

# Hill Thalís

Architecture + Urban Projects

16th February 2024  
Project No. 10.34 PT/ST/KH

Hill Thalís opinion –

## TOD SEPP: Transport Oriented Development Program

### Explanation of Intended Effect: Changes to create low-and mid-rise housing

Ku-ring-gai Council

Attn: Craigie Wyse • Team Leader Urban Planning  
Email: cwyse@krg.nsw.gov.au

Dear Client,

We write in response to Ku-ring-gai Council's request for Hill Thalís to prepare a written opinion on Planning NSW's *TOD SEPP: Transport Oriented Development Program* and the accompanying *Explanation of Intended Effect: Changes to create low-and mid-rise housing (December 2023)* associated with Part 2 of the TOD program.

Hill Thalís supports the government's primary objective to increase the range of housing types and the need to increase densities within the Greater Sydney and Six Cities existing urban footprints.

We support sound policy founded on evidenced-based testing that demonstrates high-quality urban outcomes essential for realising the vibrant cities intended; and promotes healthy living environments that are critical for all people that our cities house.

We support inclusionary zoning and a levy to provide affordable housing. However, blunt policy mechanisms that are poorly aligned, or inconsistent with evidence-based testing is considered a poor public policy approach. An approach that historically has demonstrated poor urban outcomes and generates adverse public reaction.

Hill Thalís agrees there are opportunities for low- and mid-rise development for the 31 TOD precincts.

However, the TOD SEPP and EIE is not supported given the significant improvements to the policy settings and mechanisms required to support appropriate building typologies consistent with essential human amenity – natural ventilation and cross-ventilation, solar access and daylight, deep soil and canopy landscape required by successful NSW and local policies and expected by communities.

#### **Need for government to introduce value capture for all upzonings**

Australia has been a laggard in capturing adequate public benefit available through the privilege granted to develop land. This is wide-ranging from mining natural resources to land development. Australia has failed to introduce policies that benefit future generations such as have countries like Norway and UAE with the sovereign future funds and effective tax and royalty settings.

Urban development policy continues to direct financial benefits to a few, with private individual land-owners receiving disproportionate monetary gain of any uplift. This is poor public policy in our view.

The TOD SEPP and EIE for low- and mid-rise development marks a turning point of opportunity for government (the public) to share some of the monetary gains through direct value capture of all land sales arising through this policy.

While the intent to increase supply is welcome, there remains a little discussed obligation on government to direct fund public housing. This policy could present opportunities to help source the needed funding.

It is unrealistic and unreasonable for the housing crisis to be dependent on the private sector solving it. The sectors long-known to be failed by the market will not be served by continuing along the same path. This is not best practice when compared to many overseas examples.

We urge government to introduce a mechanism for value capturing that over time changes the expectations of all stakeholders so public housing again can be seen as critical infrastructure as it is in many European and Asian jurisdictions.

### **Objects of the Environmental Planning and Assessment Act 1979 No 203**

We draw attention to the fundamentals of what these policies must demonstrate:

#### **1.3 Objects of Act**

*The objects of this Act are as follows—*

- (a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,*
- (b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,*
- (c) to promote the orderly and economic use and development of land,*
- (d) to promote the delivery and maintenance of affordable housing,*
- (e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,*
- (f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),*
- (g) to promote good design and amenity of the built environment,*
- (h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,*
- (i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,*
- (j) to provide increased opportunity for community participation in environmental planning and assessment.*

As proposed, significant work is needed for a final policy to be consistent with these objectives.

Our focus on sound city-making is the alignment between building type, FSR, Height, and deep soil landscape.

The following response should be understood in context of most of the detail and implications arising from the TOD: SEPP information provided by the Department, are located in the EIE: Changes to create low-and mid-rise housing. Our opinion therefore is structured that way.

This letter provides comments on the following:

TOD SEPP: Transport Oriented Development Program:

Non-refusal standards and mechanisms

EIE: Changes to create low-and mid-rise housing:

Chapter 2

Chapter 3

Chapter 4

## TOD SEPP: Transport Oriented Development Program:

### Non-refusal standards and mechanisms

## What will the SEPP include?

From April 2024, new planning controls will apply within 400 metres of 31 well located and well-connected stations and town centres.

