build up of dirt, given the high traffic volumes past the site. This can be the subject of a permit condition.

Amenity considerations

On-site amenity

Council officers will no doubt undertake a detailed assessment of the proposal against the Clause 58 apartment standards. However, in general terms the proposal appears to provide a good choice of apartments with appropriate liveability and amenity and useable balcony areas, complemented by a generous communal outdoor area at Level 3.

A query has been raised regarding daylight access to the basement level of townhouses along Coate Avenue. The aperture to the courtyard outside these spaces is limited in area and as a result it is likely that internal daylight levels will be relatively low. However, given that these rooms appear to function as a secondary living area, with the main living area/dining/kitchen provided at ground level, this is considered acceptable.

Off-site amenity

Dwellings to the south are set at an angle to the common boundary at a distance of at least 5.8m from the site. They present a side elevation, including habitable room windows to the subject site, with private open space courtyards to the east and west. The access driveway and common landscaped areas occupy the setback area.

Generally, the configuration of the proposal has avoided significant amenity impacts on these residences, with the exception of overshadowing to the POS of the north eastern unit in the middle of the day (fully overshadowed at 1pm and 2pm at 12 September). This shadowing impact is excessive and should be reduced. The suggested modifications to the massing of the

southern wing of the building will assist in this.

The configuration and massing of the proposal has also sought to manage the visual bulk presented to these properties. However, as discussed earlier, further moderation of the southern wing of the building is considered necessary to achieve a more comfortable transition to these properties and reduce the appearance of building bulk.

The separation between the proposed building and windows and open spaces to the south means that no unreasonable overlooking would occur.

Dwellings to the west across Coate Avenue face the site across the street and their front gardens and, whilst some shadowing would reach their rear and side POS areas at 9am at the equinox, the shadow moves off these areas by 10am.

The changes recommended to moderate the massing of the western wing of the proposal will further reduce this effect and the visual presence of the building within the Coate Avenue streetscape.

Conclusions

The proposed development is, in the main, a well-designed response to the site's context, opportunities and constraints. However, whilst the overall height is supportable at the Heidelberg Road/Chandler Highway intersection, changes are required to the massing of the tower element to reduce its scale to the south and west to achieve a suitable transition to the low-rise residential area. The recommendations at Figure 2 and Figure 3 illustrate how the current design could be amended to achieve this aim.

We trust this advice is of assistance. Please contact our office if there are any queries.

Message Consultants Australia Pty Ltd

18 April 2018

Attachment 6 - Open Space Unit Referral Comments

Memo

To: Amy Hodgen

Cc: Carrie Lindsay, Clare Lee

From: Craig Lupton, Fiona O'Byrne

Date: 21 March 2018

Subject: PLN17/0858 – 582 Heidelberg Road Alphington

diverse

vibrant

exciting

inclusive

Hi Amy,

The streetscapes and Natural Values Team provides the following comments in relation to PLN17/0858 – 582 Heidelberg Road, Alphington:

- The tree removal recommendations in the Arboricultural Assessment and Report are supported.
- Tree 8 is proposed for removal and meets the criteria for a 'significant tree' and will therefore require a permit under General Local Law (2016).
- It is recommended that a locally indigenous form of *Eucalyptus Leucoxylon ssp. connata* (Melbourne Yellow Gum) replaces *Corymbia maculata* (Spotted Gum) as the preferred tree to be planted along the southern boundary of the proposed development. The use of locally indigenous trees will enhance urban biodiversity values.
- The applicant is encouraged to undertake a maintenance feasibility assessment of the proposed southern boundary planting. In particular is the proposed path of sufficient width to satisfactorily maintain a row of Eucalypts that are capable of growth heights of 15m + and widths of 10m + under favourable conditions.
- The applicant should consider installing strata cells or structural soils under adjacent structures to increase soil volume to improve tree stability and maximise canopy growth potential for the row of Eucalypts along the southern boundary.
- It is requested that the applicant provide soil volume data and dimensions for all proposed planter boxes. This will enable the requirements of proposed plant species to be assessed prior to planter box allocation.
- The two street trees on Heidelberg Road *Ulmus parvifolia* (Chinese Elms) will be retained and must be protected during construction works. An Asset Protection Permit Bond of $10,000 (ex

Attachment 6 - Open Space Unit Referral Comments

GST) should be applied to the trees to offset the cost of repairing any damage incurred during construction.

- The Landscape Concept Plan doesn't show the two (2) existing street trees (*Hakea* spp.) in Coate Avenue adjacent to the development site. They Architectural Drawings show they are to be retained. The trees are small and do not provide much shade or amenity to the street and therefore it is suggested they are removed and replaced with three new trees as shown on the Landscape Concept Plan. Given there are no powerlines on the east side of the street, the opportunity exists to replace with a species that will provide a broader canopy to provide shade and enclose the street. A native deciduous species such as *Melia azedarach* (White Cedar low fruiting variety) is recommended and will also allow for maximum sunlight penetration into the apartments during the cooler months.

- There is an opportunity to replace the existing four (4) small street trees (*Hakea spp*.) on the western side of Coate Avenue with *Melia azedarach* (White Cedar). It is recommended that the applicant contribute to the local amenity by covering the cost of planting seven (7) *Melia azedarach* (White Cedar) in total. Planting will be carried out by Council's tree planting contractor when construction is completed. The cost to supply and install and undertake establishment maintenance for two years is $4090 (ex GST).

The Open Space Planning and Design Team provides the following comments in relation to PLN17/0858 – 582 Heidelberg Road, Alphington:

- Further detail is requested on the proposed event shelter (height, materials etc.)
- Further detail is requested on the proposed communal building/spa entry. There is a car park exhaust located within this communal building. Can further detail be provided on the amenity impact of this for the podium users (fumes, noise etc.)
- Further detail is requested on the proposed fencing around the infinity spa (height, gate location etc.)

Landscape plan requirements apply, including:

- Plants identified by genus and species
- Number of plants
- Pot sizes at planting
- Tree sizes at maturity
- Planter details, dimensions of planters, proposed planting media, irrigation and drainage.

Proposed paving materials:

- Feature paving at the entrances on Heidelberg Road, Coate Avenue and Grange Road should be to City of Yarra standards (not City of Darebin standards, as noted on the plans).
- Any feature paving at ground level should be sawn bluestone.
- Further detail on Yarra paving materials palette can be found in Yarra's Public Domain Manual (refer to Section 4.1.3: https://www.yarracity.vic.gov.au/-/media/files/roads/technical-notes/yarra-city-council-public-domain-manual-technical-notes.pdf).

Please let me know if you require any further information.

Kind Regards

Carrie Lindsay
Coordinator Open Space Planning & Design

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

Sustainable Management Plan (SMP)
Referral Response by Yarra City Council

ESD in the Planning Permit Application Process

Yarra City Council's planning permit application process includes Environmentally Sustainable Development (ESD) considerations. This is now supported by the ESD Local Policy Clause 22.17 of the Yarra Planning Scheme, entitled *Environmentally Sustainable Development*.

The Clause 22.17 requires all eligible applications to demonstrate best practice in ESD, supported by the Built Environment Sustainability Scorecard (BESS) web-based application tool, which is based on the Sustainable Design Assessment in the Planning Process (SDAPP) program.

As detailed in Clause 22.17, this application is a 'large' planning application as it meets the category *Residential 1. Ten or more dwellings*.

What is a Sustainable Management Plan (SMP)?
An SMP is a detailed sustainability assessment of a proposed design at the planning stage. An SMP demonstrates best practice in the 10 Key Sustainable Building Categories and;

- Provides a detailed assessment of the development. It may use relevant tools such as BESS and STORM or an alternative assessment approach to the satisfaction of the responsible authority; and
- Identifies achievable environmental performance outcomes having regard to the objectives of Clause 22.17 (as appropriate); and
- Demonstrates that the building has the design potential to achieve the relevant environmental performance outcomes, having regard to the site's opportunities and constraints; and
- Documents the means by which the performance outcomes can be achieved.

An SMP identifies beneficial, easy to implement, best practice initiatives. The nature of larger developments provides the opportunity for increased environmental benefits and the opportunity for major resource savings. Hence, greater rigour in investigation is justified. It may be necessary to engage a sustainability consultant to prepare an SMP.

Assessment Process:

The applicant's town planning drawings provide the basis for Council's ESD assessment. Through the provided drawings and the SMP, Council requires the applicant to demonstrate best practice.
The following comments are based on the review of the architectural drawings, prepared by DKO Architects (prepared 11/10/2017) and the accompanying SMP, prepared by Wood and Grieves (prepared 7th February).

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

Sustainable Management Plan (SMP)
Referral Response by Yarra City Council

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Attachment 7 - Environmental Sustainable Development Officer Referral Comments

Sustainable Management Plan (SMP)
Referral Response by Yarra City Council

Assessment Summary:

Responsible Planner:		Amy Hodgen	
ESD Advisor:		Euan Williamson	
Date:	13.03.2018	Planning Application No:	PLN17/0858
Subject Site:		582 Heidelberg Road, Alphington.	
Site Area:	Approx. 3,887m^2	Site Coverage:	100%
Project Description:		14 storey mixed use development.	
Pre-application meeting(s):		None.	

The standard of the ESD largely meets Council's Environmental Sustainable Design (ESD) standards. Should a permit be issued, the following ESD commitments (1) and deficiencies (2) should be conditioned as part of a planning permit to ensure Council's ESD standards are fully met.

Furthermore, it is recommended that all ESD commitments (1), deficiencies (2) and the outstanding information (3) are addressed in an updated SMP report and are clearly shown on Condition 1 drawings. ESD improvement opportunities (4) have been summarised as a recommendation to the applicant.