The changes will allow:

- Residential apartment buildings in all residential zones (R1, R2, R3, and R4) within 400m of identified stations
- Residential apartment buildings and shop-top housing in local and commercial centres (E1 and E2) within 400m of identified stations

Proposed changes to planning controls:

- Maximum building height 21m (approx. 6 storeys)
- Floor space ratio 3:1
- No minimum lot size or lot width
- Minimum active street frontage controls in E1 and E2 zones
- Maximum parking rates

It also proposes to introduce new design criteria for mid-rise residential apartment buildings:

- Building separations
- Setbacks
- Vehicle access
- Visual privacy
- Communal open space

In our experience, these combinations of proposed non-refusal development standards are simultaneously enabling very poor outcomes with no prospect of facilitating high quality urban outcomes.

They are incompatible with residential building types needed to deliver fundamental resident amenity – natural ventilation and cross ventilation, solar access, daylight and outlook; and any meaningful deep soil landscape and canopy. They result in excessive, large building footprint types that evidence continues to demonstrate delivers very poor amenity on those metrics.

The combination of proposed building height with excessive, misaligned FSR results in outcomes contrary to best practice, and the Objects of the EP&A Act.

In our experience the proposed mechanisms are not supported by research and urban testing previously carried out by the Department, GANSW and numerous professional urban studies. Based on our experience, the ADG amenity standards will be very difficult to achieve on all but a few sites (likely corner sites). We consider this to represent poor policy outcomes.

As a general comment, the proposal to relax any ADG provision is not supported. While we support in principle, opportunities to improve policies, the ADG remains an exemplar and the most effective public policy in Australia for delivering residential amenity in apartment development. It should not be weakened to reduce the *minimal* amenity objectives and metrics it currently delivers in delivering the proposed housing.

Ku-ring-gai's existing LEP controls for FSR in R4 and R3 zones are exemplars for consistency with ADG, NSW urban canopy protection and targets and should be the model from which the TOD SEPP allows local Councils to deliver the intended housing. The community should expect that councils' regular required reviews of local controls will equal or improve on urban and amenity outcomes, they should not decrease these outcomes.

Hill Thalys notes that the TOD SEPP definition Height - inclusions and exclusions need to be based on floor-to-floor heights to satisfy the requirements of the ADG, NSW Building Commission, building envelope waterproofing, and AC plant plus an allowance for accessible communal open space roof gardens to accommodate the lift over run, planting, and waterproofing. (Also see Hill Thalys's height study excerpts Figures 1 to Figure 4 conducted for the City of Sydney at Appendix 1).

TOD SEPP fails to include a mandated requirement of approval that the development must demonstrate the design is founded on proper place and site analyses, and that the design response is appropriate for the site's specific conditions. In Hill Thalís's opinion, a requirement to demonstrate design excellence should apply to any policy of such reach and urban scale.

However, the requirements for competitions should be waived.

Merit assessment pathway needs to prevail for all apartment proposals/applications so that appropriate due diligence is carried out by developers conducting their feasibility studies in land purchases; and the community can be confident all housing is demonstrating appropriate typologies that achieve the essential fundamental high-quality amenity expected. In this regard the TOD SEPP and its proposed controls fail the public. See EIE opinion on implications of the non-refusal standards.

The proposal to further reduce amenity provisions covered by the Apartment Design Guide for mid-rise apartment development should be understood in context of former SEPP 65 (now SEPP Housing Chapter 4) and continuing application of the Apartment Design Guide:

- a) The Apartment Design Guide objectives and metrics have been the most effective and successful of development policies nationally in delivering residential amenity over the past two decades (since its inception as the Residential Flat Design Code)
- b) The existing provisions with the Apartment Design Guide are *minimum* amenity standards.

Weakening a highly successful and exemplar policy by lowering performance metrics represents poor public policy and cannot be supported. Implications of reduced building separation goes to deep soil, outlook, solar access and overshadowing, visual and acoustic privacy, urban scale and is not supported.

There already exists a strong pathway within the *Environmental Planning and Assessment Act 1979* enabling 'flexibility' with the effect that all development standards and controls within SEPPs, LEPs, DCPs and the Apartment Design Guide may be varied through individual planning justification and merit consideration of a development and its specific circumstances. The proposed SEPP should retain the application of the ADG with its existing performance metrics and enable the existing mechanisms to operate if departures are sought. This requires a merit assessment pathway which in our experience is essential for good public policy and achieving higher density urban outcomes that make a positive contribution to the cities we make and provide the amenity needed to house the population.

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## EIE: Changes to create low-and mid-rise housing

The proposed non-refusal standards for residential flat buildings and shop top housing in the station and town centre precincts are:

In the inner part of the precincts within 400 metres of the stations/centres:

- Maximum Building Height: 21m
- Maximum FSR: 3:1

In the outer part of the precincts from 400 to 800 metres of the stations/centres:

- Maximum Building Height: 16m
- Maximum FSR: 2:1

The non-refusal standards will apply to any residential flat building and shop top housing development on land in station and town centre precincts (with the exception of land zoned R2). For residential flat buildings, the non-refusal standards apply to land where this land use is currently permitted or proposed to be permitted. For shop- top housing, the non-refusal standards apply where this land use is currently permitted.

### Station and town centre precincts

The Station and town centres precincts are proposed to be:

- within the Six Cities Region; and
- 800m walking distance of a heavy rail, metro or light rail station; or
- 800m walking distance of land zoned E2 Commercial Centre or SP5 Metropolitan Centre; or
- 800m walking distance of land zoned E1 Local Centre or MU1 Mixed use but only if the zone contains a wide range of frequently needed goods and services such as full line supermarkets, shops and restaurants.
  - The Department is seeking input from councils to determine which E1 and MU1 centres contain an appropriate level of goods, services and amenities to be included.

## EIE: Changes to create low-and mid-rise housing

### Chapter 2 The Housing Crisis

#### 2.3 Well-located infill housing

We support the government's intent recognising the key to successful increased density is that it is located in areas with high amenity. As a statement of principle, we believe that higher densities should always be located in areas of higher amenity and environmental quality.

The failure of housing policies to date has resulted in perverse outcomes, focusing the highest density where there is the lowest amenity – primarily along noise corridors often with poor existing urban structure and essential supporting amenity – such as dysfunctional block sizes incompatible with walkability, no public open space network, little opportunity for tree canopy, poor pedestrian/cyclist amenity, and inadequate focus on critical urban repair to support the densities or building types to address challenging conditions.

NSW has the opportunity to make our cities fabulous places, but it is critical that public policies are well-aligned to deliver them. Historically, too frequently this has not been communities' experience and continues to instil distrust of public planning and creates avoidable conflict.

The Government's intent to align the currently disparate quality of LEPs is logical, but critically must be founded on the findings of evidence-based urban studies and testing; and must work with communities rather than inflict what may appear easy or lazy policy solutions to address crises conditions.

Blunt, poorly conceived mechanisms, not informed by evidence will be doomed to fail.

Enabling additional supply of itself will not equate to delivery nor desirable outcomes.

Enabling supply by poor quality mechanisms is not acceptable for public policies that have such wide reaching impacts to the look and functioning of our cities for decades to come.

The Objects of the Act demand proper planning that enables our cities to grow to support the health and well-being of all residents and is economic and orderly.

Delivering the intended housing targets needs the community to support it.

Ku-ring-gai remains an exemplar of well-aligned FSR, height and landscape controls amongst its suite of LEP and DCP policy.

It has very successfully delivered all the state's housing targets within its existing local control mechanisms. Ku-ring-gai's high- and multi-density development controls continue to deliver high- and medium- density housing with critical high-quality amenity, urban canopy and deep soil landscape outcomes.

We agree there are opportunities in Ku-ring-gai for increasing high-, mid-rise and low-rise multi-dwelling housing that can be supported by commensurate open space, walkable distances to schools and services in neighbourhood centres, located on bus routes with frequent transport to heavy rail/Sydney city centre, existing or potential for walkable blocks and understanding subdivision, topography and the like.

We do not support the proposed non-refusal development standards have the effect of voiding councils' ability to define their Desired Local Character and the policies to deliver them under the Act. The local character established for where they choose to live is aligned with the specifics of the place and rightly is highly valued by communities.

We do not support the approach to heritage (discussed elsewhere) that fails to value heritage with mechanisms that appears are intended to enable ill-considered wholesale demolition.

The expectation that the uptake will see development applications for apartment development lodged within months is also unrealistic. Feasibility studies, planning analyses, acquiring sites, financial institutions' lending requirements to developers (including the limitations of who qualifies for finance), the time needed to engage consultants and prepare designs to DA stage is highly unlikely to be completed in 2024.

## **EIE: Changes to create low-and mid-rise housing**

### **Chapter 3 What's preventing more low-and mid-rise houses being built**

#### **3.1 Mid-rise housing**

Much is made in the EIE of the R3 and R2 zones 'preventing' certain housing types as the root cause of the housing crisis.