(1) Applicant ESD Commitments:

- Access to ventilation is good to most dwellings.
- Good daylight access good to most dwellings.
- Average 6 Star NatHERS thermal energy ratings for dwellings. Gym and retail areas to be 20% improvement on NCC energy efficiency standards.
- A 10 kW solar PV array to contribute to onsite electricity consumption.
- A MUSIC model demonstrating best practice has been submitted that relies on ~1,701m^2 of roof connected to 30,000 litres of rainwater storage for landscape irrigation and 2,180m^2 of podium and terrace landscape areas filtered through 25m^2 of raingarden. An additional 25,000 litres of stormwater detention completes the stormwater management system.
- Energy efficient hot water, heating/cooling and lighting.
- Water efficient fixtures and taps.
- Extensive common areas and landscaping.

(2) Application ESD Deficiencies:

- The carpark exhaust is located in the common area podium garden. Recommend that the carpark exhaust is relocated away from the common area garden and is filtered to remove carpark pollutants.
- It appears on the detailed dwelling plans that some bedrooms do not have operable windows. Ensure that all habitable rooms have an operable window to facilitate natural ventilation.
- 146 secure bicycle parking spaces on ground floor and carparking levels for staff, residents and visitors. Recommend increasing the number of residential, staff and visitor bike spaces to 175 for residents, 13 of staff plus visitor bike parking spaces.

(3) Outstanding Information:

- There are large areas of glazing exposed to summer sun angles but the cooling loads provided show that the maximum 21MJ/m^2 cooling load will not be exceeded. Please provide additional sample NatHERS ratings for dwelling Type 1E, 3H and 3D – and demonstrate that cooling loads do not exceed the 21MJ/m^2 threshold.
- Please show the location of the 25m^2 of raingarden on the landscape plans and on the architectural drawings, and the location and approximate size of the 25,000 litre detention tank on architectural plans also. The 30,000 litre tank is clearly identifiable.

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

Sustainable Management Plan (SMP)
Referral Response by Yarra City Council

(4) ESD Improvement Opportunities

- Consider a 7 Star NatHERS thermal energy efficiency standard.
- Consider a larger solar PV array to cover more of the onsite electricity consumption.
- Consider providing composting for organic residential waste.
- Recommend comprehensive commissioning and tuning of all major appliances and building services.
- Recommend that an Environmental Management Plan be developed by the building contractor to monitor and control activities undertaken during construction.

Further Recommendations:

The applicant is encouraged to consider the inclusion of ESD recommendations, detailed in this referral report. Further guidance on how to meet individual planning conditions has been provided in reference to the individual categories. The applicant is also encouraged to seek further advice or clarification from Council on the individual project recommendations.

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

1. Indoor Environment Quality (IEQ)

Objectives:

- to achieve a healthy indoor environment quality for the wellbeing of building occupants.
- to provide a naturally comfortable indoor environment will lower the need for building services, such as artificial lighting, mechanical ventilation and cooling and heating devices.

Issues	Applicant's Design Responses	Council Comments	CAR*
Natural Ventilation and Night Purging	Access to ventilation is good to most dwellings. Single sided dwellings have reasonable access to natural ventilation.	Recommend that the carpark exhaust is relocated away from the common area garden and is filtered to remove carpark pollutants. It appears on the detailed dwelling plans that some bedrooms do not have operable windows. Ensure that all habitable rooms have an operable window to facilitate natural ventilation.	2
Daylight & Solar Access	Good daylight access good to most dwellings.	Daylight standards to the subsurface living rooms in the townhouses are passable, with good access across the townhouses as a whole.	1
External Views	External views from all rooms and common areas.	-	1
Hazardous Materials and VOC	Low-VOC paints, adhesives, sealants, carpets and flooring, wall & ceiling coverings. Low formaldehyde content timber products.	-	1
Thermal Comfort	Good thermal comfort is determined through a combination of good access to ventilation, balanced passive heat gains and high levels of insulation. The application proposes: - Good natural ventilation (mixed mode) - Reasonable shading proposed - Average thermal efficiency standards.	Please refer to section on, *NCC Energy Efficiency Requirements Exceeded* and *Effective Shading*	1

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 1. Indoor Environment Quality
Good Environmental Choice Australia Standards www.geca.org.au
Australian Green Procurement www.greenprocurement.org
Residential Flat Design Code www.planning.nsw.gov.au
Your Home www.yourhome.gov.au

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

2. Energy Efficiency

Objectives:

- to ensure the efficient use of energy
- to reduce total operating greenhouse emissions
- to reduce energy peak demand
- to minimize associated energy costs.

Issues	Applicant's Design Responses	Council Comments	CAR*
NCC Energy Efficiency Requirements Exceeded	Average 6 Star NatHERS ratings for dwellings. Gym and retail areas to be 20% improvement on NCC energy efficiency standards.	Please provide additional sample NatHERS ratings for dwelling Type 1E, 3H and 3D – and demonstrate that cooling loads do not exceed the 21MJ/m^2 threshold. Consider a 7 Star average NatHERS standard.	3
Hot Water System	Centralised instantaneous gas hot water (5 Star min).	-	1
Peak Energy Demand	Peak demand reduced through various initiatives.	-	1
Effective Shading	There are large areas of glazing exposed to summer sun angles but the cooling loads demonstrate that the maximum 21MJ/m^2 cooling load will not be exceeded.	Please provide additional sample NatHERS ratings for dwelling Type 1E, 3H and 3D – and demonstrate that cooling loads do not exceed the 21MJ/m^2 threshold.	3
Efficient HVAC system	Reverse-cycle split systems (minimum 4 Star) and a centralised VRV system	-	1
Efficient Lighting	Energy efficient LED lighting.	-	1
Electricity Generation	A 10 kW solar PV array to contribute to onsite electricity consumption.	Consider a larger solar PV array to cover more of the onsite electricity needs.	4
Other	-	-	-

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 2. Energy Efficiency
House Energy Rating www.makeyourhomegreen.vic.gov.au
Building Code Australia www.abcb.gov.au
Window Efficiency Rating Scheme (WERS) www.wers.net
Minimum Energy Performance Standards (MEPS) www.energyrating.gov.au
Energy Efficiency www.resourcesmart.vic.gov.au

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

3. Water Efficiency

Objectives:

- to ensure the efficient use of water
- to reduce total operating potable water use
- to encourage the collection and reuse of rainwater and stormwater
- to encourage the appropriate use of alternative water sources (e.g. grey water)
- to minimise associated water costs.

Issues	Applicant's Design Responses	Council Comments	CAR*
Minimising Amenity Water Demand	Water efficient taps and fittings throughout, including: - 4 Star toilets - 5 Star tapware - 3 Star showers <7.5 litres/min - 4 Star dishwashers & washing machines	-	1
Water for Toilet Flushing	A 30,000 litre rainwater tank connected to toilets for flushing & landscape irrigation.	-	1
Water Meter	Water metering for all separate dwellings, retail and major common area uses.	-	1
Landscape Irrigation	Provided by rainwater.	-	1
Other	-	-	-

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 3. Water Efficiency
Water Efficient Labelling Scheme (WELS) www.waterrating.gov.au
Water Services Association of Australia www.wsaa.asn.au
Water Tank Requirement www.makeyourhomegreen.vic.gov.au
Melbourne Water STORM calculator www.storm.melbournewater.com.au
Sustainable Landscaping www.ourwater.vic.gov.au

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

4. Stormwater Management

Objectives:

- to reduce the impact of stormwater runoff
- to improve the water quality of stormwater runoff
- to achieve best practice stormwater quality outcomes
- to incorporate Water Sensitive Urban Design principles.

Issues	Applicant's Design Responses	Council Comments	CAR*
STORM Rating	A MUSIC model demonstrating best practice has been submitted that relies on ~1,701m^2 of roof connected to 30,000 litres of rainwater storage for landscape irrigation and 2,180m^2 of podium and terrace landscape areas filtered through 25m^2 of raingarden. An additional 25,000 litres of stormwater detention completes the stormwater management system.	Please show the location of the 25m^2 of raingarden on the landscape plans and on the architectural drawings, and the location and approximate size of the 25,000 litre detention tank on architectural plans also. The 30,000 litre tank is clearly identifiable.	3
Discharge to Sewer	-	-	-
Stormwater Diversion	-	-	-
Stormwater Detention	25,00 litres of rainwater tanks detailed above will act in a detention capacity.	-	1
Stormwater Treatment	-	-	-
Others	-	-	-

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 4. Stormwater Management
Melbourne Water STORM calculator www.storm.melbournewater.com.au
Water Sensitive Urban Design Principles www.melbournewater.com.au
Environmental Protection Authority Victoria www.epa.vic.gov.au
Water Services Association of Australia www.wsaa.asn.au
Sustainable Landscaping www.ourwater.vic.gov.au

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

5. Building Materials

Objectives:

- to minimise the environmental impact of materials used by encouraging the use of materials with a favourable lifecycle assessment.

Issues	Applicant's Design Responses	Council Comments	CAR*
Reuse of Recycled Materials	No specific commitment has been provided.	Consider recycled materials in building materials such as insulation.	4
Embodied Energy of Concrete and Steel	No specific information has been provided.	Consider recycled water and post-industrial process materials, such as slag or fly ash to reduce the % volume of Portland cement.	4
Sustainable Timber	Sustainable timber sourced with FSC or PEFC certification.	Consider FSC accredited sustainable timber or recycled timber only.	1
Design for Disassembly	No information has been provided.	Consider a small pallet of materials and construction techniques that can assist in disassembly.	4
PVC	PVC used will meet best practice guidelines.	-	1

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 5. Building Materials
Building Materials, Technical Manuals www.yourhome.gov.au
Embodied Energy Technical Manual www.yourhome.gov.au
Good Environmental Choice Australia Standards www.geca.org.au
Forest Stewardship Council Certification Scheme www.fsc.org
Australian Green Procurement www.greenprocurement.org

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

6. Transport

Objectives:

- to minimise car dependency
- to ensure that the built environment is designed to promote the use of public transport, walking and cycling.