We consider this to be a flawed contention, not sufficiently supported by either data or place specific analyses.

The purpose of these different residential land use zones is deliberately intended to identify different urban outcomes matched to the population needs of a city by enabling housing to be delivered by specific building types. Low density detached dwellings inevitably will play a role in all cities. The effect of the EIE essentially removes this housing type through the inclusion of blanket application of dual occupancy to the zone. Should this occur, local controls must prevail for lot size and requirements that both dwellings provide a minimum street frontage. Poor amenity and deep soil outcomes are continuing to result with subdivided battle-axe dual occupancy lots types.

The problem is not the 'zonings' restricting housing supply per se, but the need for land to be rezoned to align with the types of housing desired, and intended, to increase density as dwellings per hectare enabled by a different land-use zone.

Local councils have the ability to identify areas with the highest amenity. They have the critical local knowledge regarding available city-making infrastructure – including green, blue and cultural networks; open space; topography; schools and hospitals; transport; and urban structure of street patterns/types and subdivision patterns to identify opportunities for change that will deliver high quality housing with excellent amenity.

This level of detailed, holistic consideration is fundamental to bringing less expensive types housing along with the proposed scale of changes that will need to be met. This recognises cities must deliver housing for younger generations that will sustain them over their lives and retain the mix and vitality of neighbourhoods.

The TOD SEPP and wider proposed low- and mid-rise housing in its current form cannot deliver=.

Where building heights above 4 storeys and FSR is higher, intended to deliver apartment types, these should be delivered through the R4 zone mechanism rather than changing mechanisms throughout R3 zones. This does not shy away from nuanced consideration of R3 housing types or the intent of the EIE but uses the right mechanisms to deliver the right urban outcomes.

Hill Thalys points to the excellent research carried out by McGregor Westlake and Redshift AA for GANSW as regards mid-rise and low-rise medium density housing. The following link provides an overview of this work. (Copy and paste to browser if link not directed):

<https://www.redshiftaa.com.au/research-advocacy/what-is-the-missingmiddle>

Hill Thalys also points to the submission prepared by Redshift AA in response to this EIE.

It provides an excellent explanation of reasons why the mid-rise and low-rise housing typologies have not been delivering. It details the importance of well-aligned FSR, height, site coverage and deep soil landscape controls, and identifies the unintended outcomes where controls are poorly aligned:

[https://redshiftaa-my.sharepoint.com/:b:/g/personal/angelo\\_redshiftaa\\_com\\_au/EawvK-koUfZBr2wdSh-13ZsB91oS33UuegDHmcFYGgpRLA?e=bgKnZc](https://redshiftaa-my.sharepoint.com/:b:/g/personal/angelo_redshiftaa_com_au/EawvK-koUfZBr2wdSh-13ZsB91oS33UuegDHmcFYGgpRLA?e=bgKnZc)

#### **3.2 Low-rise housing – multi-dwelling housing**

There remains a current pathway with the effect of enabling multi-dwelling housing in low Density R2 zones is via the Housing SEPP – Chapter 3 for Housing for seniors and people with a disability.

The continuing failure of the Housing SEPP remains in all its residential non-refusal landscape controls.

The EIE is also self-contradictory as the non-refusal development standards and their proposed mechanism of non-refusal prevent any merit consideration that simultaneously is claimed can occur. Failure to mandate a requirement to address constraints of a site prevents any fact-based assessment of development potential of individual sites and appropriate design response founded on the specifics of a site facilitating and favouring poor design outcomes rather than promoting best practice urban outcomes. Experience of existing SEPPs with non-refusal development standards demonstrates this facilitates inadequate due diligence in land purchases that becomes embedded at concept design as a pathway to poor urban outcomes.

We return to one of the tenets of the Act being:

*(g) to promote good design and amenity of the built environment,*

### **Landscape**

SEPP one-size-fits-all non-refusal controls with no mandated provisions for merit assessment over-riding effective local controls are not fit for purpose in delivering the needed deep soil and canopy that must be protected and delivered to meet NSW canopy targets and address urban heat. There remain cumulative impacts of existing SEPPs resulting in the constant loss of canopy and deep soil. The proposed TOD SEPP will accelerate deep soil and canopy loss.