Issues	Applicant's Design Responses	Council Comments	CAR*
Minimising the Provision of Car Parks	Car parking throughout podium and basement levels.	-	1
Bike Parking Spaces	146 secure bicycle parking spaces on ground floor and carparking levels for staff, residents and visitors	Recommend increasing the number of residential, staff and visitor bike spaces to 175 for residents, 13 of staff plus visitor bike parking spaces.	2
End of Trip Facilities	End of trip facilities provided.	-	1
Car Share Facilities	No information has been provided.	-	1
Electric vehicle charging	Electric vehicle charging facilities provided.	-	1

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 6. Transport
Off-setting Car Emissions Options www.greenfleet.com.au
Sustainable Transport www.transport.vic.gov.au/doi/internet/icy.nsf
Car share options www.yarracity.vic.gov.au/Parking-roads-and-transport/Transport-Services/Carsharing/
Bicycle Victoria www.bv.com.au

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

7. Waste Management

Objectives:

- to ensure waste avoidance, reuse and recycling during the design, construction and operation stages of development
- to ensure long term reusability of building materials.
- to meet Councils' requirement that all multi-unit developments must provide a Waste Management Plan in accordance with the *Guide to Best Practice for Waste Management in Multi-unit Developments 2010*, published by Sustainability Victoria.

Issues	Applicant's Design Responses	Council Comments	CAR*
Construction Waste Management	A CWMP with a minimum 60% recycling/reuse target for construction and demolition waste.	-	1
Operational Waste Management	General waste and recycling waste. Dual waste chutes provided.	Consider providing composting for organic residential waste	4
Storage Spaces for Recycling and Green Waste	Area for bins, including recycling, can be identified on the plans.	-	1
Others	-	-	-

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 7. Waste Management
Construction and Waste Management www.sustainability.vic.gov.au
Preparing a WMP www.epa.vic.gov.au
Waste and Recycling www.resourcesmart.vic.gov.au
Better Practice Guide for Waste Management in Multi-Unit Dwellings (2002)
www.environment.nsw.gov.au
Waste reduction in office buildings (2002) www.environment.nsw.gov.au

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

8. Urban Ecology

Objectives:

- to protect and enhance biodiversity
- to provide sustainable landscaping
- to protect and manage all remnant indigenous plant communities
- to encourage the planting of indigenous vegetation.

Issues	Applicant's Design Responses	Council Comments	CAR*
On Site Topsoil Retention	There is no productive topsoil on this site.	-	NA
Maintaining / Enhancing Ecological Value	Landscaping to podium courtyard and ground floor surrounding the building.	-	1
Heat Island Effect	No specific information has been submitted.	-	1
Communal Spaces	Extensive communal spaces and facilities.	-	1

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 8. Urban Ecology
Department of Sustainability and Environment www.dse.vic.gov.au
Australian Research Centre for Urban Ecology www.arcue.botany.unimelb.edu.au
Greening Australia www.greeningaustralia.org.au
Green Roof Technical Manual www.yourhome.gov.au

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

9. Innovation

Objective:

- to encourage innovative technology, design and processes in all development, which positively influence the sustainability of buildings.

Issues	Applicant's Design Responses	Council Comments	CAR*
Significant Enhancement to the Environmental Performance	-	-	-
Innovative Social Improvements	-	-	-
New Technology	-	-	-
New Design Approach	-	-	-
Others	-	-	-

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 9. Innovation
Green Building Council Australia www.gbca.org.au
Victorian Eco Innovation lab www.ecoinnovationlab.com
Business Victoria www.business.vic.gov.au
Environment Design Guide www.environmentdesignguide.com.au

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

10. Construction and Building Management

Objective:

- to encourage a holistic and integrated design and construction process and ongoing high performance

Issues	Applicant's Design Responses	Council Comments	CAR*
Building Tuning	No information has been provided.	Recommend comprehensive commissioning and tuning of all major appliances and building services.	4
Building Users Guide	A Building Users Guide will be provided explaining optimal usage of building services and sustainability features and common areas.	-	1
Contractor has Valid ISO14001 Accreditation	-	-	-
Construction Management Plan	No information has been provided.	Recommend that an Environmental Management Plan be developed by the building contractor to monitor and control activities undertaken during construction.	4
Others	-	-	-

*** Council Assessment Ratings:**

1 – Design Response is SATISFACTORY; 2 – Design Response is NOT SATISFACTORY
3 – MORE INFORMATION is required; 4 – ESD IMPROVEMENT OPPORTUNITIES

References and useful information:
SDAPP Fact Sheet: 10. Construction and Building Management
ASHRAE and CIBSE Commissioning handbooks
International Organization for standardization – ISO14001 – Environmental Management Systems
Keeping Our Stormwater Clean – A Builder's Guide www.melbournewater.com.au

Attachment 7 - Environmental Sustainable Development Officer Referral Comments

Sustainable Management Plan (SMP)
for planning applications being considered by Yarra Council

Applicant Response Guidelines

Project Information:

Applicants should state the property address and the proposed development's use and extent. They should describe neighbouring buildings that impact on or may be impacted by the development. It is required to outline relevant areas, such as site permeability, water capture areas and gross floor area of different building uses. Applicants should describe the development's sustainable design approach and summarise the project's key ESD objectives.

Environmental Categories:

Each criterion is one of the 10 Key Sustainable Building Categories. The applicant is required to address each criterion and demonstrate how the design meets its objectives.

Objectives:

Within this section the general intent, the aims and the purposes of the category are explained.

Issues:

This section comprises a list of topics that might be relevant within the environmental category. As each application responds to different opportunities and constraints, it is not required to address all issues. The list is non-exhaustive and topics can be added to tailor to specific application needs.

Assessment Method Description:

Where applicable, the Applicant needs to explain what standards have been used to assess the applicable issues.

Benchmarks Description:

The applicant is required to briefly explain the benchmark applied as outlined within the chosen standard. A benchmark description is required for each environmental issue that has been identified as relevant.

How does the proposal comply with the benchmarks?

The applicant should show how the proposed design meets the benchmarks of the chosen standard through making references to the design brief, drawings, specifications, consultant reports or other evidence that proves compliance with the chosen benchmark.

ESD Matters on Architectural Drawings:

Architectural drawings should reflect all relevant ESD matters where feasible. As an example, window attributes, sun shading and materials should be noted on elevations and finishes schedules, water tanks and renewable energy devices should be shown on plans. The site's permeability should be clearly noted. It is also recommended to indicate water catchment areas on roof- or site plans to confirm water re-use calculations.

Attachment 8 - Engineering Services Unit Referral Comments

CITY OF YARRA

MEMO

To: **Amy Hodgen**

From: **Mark Pisani**

Date: **28 February 2018**

Subject: **Application No:** **PLN17/0858**
Description: **Major Development**
Site Address: **582 Heidelberg Road, Alphington**

I refer to the above Planning Application received on 10 January 2018 and the accompanying report prepared by GTA Consultants in relation to the proposed development at 582 Heidelberg Road, Alphington. Council's Engineering Services unit provides the following information:

CAR PARKING PROVISION

Proposed Development

Under the provisions of Clause 52.06-5 of the Yarra Planning Scheme, the development's parking requirements are as follows:

Proposed Use	Quantity/ Size	Statutory Parking Rate	No. of Spaces Required	No. of Spaces Allocated
One-bedroom dwelling	20	1 space per dwelling	20	20
Two-bedroom dwelling	114	1 space per dwelling	114	114
Three-bedroom dwelling	38	2 spaces per dwelling	76	76
Residential visitors	172 dwellings	1 space per 5 dwellings	34	22*
Office	982 m^2	3.5 spaces per 100 m^2 of net floor area	34	31**
Indoor Recreation Facility (Gymnasium)	280 m^2	Rate Not Specified	To the satisfaction of the Responsible Authority	1
		Total	278 Spaces + Parking for indoor recreation facility	264 Spaces

***** The 22 on-site visitor spaces would be shared amongst residential visitors, office clients and patrons of the gymnasium.

****** The 31 on-site spaces allocated to office employees.

To reduce the number of car parking spaces required under Clause 52.06-5 (including to reduce to zero spaces), the application for the car parking reduction must be accompanied by a Car Parking Demand Assessment.

Car Parking Demand Assessment

In reducing the number of parking spaces required for the proposed development, the Car Parking Demand Assessment would assess the following:

Attachment 8 - Engineering Services Unit Referral Comments

- *Parking Demand for the Residential Dwellings*. Parking for the residential dwelling has been provided at the statutory parking rate.
- *Parking Demand for Residential Visitors*. Peak parking for residential visitors generally occurs on weekday evenings and at weekends. Applying an established empirical peak residential parking rate of 0.12 spaces per dwelling for the 172 dwellings would result in a parking demand of 21 spaces. During normal business hours, the visitor parking rate would be much less than the 0.12 spaces per dwelling. Daytime visitor parking would be around 0.07 spaces per dwelling, which would result in 12 spaces. The provision of 22 visitor parking spaces would be shared by residential visitors, office clients and patrons of the gymnasium and is considered adequate. Any residential visitor parking overflow can be accommodated off-site.
- *Parking Demand for Office Use*. The office parking allocation of 31 spaces would be for staff. The parking demand of three office visitor parking (10% of the total office parking demand) would be contained within the shared visitor parking allocation.
- *Parking Demand for the Gymnasium*. GTA Consultants have sourced the NSW Road & Maritime Services' Guide to Traffic Generating Developments which provides a gymnasium parking rate of 4.5 spaces per 100 square metres of gross floor area. Applying this rate would equate to 12 spaces. This parking rate is considered a little high, and the actual parking demand may be lower. It is possible that some of the patronage to the gymnasium would be drawn from the offices and residences within the development.
- *Variation of Car Parking Demand over Time*. GTA have provided a summary of the variation in the visitor parking demand at the site. It is agreed that residential visitor parking would peak in the evenings. However, we disagree that gymnasium parking would not be generated during weekday evenings. In the event of any parking overflow during weekday evenings, this would need to be accommodated on-street.
- *Availability of Public Transport in the Locality of the Land*. The site is within walking distance of bus services operating along Heidelberg Road and Chandler Highway. The Fairfield and Alphington railway stations are several hundred metres from the site and can be accessed by foot.