The combination of inadequate settings and non-refusal consideration further limits the ability to replace lost canopy and prevents urban repair where it may be critical for sound city-making and managing essential green infrastructure over the long term.

We consider this to be unsustainable outcome across NSW.

The notable exception to this has been SEPP 65 (now SEPP Housing – Chapter 4) that has been such a success specifically because the SEPP enabled landscape controls to defer to local policies. The Apartment Design Guide sets a helpful guide for Councils without well-developed landscape and deep soil controls, however, the ADG deep soil and landscape provisions are accepted by most stakeholders and urbanists as far too low. See further comments on Ku-ring-gai's deep soil at Appendix 1.

In our opinion, SEPPs would deliver improved and sustainable deep soil landscape and canopy outcomes across urban areas where landscape provisions are elevated within LEPs, supported by local DCPs, and SEPPs enable local landscape policies to prevail similarly to mechanisms currently successfully operating under the former SEPP 65, now SEPP Housing Chapter 4.

### **Heritage**

Ku-ring-gai's pattern of settlement has produced areas of high heritage significance of a particular character - with large blocks, large lots comprising deep soil and canopy landscape as the setting for dwelling houses. These areas have not prevented development yet successfully retain the high values of significance through considered, and effective local controls. State policies should be supporting and encouraging the recognition and celebration of heritage in all council areas throughout NSW that balances with well-aligned development policies.

Blunt rezonings in combination with non-refusal development standards promote demolition rather than retention and adaption as a priority. Re-use must be encouraged and supported by policy.

There is scope for a review of heritage conservation areas so that genuine high quality values are retained, to ensure there remains the vibrancy of development types as well as provisions that can encourage more retention and adaption.

The approach assumed by the TOD SEPP around stations and town centres is wholesale demolition. This is the effect of the combination of non-refusal development standards and inability for a merit assessment that considers heritage. The proposed form of the policy is incompatible with heritage conservation and contrary to sustainability and climate policies that need to promote retention and re-use of existing buildings. Hill Thalys considers this represents poor public policy.

### **Affordable housing**

#### **a) TOD SEPP**

Hill Thalys supports the intent for inclusionary zoning for affordable housing.

The targeted 15% affordable housing in the 8 TOD SEPP Accelerated Precincts is a positive inclusion. However, the qualifying statements that this maximum is subject to feasibility testing is concerning. The EIE does not specify who will undertake the feasibility studies and represents a failure of the intent. The proposed upzonings should mandate the affordable component as a condition of the development.

All affordable housing must be held in perpetuity to prevent the constant leakage of supply continuing to be enabled by inadequate settings in SEPP Housing. Hill Thalys does not support policy that limits the time affordable housing is held before being released back to the market as private housing.

Delivering affordable housing for key workers should be a paramount to the housing targets. Supply alone is not the solution despite some dominant voices in the public debate.

There is a primary responsibility on government to invest in direct public funding to supply the specific areas so well identified in all studies of which we are aware as being failed by 'the market': public housing, crisis housing, domestic violence, single parents with families, older women, disability housing, and key workers.

b) Low- and mid-rise development

The proposed commencement of a mechanism to include affordable housing is supported in principle.

The 2% target is far too low and will not deliver any meaningful contribution. This is inconsistent with good practice outcomes in our view.

As a general principle, we consider any proposed up-zoning in NSW should be mandated to commence for all development types at 15% increasing to 25% over the next decade. This is consistent with overseas practice and redresses previous decades impacts of diminishing public investment.

All affordable housing must be retained in perpetuity.

The avoidance of all governments to direct public investment into delivering public housing, treated as essential infrastructure - as Australia has done so well in previous decades – remains disappointing.

## **EIE: Changes to create low-and mid-rise housing**

### **Chapter 4 Proposals to build more low- and mid-rise housing**

#### **4.1 Mid-rise housing**

As a statement of principle, we believe that higher densities should always be located in areas of higher amenity and environmental quality. This includes town centres with high quality parks and open spaces and provides councils with opportunities to identify the potential to create more vibrant smaller local centres with smaller scaled increased density to complement the transport node precincts.

Further clarification and detail around the application of this component of the policy is required. The EIE lacks clarity as to the size of E1 or MU1 and definitions around exact types and scale of services as well as supporting infrastructure such as high quality open spaces and parks in walking distance (which should be no more than 200m). Outcomes where one or two mixed use developments may have a tokenistic retail/commercial use at ground floor to 'tick a box' as mixed use development should not be permitted as being sufficient to trigger the 800m walking distance provision.

Previous comments in this letter regarding the non-refusal development standards and mechanisms that prevent merit assessment to achieve the maximum permitted FSRs apply to this component of the proposed SEPP.

The proposal lacks essential local knowledge to deliver well-located housing and needed supporting infrastructure. There is no capacity for local strategic planning and represents a failure of the TOD SEPP and EIE in our opinion.

Achieving economic and orderly development of land is facilitated by rigorous, well-considered and integrated strategic planning that councils are best placed to deliver.

#### **4.2 Low-rise Housing**

Further clarification and detail around the application of this component of the policy is required. The EIE lacks clarity as to the size of E1 or MU1 and definitions around exact types and scale of services as well as supporting infrastructure such as high quality open spaces and parks in walking distance (should be no more than 200m). Outcomes where a one or two mixed use developments may have a tokenistic retail/commercial use at ground floor to 'tick a box' as mixed use development should not be permitted as being sufficient to trigger the 800m walking distance provision.

Previous comments in this letter regarding the non-refusal development standards and mechanisms that prevent merit assessment to achieve the maximum permitted FSRs apply to this component of the proposed SEPP.



### **Villa Housing**

While it is noted villa housing is not specifically identified in the EIE, by implication, we consider it may be a housing type enabled because it falls under the Low-rise Housing Diversity Code (LRHD).

Villa type housing must be removed as a permissible housing type with the LRHD Code. Urban outcomes are unacceptable due to the impacts of driveways, vehicle swept paths and at-grade parking. Impacts continue to devastate existing urban canopy, prevent replacement canopy, result in poor resident amenity with poor daylight, natural ventilation, open space, landscape provisions.

### **Dual occupancy**

Permitted types of dual occupancy should be defined by councils. Battle-axe types are not supported as they facilitate poor urban outcomes with the loss of canopy trees, too much of a site being given to hardstand accommodating rear access and swept paths.

Dual occupancy types must require both dwellings directly address the street main entry to the dwelling and vehicle access. Garages and car parking must not dominate the frontage, which requires a site frontage greater than the proposed 12 metres in the Ku-ring-gai context.

In principle, Hill Thalys supports reduced car parking – limiting to 1 x car space per dual occupancy - to reduce the dominance and negative impacts of garages in street frontages.

Local councils are best placed to identify and manage locations for dual occupancy consistent with their delivering their Desired Local Character, tested and directly tied to delivering their housing targets.

### **Minimum lot size, Site frontage and FSR**

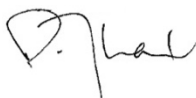
To achieve positive urban outcomes appropriate to, and well-aligned with, Desired Local Character, both minimum lot size and site frontage requirements need to be set in LEP controls. Blunt one-size-fits-all development standards proposed through the TOD SEPP and EIE do not allow for the nuance of existing subdivision patterns, urban structure, or adequate consideration of deep soil. All essential for sound city-making

Minimum lot width of 12 metres is not clarified as being per sub-divided lot or the parent lot. If a parent lot, 12 metres is considered inadequate in Ku-ring-gai context and conducive to poor urban outcomes with vehicles dominating the street frontage and no provision for meaningful side setback landscaping as is the experience of council with provisions that currently enable dual occupancies with poorly-aligned landscape controls.

FSR and maximum site coverage provisions need to be well-aligned with deep soil provision that should be a minimum 40% for dual occupancy types in Ku-ring-gai given the larger lot sizes and noting current multi-dwelling housing already achieves this as does apartment development ranging from 40% to 50% dependant on lot size.

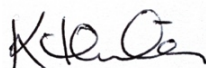
See Appendix 1 for further comments on deep soil in Ku-ring-gai.

Yours faithfully,



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See Appendix 1 - City of Sydney – Height, FSR and Deep Soil Alignment Study  
See Appendix 2 – Hill Thalys residential housing types matrix

## Appendix 1

### City of Sydney – Height, FSR and Deep Soil Alignment Study

#### Evidence Base

Last year Hill Thalys was engaged by the City of Sydney Strategic Planning and Urban Design, to prepare a Height & FSR Alignment Study. Our focus was on the alignment of height and FSR and deep soil landscape outcomes.