Appropriateness of Providing Fewer Spaces than the Likely Parking Demand

Clause 52.06 lists a number of considerations for deciding whether the required number of spaces should be reduced. For the subject site, the following considerations are as follows:

- *Availability of Car Parking*. GTA Consultants have not provided any information on the availability of parking in the surrounding area or whether any parking overflow from the site could be accommodated on-street. Coate Avenue contains 2P parking restrictions operating from 7:00am to 7:00pm Mondays to Fridays. The majority of residential properties in the street have off-street parking. During weekday evenings, on-street parking spaces should be available.
- *Relevant Local Policy or Incorporated Document*. The proposed development is considered to be in line with the objectives contained in Council's *Strategic Transport Statement*. The site is ideally located with regard to sustainable transport alternatives and the reduced provision of on-site car parking would potentially discourage private motor vehicle ownership and use.

Adequacy of Car Parking

From a traffic engineering perspective, the waiver of residential visitor, office and gymnasium parking spaces is considered appropriate in the context of the development and the surrounding area. The bulk of the parking demand for the development can be comfortably accommodated on-site. Any short-stay parking overflow that may be generated could be accommodated on-street.

Engineering Services has no objection to the dispensation in the car parking requirement for this site.

Attachment 8 - Engineering Services Unit Referral Comments

TRAFFIC GENERATION

Trip Generation

The traffic generation for the site adopted by GTA Consultants is as follows:

Proposed Use	Adopted Traffic Generation Rate	Peak Hour	
		AM	PM
Residential (172 dwellings)	0.35 trips per dwelling in each peak hour Based on approved Development Plan for AMCOR	60	60
Office 982 m^2	2.0 trips per 100 m^2 in each peak hour. Based on approved Development Plan for AMCOR	20	20
Gymnasium 280 m^2	3.0 trips per 100 m^2 in each peak hour. Based on NSW RMS Guidelines	8	8
	Total	88	88

Distribution of Development Traffic

The following traffic distribution assumptions were adopted:

Direction	Proportion	Arterial Route
North	10%	Grange Road
South	10%	Chandler Highway
East	30%	Heidelberg Road
West	50%	Heidelberg Road

For the purpose of assessing the traffic impacts of the development, the above assumptions are considered reasonable.

Intersection Analysis

The traffic impact of the Heidelberg Road/Coate Avenue intersection was assessed by GTA Consultants using the SIDRA program, which measures intersection performance. SIDRA modelling works well under free flowing traffic conditions and may have limitations, such as queuing of downstream traffic. The intersection analysis was done for the base or existing traffic conditions and for post development conditions which incorporated the modelling previously undertaken for the Alphington Paper Mill Site.

The results of the intersection modelling recorded an anomaly for the south approach of Coate Avenue (the right turn movement onto Heidelberg Road), whereby this movement had exceed capacity during the PM peak hour. According to GTA, this is attributed to SIDRA not being able to detect gaps in stationary traffic queues to allow motorists to enter the traffic stream (in this case, Heidelberg Road). In the PM peak hour, the expected development traffic making the right turn onto Heidelberg Road is 28 trips. The storage of the right turn slot in the Heidelberg Road median can accommodate one to two cars. According to GTA's on-site observations of traffic conditions at the intersection during a weekday PM peak hour, stationary traffic queues were observed to extend beyond Coate Avenue (for the eastbound traffic queue on Heidelberg Road). In light of the above, traffic should be able to exit Coate Avenue satisfactory and without long delays.

The results of the post development modelling suggest that the Heidelberg Road/Coate Avenue intersection will operate satisfactorily.

Attachment 8 - Engineering Services Unit Referral Comments

DEVELOPMENT LAYOUT DESIGN

Layout Design Assessment

Item	Assessment
Access Arrangements	
Development Entrance	The 6.4 metre wide entrance satisfies *Design standard 1- Accessways* of Clause 52.06-9 and the Australian/New Zealand Standard AS/NZS 2890.1:2004.
Visibility	A visibility splay has been provided for the exit lane of the entrance in accordance with *Design standard 1*.
Headroom Clearance	Headroom clearance at entrance and at critical points along the internal ramps has not been dimensioned.
Vehicle Turning Movements – Development Entrance	The swept path diagrams for a B99 design vehicle and an oncoming B85 design vehicle satisfactorily demonstrate vehicle turning and passing movements at the entrance via Coate Avenue.
Internal Ramped Accessways	The 6.4 metre wall-to-wall widths of the internal ramps satisfy AS/NZS 2890.1:2004.
Car Parking Modules	
At-grade Parking Spaces	The dimensions of the at-grade parking spaces (4.9 metres by 2.6 metres) satisfy *Design standard 2: Car parking spaces*.
Tandem Parking Sets	The lengths of the tandem parking sets (10.3 metres) also satisfy *Design standard 2*.
Double Garages	The dimensions of the double garages (6.0 metres by 5.5 metres) satisfy *Design standard 2*.
Accessible Parking Space	With the exception of the length (which satisfies *Design standard 2*), the accessible parking spaces and shared areas satisfy the Australia/New Zealand Standard AS/NZS 2890.6:2009.
Aisles	The 6.4 metre wide aisles satisfy *Table 2: Minimum dimensions of car parking spaces and accessways* of Clause 52.06-9.
Column Depths and Setbacks	Not dimensioned on the drawings.
Clearances to Walls	Clearances of 300 mm have been provided to spaces abutting walls and are in accordance with Design standard 2.
Blind Aisle Extensions	Blind aisle extensions range from 0.985 metres to 1.0 metre and are considered satisfactory.
Gradients	
Ramp Grade for First 5.0 metres inside Property	The ramp grade within the first 5.0 metres inside the property is 1 in 12 and satisfies *Design standard 3: Gradients*.
Ramp Grades and Changes of Grade	The ramp grades and the changes of grade for the ramped accessway and the internal ramps satisfy *Design standard 3*. However, the ramp grade sections have not been dimensioned on the drawings.

Attachment 8 - Engineering Services Unit Referral Comments

Item	Assessment
Other Items	
Vehicle Entry and Exit Movements Double Garages	The swept path diagrams for a B85 design vehicle entering and exiting the garages are considered satisfactory. An additional correction manoeuvre would be required for vehicles entering and exiting one of the garages – permissible under AS/NZS 2890.1:2004 for long-stay resident parking.
Vehicle Entry and Exit Movements into Spaces adjacent to Blind Aisle Ends	The submitted swept path diagrams for vehicles entering and exiting bays adjacent to blind aisle ends are considered satisfactory.
Loading Bay	The dimensions of the loading bay (3.6 metres by 7.6 metres) satisfy Clause 52.07 – *Loading and Unloading of Vehicles*.
Vehicle Entry and Exit Movements Loading Bay	The swept path diagrams for a 6.4 metre Small Rigid Vehicle and a 6.34 metre waste collection vehicle into and out of the site and into and out of the loading bay are considered satisfactory.

Design Items to be Addressed

Item	Details
Headroom Clearance	To be dimensioned on the drawings at the entrance and at critical points along the internal ramps (measured perpendicular to the ramp grade). Headroom clearance should be a minimum of 2.1 metres throughout the car parks and 2.5 metres above accessible parking spaces.
Column Depths and Setbacks	To be dimensioned on the drawings and satisfy *Diagram 1 Clearance to car park spaces* of Clause 52.06-9.
Ramp Grades	Each ramp grade length and transition grade should be dimensioned on the drawings.
Proposed Canopy and Sight Lines of Traffic Signals – Chandler Highway (North Bound)	The applicant must ensure that the proposed canopy does not obstruct a driver's sight lines of the traffic signal lanterns at the Heidelberg Road/Chandler Highway intersection for north bound traffic on Chandler Highway.

PROPOSED REMOVAL OF ROAD HUMP

The applicant proposes to relocate the existing road hump in Coate Avenue in order to provide the new access point to the property. A site inspection of Coate Avenue revealed that there is very little opportunity to install a new road hump to another location in the street due to the large number of vehicle crossings and the limited opportunity to install a road hump underneath a street light. In lieu of a road hump, it is recommended that a raised pavement threshold treatment be installed at the northern end of Coate Avenue. A design for the raised pavement threshold, including associated drainage, is to be prepared and submitted to Council for assessment and approval.

The removal of the road hump would require the reinstatement of full depth road pavement to Council's engineering requirements.

The above works will be funded by the Permit Holder.

Attachment 8 - Engineering Services Unit Referral Comments

IMPACT ON COUNCIL ROAD ASSETS

The construction of the new buildings, the provision of underground utilities and construction traffic servicing and transporting materials to the site will impact on Council assets. Trenching and areas of excavation for underground services invariably deteriorates the condition and integrity of footpaths, kerb and channel, laneways and road pavements of the adjacent roads to the site.

It is essential that the developer rehabilitates/restores laneways, footpaths, kerbing and other road related items, as recommended by Council, to ensure that the Council infrastructure surrounding the site has a high level of serviceability for residents, employees, visitors and other users of the site.

ENGINEERING CONDITIONS

Civil Works

Upon the completion of all building works and connections for underground utility services,

- The footpath along the property's Coate Avenue, Heidelberg Road and Chandler Highway road frontages must be reconstructed to Council's satisfaction and at the Permit Holder's cost. The footpath must have a cross-fall of 1 in 40 or unless otherwise specified by Council.
- The kerb and channel along the property's Coate Avenue, Heidelberg Road and Chandler Highway road frontages must be reconstructed to Council's satisfaction and at the Permit Holder's cost.
- The nature strips surrounding the site must be cultivated and top dressed to Council's satisfaction and at the Permit Holder's cost.
- A new raised pavement threshold treatment to be constructed at the Coate Avenue Heidelberg Road intersection to Council's satisfaction and at the Permit Holder's cost. The detailed design of the raised pavement threshold treatment is to be incorporated into the overall detailed design of civil infrastructure and public realm works surrounding the development.
- All redundant vehicle crossings must be demolished and reinstated to Council's satisfaction and at the Permit Holder's cost.
- The existing road hump in Coate Avenue must be demolished and reinstated with full depth road pavement to Council's satisfaction and at the Permit Holder's cost.
- The vehicle crossing servicing the development entrance on the east side of Coate Avenue must be constructed to Council's satisfaction. Materials to be used must comply with Council's *Infrastructure Road Materials Policy*. The vehicle crossing must satisfy the vehicle ground clearance requirements for the B99 design vehicle. The telecommunications pit within the area of the new crossing is to be provided with a heavy duty lid.
- The half width road pavement of Coate Avenue, outside the site's frontage, must be profiled (grinded up to 50 mm) and re-sheeted to Council's satisfaction and at the Permit Holder's cost.
- The splay at the north west corner of the site must be maintained at ground level, including all subsurface levels.