The work and recommendations were founded on evidence comprising:

- A suite of 24 exemplary projects were showcased to demonstrate design integration of key values, and report on key site characteristics and graphically demonstrate the ability of the project to incorporate Council's proposed deep soil landscape controls.
- Built proposition site studies were prepared for 21 sites with 33 propositions. The studies tested the existing LEP FSR, LEP HOB, DCP storey height controls, draft deep soil landscape controls, requirements for noise barrier buildings on heavily trafficked streets and the requirements of the Apartment Design Guide (ADG).

We found that most sites required additional LEP building height to achieve the LEP FSR.

LEP HOBs were reviewed to anticipate appropriate floor-to-floor heights to satisfy the requirements of the ADG, Building Commissioner, building envelope waterproofing, and AC plant. Accessible communal open space roof gardens required an additional allowance to contain the lift over run, planting, and waterproofing.

Section drawings were prepared to demonstrate necessary inclusions. The impact of flooding, differing from site to site, needed to be excluded from HOB. (See excerpts on following pages.)

Two tables were prepared, one for mixed use buildings and one for exclusively residential buildings. (See excerpts on following pages)

#### Flooding

We note that HOB needs to be measured from the flood design level. When flood design levels are forced into HOB, without loss of FSR, less optimal layouts with increased building footprint, built site coverage and building depth compromises design quality.

#### Height, FSR, and Deep Soil Relationship

The exemplars and site studies demonstrated that to satisfy the requirements of the ADG, Building Commissioner, building envelope waterproofing, roof top AC plant, HOB needs to be calibrated to FSR. This is evident in the Height and FSR relationship tables on the previous page.

In the study, we concluded that FSR of 2.5:1 required a base building height of HOB 27m for 7 storeys.

The study also demonstrated that it was not possible to consistently achieve design quality and amenable apartments, across a grouping of neighbouring sites for FSRs of 3.0:1. Site exceptions were on corner sites.

Accessible communal open space roof gardens required an additional allowance to contain the lift over run.

Consistent with achieving deep soil landscape and high apartment amenity, non-residential ground floor uses - generally need to approximate the residential footprint above.

#### Deep soil Landscape

Ku-ring-gai Council actively promotes deep soil landscape with controls for building footprint (40% max), deep soil landscape (40% min), supported by effective definitions, which intentionally values and protects the existing urban tree canopy. This is consistent with the Greater Sydney Commission's target for urban tree canopy in order to temper increasingly frequent climate extremes. As well as making an amenable city, urban tree canopy will moderate the loss of life during heat waves, reducing ground temperatures by 10-15 degrees on excessively hot days.

The Hill Thalys studies tested a 15% deep soil landscape proposed by the City of Sydney, significantly less than Ku-ring-gai's controls while being directly relevant to the relationship of FSR, height and amenity. The report findings proposed a *minimum* 25% deep soil landscape control in proximity to well served centres, consistent with Sydney's amenable eastern suburbs and LGAs of Randwick and Woollahra in context of their lot sizes and subdivision patterns.

It is noted in recent media reporting on 2<sup>nd</sup> January 2024, that Ku-ring-gai has suffered one of the greatest losses of canopy of LGAs in Sydney (8.2% loss). However, Council's own audit demonstrates this is incorrect.

The following is a summary of Council's calculations provided to the media to correct the figures:

*Our data considered 'Total Canopy' meaning all vegetation >3m. We also considered "Urban Canopy" which is all vegetation >3m but excluding National Parks (Zone C1).*

- *In 2020, Total Canopy (vegetation >3m in height) was 51.4%, and the Urban Canopy (excluding land zoned C1 – National Parks) was 44.8%.*
- *In 2022, Total Canopy (vegetation >3m in height) was 50.0%, and the Urban Canopy (excluding land zoned C1 – National Parks) was 43.6%*

*As per the above, from 2020 – 2022 we [Ku-ring-gai] lost 1.4% of Total Canopy and 1.2% of Urban Canopy. Noting the slightly different time period (Council's data is from 2020-2022 as opposed to the SMH article which is 2019-2022) the results are still very different.*

*Total Canopy and Urban Canopy display a downward trend which is something we want to turn around. Our Urban Forest Strategy seeks to increase canopy cover to 49% by 2036. In order to achieve this increase in Urban Canopy, based on an average crown area of 70m<sup>2</sup> per tree, an additional 44,043 trees will be needed.*

Ku-ring-gai's experience has been that this loss has been a result of existing SEPP policies and their interactions with other policies with inadequate deep soil, site coverage, and tree protection controls that override Ku-ring-gai's well-modelled local DCP controls. It is noted that the exception was SEPP 65 (now Chapter 4 of SEPP Housing) where local deep soil and landscape policies continued to apply.