Public Lighting (on Roads)

- The existing electrical pole and street light on the west side of Coate Avenue (pole No. AO14752) must be replaced with an alternative luminaire to eliminate light spill into the habitable windows of the new dwellings, to the satisfaction of the relevant power authority. The supply and installation of the replacement luminaire are to be funded by the Permit Holder.

Attachment 8 - Engineering Services Unit Referral Comments

Road Asset Protection

- Any damaged roads, footpaths and other road related infrastructure adjacent to the development site as a result of the construction works, including trenching and excavation for utility service connections, must be reconstructed to Council's satisfaction and at the developer's expense.

Construction Management Plan

- A Construction Management Plan must be prepared and submitted to Council. The Plan must be approved by Council prior to the commencement of works. A detailed dilapidation report should detail and document the existing and post construction conditions of surrounding road infrastructure and adjoining private properties.

Impact of Assets on Proposed Development

- Any services poles, structures or pits that interfere with the proposal must be adjusted, removed or relocated at the owner's expense after seeking approval from the relevant authority.
- Areas must be provided inside the property line and adjacent to the footpath to accommodate pits and meters. No private pits, valves or meters on Council property will be accepted.

Removal, Adjustment, Changing or Relocation of Parking Restriction Signs

- No parking restriction signs or line-marked on-street parking bays are to be removed, adjusted, changed or relocated without approval or authorisation from Council's Parking Management unit and Construction Management branch.
- Any on-street parking reinstated as a result of development works must be approved by Council's Parking Management unit.
- The removal of any kerbside parking sensors and any reinstatement of parking sensors will require the Permit Holder to pay Council the cost of each parking sensor taken out from the kerb/footpath/roadway. Any costs associated with the reinstatement of road infrastructure due to the removal of the parking sensors must also be borne by the Permit Holder.

NON-PLANNING ADVICE FOR THE APPLICANT

Legal Point of Discharge

The applicant must apply for a Legal Point of Discharge under Regulation 610 – Stormwater Drainage of the *Building Regulations 2006* from Yarra Building Services unit. Any storm water drainage within the property must be provided and be connected to the nearest Council pit of adequate depth and capacity (legal point of discharge), or to Council's satisfaction under Section 200 of the *Local Government Act 1989* and Regulation 610.

Preparation of Detailed Road Infrastructure Design Drawings

The developer must prepare and submit detailed design drawings of all road infrastructure and drainage works associated with this development for assessment and approval. The design must provide reduced levels to ensure that external ground surfaces within private properties that are publicly trafficable are flush with Council footpaths.

Discharge of Water from Development

- Only roof runoff, surface water and clean groundwater seepage from above the water table can be discharged into Council drains.
- Contaminated ground water seepage into basements from above the water table must be discharged to the sewer system through a trade waste agreement with the relevant authority or in accordance with EPA guidelines.
- Contaminated groundwater from below the water table must be discharged to the sewer system through a trade waste agreement from the relevant sewer authority.

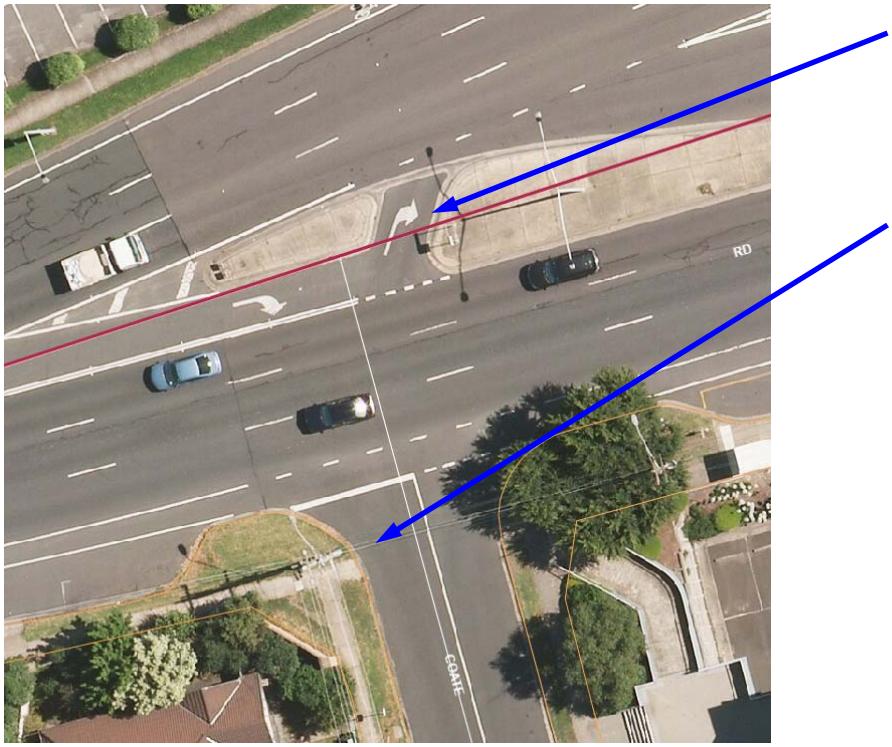
Attachment 8 - Engineering Services Unit Referral Comments

- Council will not permit clean groundwater from below the groundwater table to be discharged into Council's drainage system. Basements that extend into the groundwater table must be waterproofed/tanked.

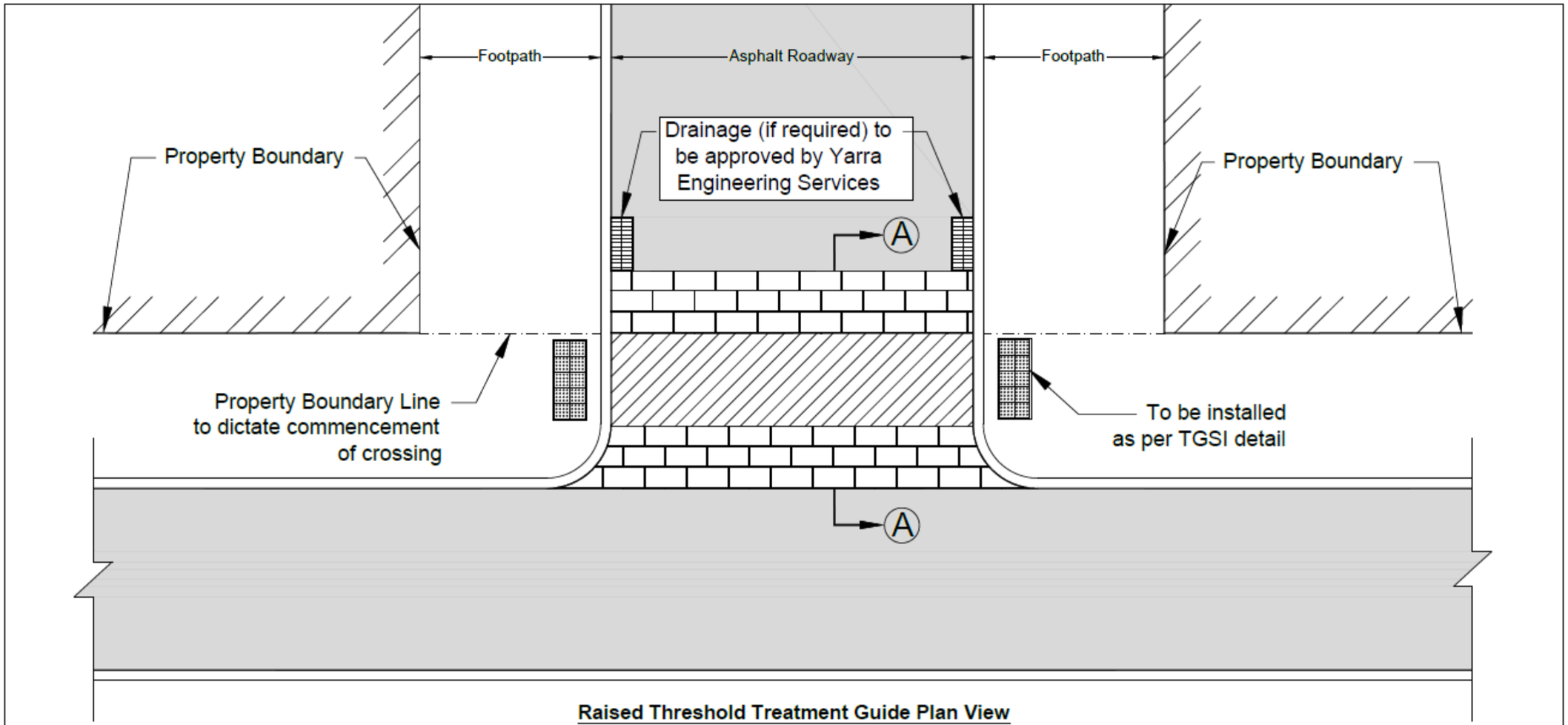
ADDITIONAL INFORMATION PROVIDED BY CONSTRUCTION MANAGEMENT
General Construction Activity Comments

- All road pavement reinstatements must be consolidated as single full-width areas of reinstatement to reduce further construction joints in the pavement.
- Redundant pits/services to be removed and Council assets to be reinstated.
- Comment from Council's Open Space branch should be sought in relation to existing street trees along Heidelberg Road that would be potentially impacted on by the proposed building and canopy.
- Clearances between the building canopy and street lamp posts on Heidelberg Road and Chandler Highway are to be shown on plans. Minimum clearances should be confirmed by the relevant power authority.
- Public Transport Victoria must be consulted with respect to the bus stop infrastructure. PTV to confirm if they are satisfied with the proximity of the building canopy to the bus shelter for the bus stop on the south side of Heidelberg Road.
- A Section 173 agreement should be drafted to ensure that applicant maintains, and is liable for, external ground floor surfaces that are publicly trafficable within the property.
- Pedestrian tactile surface indicators to be retained, or replaced where appropriate, on footpaths surrounding the site.
- Fire exit doors should be recessed and out swinging doors should not protrude beyond the title boundary.
- Confirmation should be sought from Citipower regarding the suitability of locating the substation along site's Chandler Highway frontage. It should be noted that there is a fire hydrant at that location.

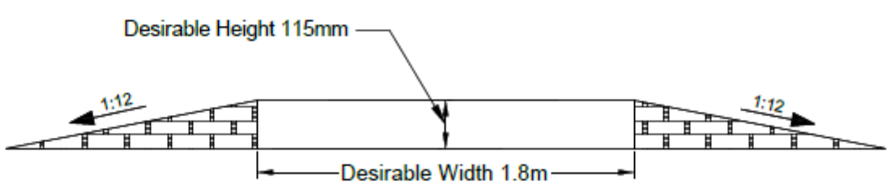
Intersection of Heidelberg Road/Coate Avenue



Attachment 8 - Engineering Services Unit Referral Comments

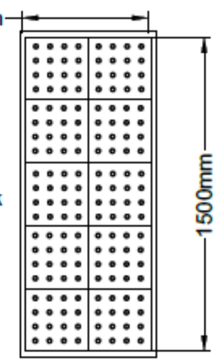


Raised Threshold Treatment Guide Plan View
Scale - 1:75



Section A-A
Scale - 1:25

Note:
To be installed **300mm** from back of Kerb



TGSI Detail
Scale - 1:25

Notes:

1) Vehicular access must satisfy 85th percentile vehicle. Ramp grades adjusted accordingly.

2) Pedestrian access cross fall to be between 2% and 5%.

3) Sliced Blue Stone (smooth side up) to be used on ramps.

4) Height to be consistent across crown of road - 115mm.

Yarra Standard:YSD711
Drawing Title:
TYPICAL DETAILS - RAISED THRESHOLD TREATMENT

Scale : N.T.S

REV	DATE	DRAWN BY
A	5/02/16	HL
B	10/02/17	AW
B	08/05/17	AW

CITY OF YaRRA

Richmond Town Hall 333 Bridge Road Richmond PO Box 168 Richmond 3121
Phone (03) 9205 5010 Fax (03) 8417 6666

Attachment 9 - Strategic Transport Referral Comments

Planning Referral

To:	Amy Hodgen
From:	Julian Wearne
Date:	25/01/2018
Subject:	Strategic Transport Comments
Application No:	PLN17/0858
Description:	Proposed mixed-use development including dwellings, gymnasium and office.
Site Address	582 Heidelberg Road, Alphington

I refer to the above Planning Application referred on 11/01/2018, and the accompanying Traffic report prepared by GTA Consultants in relation to the proposed development at 582 Heidelberg Road, Alphington. Council's Strategic Transport unit provides the following information:

Transport Impact Assessment

As part of the permit application, the applicant has provided a Transport Impact Assessment (TIA) which appears to contain some inaccurate, or outdated information. Specifically, the following inaccuracies have been noted:

- The TIA inaccurately lists the number of dwellings (*this is noted however in the cover letter from GTA as part of the RFI response).*
- The TIA states there is 982sqm of office space, when 1230sqm of floor space is shown on the plans (Ground and Level 1).
- The TIA states there is no statutory bicycle provision rate for the gymnasium use. The gymnasium use falls under 'Minor Sports and Recreation Facility' which is listed in clause 52.34, with a statutory rate for bicycle provision. The TIA also inaccurately states the floor area of the gymnasium.
- Based on the above inaccuracies the TIA states there is no statutory requirement for changeroom shower facilities, but claims 1-2 are included in the development. However, there based on the analysis below, there is a statutory requirement for changeroom/shower facilities, whilst none are shown on the plans.

Access and land-use intensity

The proposal will result in a significant increase in land-use intensity for the subject site. This combined with other major developments at the Alphington Paper Mill site, and at 700-718 Heidelberg Road will likely result in considerable extra demand on the existing surrounding road, footpath and public transport networks.

Of particular concern is the pressure additional activity will put on the existing Heidelberg Road footpath, which is narrow and includes a bus-shelter on the footpath adjacent the subject site. Pedestrians navigating around the bus shelter under existing volumes frequently elect to walk across the nature strip (Figure 1), which indicates the shelter is a navigational obstacle; the obstacle is likely to be especially problematic for wheelchair users and people with prams. It is expected that an increase in pedestrian and bus user volumes would further exacerbate this issue.

Attachment 9 - Strategic Transport Referral Comments

Figure 1 – Pedestrian's frequently walk along the nature strip rather than navigate the tight corner around the bus shelter.

Without intervention, this situation would likely be exacerbated with expected increases in pedestrian and bus user volumes.

To cope with the expected additional pedestrian and bus user demand, the applicant should provide a moderate ground-floor setback which allows the existing footpath to be widened away from the road. Additionally, given the proposed canopy extends partially over the existing bus shelter, a setback at ground-floor would allow for the entire bus shelter to be removed, and replaced with seating beneath the canopy in approximately the same location. The applicant should liaise with PTV about removing the bus shelter. These recommended changes have been informally discussed with Council's Urban Design Unit, who have offered general support for the concept: the Urban Design Unit should be further consulted with regards to changes to the footpath and surrounds.

Bicycle Parking Provision

Statutory Requirement

Under the provisions of Clause 52.34-3 of the Yarra Planning Scheme, the development's bicycle parking requirements are as follows:

Proposed Use	Quantity/ Size	Statutory Parking Rate	No. of Spaces Required	No. of Spaces Allocated
Dwellings	dwellings	In developments of four or more storeys, 1 resident space to each 5 dwellings	34 resident spaces	
		In developments of four or more storeys, 1 visitor space to each 10 dwellings	17 visitor spaces.	
Office (other than specified in the table)	1230 sqm	1 employee space to each 300 sqm of net floor area if the net floor area exceeds 1000 sqm	4 employee spaces	
		1 visitor space to each 1000 sqm of net floor area if the net floor area exceeds 1000 sqm	1 visitor spaces.	
Minor sports and recreation facility (gymnasium)	4* employees	1 employee space per 4 employees	1 employee spaces	
	350 sqm	1 to each 200sqm of net floor area	2 visitor spaces.	
		Bicycle Parking Spaces Total	**40 resident / employee spaces**	**146 bicycle spaces**
			21 visitor spaces	
Showers / Change rooms		1 to the first 5 employee spaces and 1 to each additional 10 employee spaces	**1 showers / change rooms**	**0 showers / change rooms**

**The maximum number of employees is assumed based on the floor area of the gym.*

Attachment 9 - Strategic Transport Referral Comments

The development provides a total of 85 additional bicycle spaces above what is required by the planning scheme, however the statutory requirement for showers and change rooms has not been met.

Adequacy of visitor spaces
No spaces are noted as dedicated visitor bicycle parking spaces. Instead the TIA notes all spaces are suitable to be used by visitors and employees/residents. This arrangement is inadequate for the following reasons:

- Security and access requirements for visitor and resident/employee spaces differs given visitor spaces are primarily for short-term storage, whilst employee and resident spaces must provide a safe and secure longer term storage space.
- Visitor spaces should always be located to provide quick and easy access.
- Spaces are scattered in various locations within the car park, with steep ramps between some of the spaces (up to 1:4) which are difficult for some cyclists to navigate safely. Given this arrangement cyclists may be forced to spend time navigating the car park looking for a parking space, which increases the likelihood of conflicts with vehicles within the car park.
- At least 46 visitor spaces are required to meet Council's best practice guidelines. This comprises of the BESS recommended rate for office spaces (2) and dwellings (43), and the statutory rate for the gymnasium (1).
- Visitor spaces should be:
    - Accessible to visitors (i.e. not located within a secure facility);
    - At a horizontal bicycle rail.

Given the above concerns, at least the expected demand for visitor spaces for the office and gymnasium uses should be directly accessible from the Heidelberg Road frontage (3 spaces) with the remaining visitor spaces to be easily accessible in non-dispersed locations within the ground-floor of the garage.

Adequacy of employee spaces
Number of spaces
Whilst the proposal includes a surplus of 85 bicycle spaces above the requirements of the planning scheme, it is noted:

- Employee/resident spaces should be located separately to visitor spaces for reasons noted previously;
- the subject site is located in an inner-urban area with already high cycling-to-work demand, and trends indicate demand will continue to increase; and
- both local and state planning policies include objectives to promote sustainable transport modes, including cycling.
- Given the above, best-practice requires a rate of 1 space to each dwelling[1] (172), 1 space to each 100sqm of office floor space[2] (13), plus the statutory rate for the gymnasium use (1). Therefore it is recommended a minimum of 185 resident/employee spaces be provided. At least 20% of resident/employee spaces should be provided as horizontal bicycle spaces.
- A minimum of 2 changerooms/showers should be provided for the expected office demand.

Design and location of employee spaces and facilities
Employee and resident spaces are inadequately located and designed for the following reasons:

[1] *Category 6 of the BESS offers the following for best-practice guidance for resident bicycle parking rates: "As a rule of thumb, at least one bicycle space should be provided per dwelling for residential buildings."*
[2] *Category 6 of the Built Environment Sustainability Scorecard (BESS) offers the following best-practice guidance for bicycle parking rates: 'Non-residential buildings should provide spaces for at least 10% of building occupants.' Assuming a floor-space occupancy of 1 staff member to 10sqm (which is the maximum rate allowed under the National Construction Code for fire safety), providing bicycle spaces for 10% of occupants results in a rate of 1 space per 100sqm of floor area*

Attachment 9 - Strategic Transport Referral Comments

- Bicycle parking is provided at Basement 3, Ground Floor and Level 1, with spaces in various locations at Ground Floor. Given the ramps within the car park, it is envisioned many cyclists would chose to access the bicycle parking from the lift-shaft. This is inadequate given many cyclists may need to travel to and from the lift-shaft to access other floors if one parking area is full. It is recommended employee resident bicycle parking be contained in a maximum of two secure facilities, within close proximity to the lift-shaft.
- None of the spaces at ground-floor are located within a secure facility. Pursuant to Clause 52.34-3 & Australian Standard AS2890.3 bicycle spaces for residents and employees must be provided in a bicycle locker, or in a lockable compound. Given the ground-floor of the car park is accessible to visitors, these spaces are not located within a secure facility.
- Given the above concerns a detailed assessment of walkways and spacing dimensions has not been undertaken, however all walkways and bicycle parking spaces must comply with Australian Standard AS2890.3.

Green Travel Plan

It is noted most required information regarding travel options is provided within the Traffic Impact Assessment (TIA), however no Green Travel Plan (GTP) has been provided. Given the development has a total non-residential floor area of more than 1,000sqm, pursuant to Clause 22.17-4 a GTP must be provided. The GTP should accurately reflect the floor plans and correct the inaccuracies previously noted within the TIA. The GTP should contain the following information:

1. Before the use and/or development commences, a Green Travel Plan to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. When approved, the Green Travel plan will be endorsed and will form part of this permit. The Green Travel Plan must include, but not be limited to, the following:

    (a) a description of the location in the context of alternative modes of transport;
    (b) employee welcome packs (e.g. provision of Myki/transport ticketing);
    (c) sustainable transport goals linked to measurable targets, performance indicators and monitoring timeframes;
    (d) a designated ‘manager’ or ‘champion’ responsible for coordination and implementation;
    (e) details of bicycle parking and bicycle routes;
    (f) details of GTP funding and management responsibilities;
    (g) the types of bicycle storage devices proposed to be used for employee, resident and visitor spaces (i.e. hanging or floor mounted spaces);
    (h) security arrangements to access the employee bicycle storage spaces; and
    (i) signage and wayfinding information for bicycle facilities and pedestrians pursuant to Australian Standard AS2890.3;
    (j) provisions for the Green Travel Plan to be updated not less than every 5 years.

Electric vehicles / share cars / other relevant topics?

Council’s BESS guidelines encourage the use of fuel efficient and electric vehicles (EV). Whilst it is noted one electric car charging points is proposed at this stage, to ensure the potential for expanded future provision for electric vehicle charging the basement levels should be electrically wired to be ‘EV ready’. A minimum 40A single phase electrical sub circuit should be installed to the basement levels for this purpose.

Recommendations

The following should be shown on the plans before endorsement:

(a) A ground-floor setback along the Heidelberg Road frontage and the footpath to be widened away from Heidelberg Road.
(b) The existing bus shelter at Heidelberg Road removed and replaced with bench seating sheltered by the building canopy.

Attachment 9 - Strategic Transport Referral Comments

(c) A minimum of 46 visitor bicycle parking provided in a location easily accessed by visitors to the site. At least 3 of the visitor spaces, should be directly accessible from the Heidelberg Road frontage, the remainder should be located within the ground-floor of the car park.

(d) A minimum of 46 visitor bicycle parking provided in a location easily accessed by visitors to the site. At least 3 of the visitor spaces, should be directly accessible from the Heidelberg Road frontage, the remainder should be located within the ground-floor of the car park.

(e) A minimum of 185 resident/employee spaces provided within a maximum of two secure facilities in compliance with Australian Standard AS2890.3 or to the satisfaction of the Responsible Authority. Resident/employee spaces should be provided with reasonable proximity and access to:
   i. Building entrances and/or lift shafts;
   ii. End of trip facilities, including showers and change rooms.

(f) All resident and/or employee bicycle parking facilities to include a minimum of 20% of ground level (horizontal) spaces.

(g) Dimensions of bicycle storage spaces, and relevant access ways noted to demonstrate compliance with Australian Standard AS2890.3 or to the satisfaction of the Responsible Authority.

A Green Travel Plan / An Amended Green Travel Plan should be provided with the information outlined previously.

Regards

Julian Wearne

Transport Planning Officer
Strategic Transport Unit

Attachment 10 - City Works Unit Referral Comments

Hodgen, Amy

From: Orr, Patrick
Sent: Thursday, 22 February 2018 2:13 PM
To: Hodgen, Amy
Subject: RE: PLN17/0858 - 582 Heidelberg Road, Alphington - WMP referral

Hi Amy,

The waste management plan for 582 Heidelberg Rd, Alphington dated 21/12/2017 authored by Wastetech is satisfactory from a City Works branch's perspective.

Regards,

Patrick Orr
Contract Management Officer
City Works
Yarra Operations Depot, Clifton Hill

City of Yarra PO Box 168 Richmond 3121
T:(03) 9205 5554 **F:**(03) 8417 6666
E: patrick.orr@yarracity.vic.gov.au

Please consider the environment before you print this email!

From: Hodgen, Amy
Sent: Tuesday, 20 February 2018 5:01 PM
To: Orr, Patrick
Cc: Agostino, Joe
Subject: PLN17/0858 - 582 Heidelberg Road, Alphington - WMP referral

Hi Patrick,

Could you please review the Waste Management Plan associated with a proposed development at 582 Heidelberg Road, Alphington. Documents attached.

If you have any questions or need any additional information, please do not hesitate to contact me.

Regards
Amy

Amy Hodgen
Coordinator - Statutory Planning
City of Yarra PO Box 168 Richmond 3121
T (03) 9205 5330 **F** (03) 8417 6666
E amy.hodgen@yarracity.vic.gov.au
W www.yarracity.vic.gov.au

Attachment 11 - Wind Consultant peer review (Vipac)

Vipac Engineers and Scientists Limited

279 Normanby Rd, Port Melbourne, VIC 3207, Australia

Private Bag 16, Port Melbourne, VIC 3207, Australia

t. +61 3 9647 9700 | **f.** +61 3 9646 4370 | **e.** melbourne@vipac.com.au

w. www.vipac.com.au | A.B.N. 33 005 453 627 | A.C.N. 005 453 627

City of Yarra

333 Bridge Road

Richmond, VIC 3121

13-02-2018

Ref: 30N-18-0001-TNT-637919-0

Attention: Amy Hodgen

Dear Amy,

582 Heidelberg Road, Alphington - Peer Review

This peer review of the MEL Consultants Desktop Environment Assessment (MEL Consultants Report: D138/17) is based on Vipac's experience as a wind-engineering consultancy. No wind tunnel studies have been undertaken to support this review.

Vipac have reviewed the wind assessment report and associate drawings provided (see the file list in the attachment) and made the following comments:

- The MEL Consultants Desktop Environment Assessment has been prepared based on consultancy experience and no wind tunnel testing has been carried out to support their assessment. We have no issue with this method for a desktop study as this is a common approach to provide architects, developers and responsible authorities advice on the wind impact of the proposed design.
- We have no issue with the analysis approach, assessment criteria, wind environment and exposure estimate. MEL Consultants has clearly identified the process for the desktop assessment and this is consistent with the approach that Vipac would take to prepare a desktop wind effect statement.
- The report analysed wind effects adjacent to the development along Heidelberg Road, Chandler Highway, and Coate Avenue; the South Face; the communal open spaces on Levels 3 and 12; and Private Terraces. The report concluded that wind conditions in the surrounding streetscapes that would achieve the criterion for walking comfort for all wind directions. We agree with this conclusion. We also agreed that the area outside of the residential tower entrance would have wind conditions within short term stationary activities criterion and the area outside of the entrance to the gym and commercial tenancies would have wind conditions exceeding the short term stationary criterion. Relocating the entrances away from the corner is a suitable recommendation. An alternate recommendation would be to incorporate set back entrances.
- Vipac agrees with MEL Consultant's suggestion of "the wind conditions in the surrounding streetscapes be quantified by a wind tunnel study." in the detail design stage due to the building height of ≥ 40 m.

Attachment 11 - Wind Consultant peer review (Vipac)

In conclusion, the Mel Consultants Desktop Environment Assessment used the proper analysis methodology, analysed the wind effects on the pedestrian level by the proposed development in detail. The Assessment satisfies the requirements of the Responsible Authority.

Vipac makes no further recommendations.

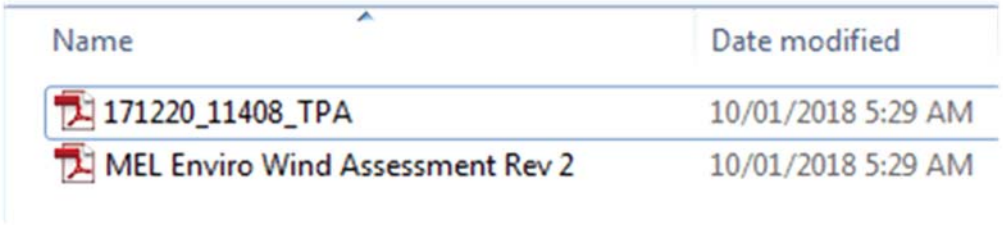
Yours sincerely,

Vipac Engineers & Scientists Ltd

Zhuyun Xu
Senior Wind Engineer

Sophie Lamande
Wind Group Leader

Attachments: List of documents reviewed:



Attachment 12 - Acoustic Consultant Peer Review (SLR Consulting)

7 February 2018

640.10090.05220 582 Heidelberg Rd Alphington 20180130.docx

City of Yarra
PO Box 168
Richmond VIC 3121

Attention: Amy Hodgen

Dear Amy

582 Heidelberg Road, Alphington
Planning Assessment Acoustic Review
PLN 17/0858

SLR Consulting Pty Ltd (SLR) has been retained by the City of Yarra to provide a review of the acoustic assessment report for the mixed use development proposed for 582 Heidelberg Road, Alphington.

Details of the report are as follows:

- Title: 582 Heidelberg Road, External Noise Intrusion
- Reference: 20171114.1/2908A/R4/BAW
- Date: 29 August 2017
- Prepared by: Acoustic Logic

We have also been asked to take into consideration the Chandler Highway Noise Mitigation assessment prepared by Arup. Details of the Arup report are:

- Title: Chandler Highway Upgrade, Noise Mitigation Assessment
- Reference: R0001
- Date: 10 August 2016
- Prepared by: Arup Pty Ltd

A planning permit has not been issued for the project and the acoustic report has been prepared to address a City of Yarra Request for Further Information on the project. The request is reproduced below:

1. *(d) Acoustic report having regard to internal and external noise impacts on the development and surrounds (as relevant).*

1 Arup Report for Chandler Highway Upgrade

The acoustic report prepared for the proposal references the Arup report for the Amcor site (682 Heidelberg Road) but does not reference the more recent Arup report for the Chandler Highway Upgrade (CHU). The CHU report predicts the change in road traffic noise in the vicinity of Chandler Higher due to the proposed works. The 2016 (pre-modification) road traffic noise levels are predicted at the subject site from a calibrated noise model, and the model is used to predict road traffic impacts in 2031 (post upgrade).

SLR Consulting Australia Pty Ltd Suite 2, 2 Domville Avenue Hawthorn VIC 3122 Australia
T: +61 3 9249 9400 F: +61 3 9249 9499 E: melbourne@slrconsulting.com
www.slrconsulting.com ABN 29 001 584 612

Attachment 12 - Acoustic Consultant Peer Review (SLR Consulting)

However, the Arup report predicts an increase in noise level of less than 1 dB in the vicinity of the subject development due to the CHU. Section 6.4 of the CHU report indicates that the predicted levels take into consideration contribution of up to 1.5 dB due to reflections from buildings proposed for the Amcor site.

Given that the predicted increase in noise levels due to the CHU appears to be less than 1 dB, the report does not have significant implications for the subject application. If Acoustic Logic have quantified the pre-modification noise from the Chandler Highway this data should be sufficient for identifying future noise impacts.

2 Acoustic Logic Report Review

2.1 Preliminary

(Section 2 of the acoustic report)

The development comprises:

- 13 residential storeys (including some residences on the ground level)
- Ground and Level one offices (no general commercial or retail areas shown in the current drawings)
- Ground floor gymnasium
- Two basement carparks

Road traffic noise from vehicles on both Heidelberg Road and Chandler highway are identified as the main source of noise impact to the subject development.

***SLR comment*:** *The project and potential noise impacts are generally identified.*

The architectural drawings included in the acoustic report have the same date but are an earlier revision of those supplied with the application. There are a number of differences between the two sets of drawings, and the acoustic report should be updated to reflect these.

We note that there are communal outdoor areas on Levels 3 and 12 (the latter is not shown in the drawings referred to in the report), and noise from these areas to existing dwellings and potentially to apartments within the development should be considered.

2.2 Road Traffic Noise

2.2.1 Design Targets

(Section 4 of the acoustic report)

Road traffic noise is proposed to be assessed to AS/NZS 2107:2016 recommended internal noise levels for developments near major roads. The recommended ranges are provided in Table 5 of the report.

SLR Comment: *Acoustic Logic do not nominate which part of the AS/NZS2107 ranges they propose to meet and under what conditions. The specific design targets should be nominated in the report to avoid ambiguity. We recommend the following:*

- *Average traffic noise levels not to exceed 40 dBA $L_{eq,16h}$ in all habitable rooms and 35 dBA $L_{eq,8h}$ in bedrooms. These targets are in line with the recently released Better Apartments Design Standards and are within the AS/NZS 2107 ranges, and*

Attachment 12 - Acoustic Consultant Peer Review (SLR Consulting)

- *Loudest hour of road traffic noise is not to exceed 45 dBA $L_{eq,1h}$ in habitable rooms from 7 am to 10 pm, and 40 dBA $L_{eq,1h}$ in bedrooms from 10 pm to 7 am the following morning. The basis for the loudest hour targets is AS/NZS2107:2016, with the day and night periods defined in accordance with Victorian EPA legislation and guidelines rather than in accordance with the Better Apartment Design Standards.*

2.2.2 Traffic Noise Measurements

(Section 6 of the acoustic report)

Traffic noise impacts to the subject site have been quantified through attended and unattended noise measurements. The unattended measurements were undertaken on the roof of the existing two storey building at the subject site, from 14 to 20 August 2017. The results are summarised in Table 3 of the acoustic report. Noise logging data is presented in Appendix 2.

Attended measurements were taken closer to the roads (3 and 4 m from the curbs) on 14 August 2017 during the afternoon peak traffic period.

SLR Comment: *The traffic noise measurements were undertaken at appropriate times and in suitable locations. The results are clearly reported.*

The existing building on the subject site is set back from both Chandler Highway (about 10 m) and Heidelberg Road (about 20 m). The logging data has presumably been adjusted to obtain noise levels at the most exposed facades of the development, which are closer to the roads than the monitoring locations. However, details of any adjustments made are not included in the report. This information should be presented for transparency. Based on the attended and unattended measurement data provided, it would seem likely that the traffic noise levels at the most impacted facades are 4 dB and 2 dB higher (Heidelberg Road and Chandler Highway respectively) than the logging data indicates.

2.2.3 Assessment / Predictions of Traffic Noise to the Development Facade

(Section 7 of the report)

An explicit assessment of road traffic noise is not provided. Proposed glazing upgrades are shown in the marked up drawings attached to the report. Some advice is provided for roof / ceiling and external wall construction.

SLR Comment: *We cannot conduct a full review of the glazing proposed for the project on the basis of the information provided. We would need to know: the predicted noise levels at the façade of the development; the spectra for both the Heidelberg Road and Chandler Highway facades; the glazing test data used by Acoustic Logic; the window dimensions, and the proposed floor coverings in order to conduct a full review.*

However, on the basis of the limited review we can carry out, it would seem likely that the internal targets we have proposed will not be achieved for some spaces with the proposed glazing. Our main concerns are the most exposed rooms with very large areas of glazing (e.g. corner bedrooms overlooking Heidelberg Road and/or Chandler Highway).

In addition to the wall and roof advice provided in the report, we recommend that the report include a recommended minimum R_w rating for lightweight external walls exposed to high levels of road traffic.

Attachment 12 - Acoustic Consultant Peer Review (SLR Consulting)

2.3 Project Mechanical Plant and Equipment

(Section 8 of the acoustic report)

Project mechanical plant is proposed to be assessed to SEPP N-1 and the Victorian EPA Noise Control Guidelines. Acoustic Logic state that the relevant noise limits will be able to be met with standard acoustic treatments.

SLR Comment: *Noise limits for mechanical plant have not been identified in the acoustic report. The development application will include a large amount of centrally located mechanical plant to service the common areas, commercial levels and basement carpark. While this site does not appear to represent a high risk of nuisance from mechanical plant, we nevertheless recommend that design targets are nominated in the acoustic report at the most sensitive receiver locations. For this development, it would be acceptable to use SEPP N-1 zoning levels as interim noise limits.*

In the absence of background noise measurements at sensitive receiver locations, conservative design targets for balcony mounted air conditioning units can be nominated such that compliance is likely during the day and evening periods. Restrictions are only likely to apply to condenser units proposed for balconies on the quiet side of the building and in close proximity to neighbouring receivers.

3 Communal Outdoor Areas

Large communal outdoor areas are proposed for Levels 3 and 12 and noise from these areas is not considered in the report. The Level 3 area includes communal facilities and an outdoor pool. The pool is in close proximity to existing residential dwellings. Advice for balcony balustrades should be provided to minimise impacts to existing dwellings. Advice for glazing upgrades to apartments potentially exposed to high levels of noise from the outdoor patron area should also be provided in the report. The report currently allows 6 mm float glass to be installed in windows overlooking the communal outdoor area, and this will not be effective in controlling voice noise.

The Level 12 outdoor area is less of a concern due to its distance from existing dwellings and because there are no overlooking apartments.

1 SLR Summary

The acoustic report for 582 Heidelberg Road, Alphington has been prepared to address potential noise impacts to and from the project. The areas we recommend addressing in further detail are listed below.

Road Traffic Noise

1. The specific road noise targets adopted for the project should be nominated in the report to avoid ambiguity. Our recommended targets are:
   - Average traffic noise levels not to exceed 40 dBA $L_{eq,16h}$ in all habitable rooms and 35 dBA $L_{eq,8h}$ in bedrooms. These targets are in line with the recently released Better Apartments Design Standards and are within the AS/NZS 2107 ranges, and

Attachment 12 - Acoustic Consultant Peer Review (SLR Consulting)

- Loudest hour of road traffic noise is not to exceed 45 dBA $L_{eq,1h}$ in habitable rooms from 7 am to 10 pm, and 40 dBA $L_{eq,1h}$ in bedrooms from 10 pm to 7 am the following morning. The basis for the loudest hour targets is AS/NZS2107:2016, with the day and night periods defined in accordance with Victorian EPA legislation and guidelines rather than in accordance with the Better Apartment Design Standards.

The revised report should include confirmation that the above recommended design targets will be met.

2. The predicted noise levels at the most impacted locations on the façade of the development, as used in the design of façade upgrades, should be provided in the report for transparency. In line with our recommended targets, the levels should include:
   - Day and night average levels, and
   - Day and night loudest hours levels
3. Recommended minimum R_w ratings should be provided for lightweight walls exposed to noise from Heidelberg Road.
4. The marked up drawings showing façade upgrades treatments should be updated to reflect the latest plans. This may have implications for façade upgrades proposed in some areas.

Project Mechanical Plant and Equipment

5. Noise limits have not been nominated for commercial mechanical plant. In the absense of background noise data we recommend using the SEPP N-1 zoning levels as the interim noise limits and conservative targets for balcony mounted condenser units. As indicated in the review, only those balcony units proposed to be installed on the quiet side or the building are likely to be at risk of exceeding EPA guidelines.

Communal Outdoor Areas

6. Consideration should be given to controlling noise from the communal areas to the nearby dwellings and to apartments within the development.

Regards,

Dianne Williams
Associate - Acoustics

Checked/
Authorised by: JA