The TOD SEPP proposes to override effective local controls and will result in significant further canopy loss where it is critically needed in major local centres and fails to recognise the value of urban character as a public asset in an evolving city.

Attention is drawn to Ku-ring-gai's well-established outcomes for residential apartment and medium density developments where the local DCP controls prevail, that continue to deliver on all state housing targets while protecting the LGA's landscape character and critical canopy assets.

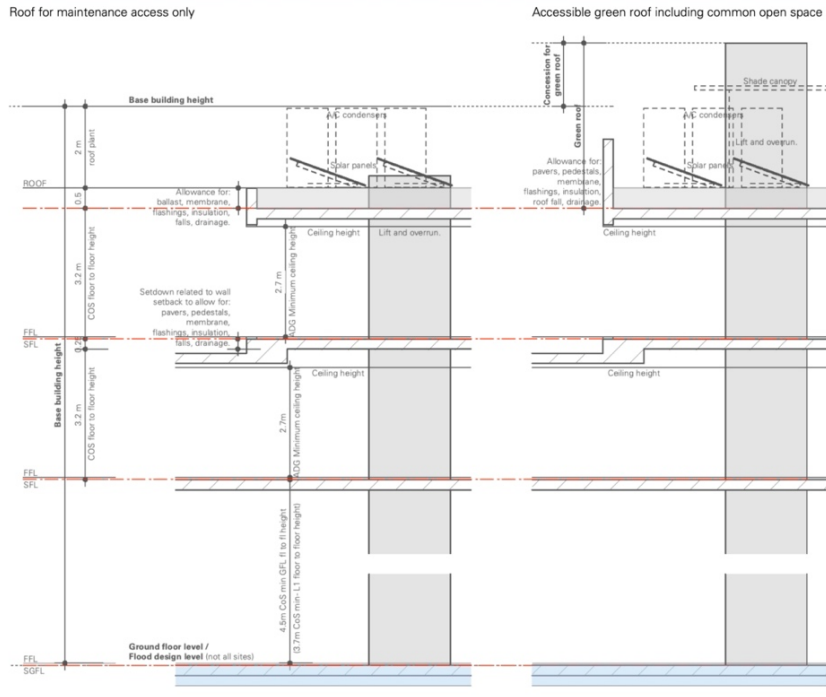
The proposed TOD SEPP fails to aspire to this achievement.

We support Ku-ring-gai Council's ambition for deep soil landscape and urban tree canopy. The controls protect the green character of the LGA and critically needed urban canopy, contribute to the ecology of the place, promote public health and well-being, and promote points of difference across the metropolitan area.

We understand that the City of Sydney has shared Hill Thalys's report with Planning NSW. They have given permission for us to share the report, which can be found at this link:

<https://cloud.hillthalis.com.au/index.php/s/8KHAnkfd2XztRFg>

Excerpts of the report in Figures 1 to 4 following.



The site studies inform appropriate LEP HOB.  
The drawing opposite describes inclusions and allowances to establish base building height as indicated on the site studies.

- A Inclusions in Base building height**
- The following are included in the Base building height:
- Roof top building plant
  - Roof top water resistance
  - Structural floor set downs
  - Storey height

- B Exclusions from the base building height**
- The following are excluded from the Base building height:
- Flood affectation; and
  - Green roofs

Figure 1 - Section demonstrating base building height

Issue  
Building height controls need to align LEP HOB in metres with ADG & DCP floor to floor heights and DCP storey heights.

Commentary  
The calculation of appropriate building height in this study is based on residential buildings with non residential ground floor uses such as retail or community, in zones which permit a mix of uses. These studies show:

- Limited residential building depth;
- DCP floor to floor heights at ground and first floor levels; and
- On sites with the same floor space ratio, these building heights would also be suitable for most commercial buildings.

Table 8 Calculation of HOB - Mixed use

recommended SDCP H (storeys)	allowance for each storey height etc. (m)	base building height (BBH) (m)	recommended LEP HOB (m)	LEP HOB - BBH (m)
10	3.20	35.55	37	0.45
9	3.20	33.35	34	0.65
8	3.20	30.15	31	0.85
7	3.20	26.95	27	0.95
6	3.20	23.75	24	0.25
5	3.20	20.55	21	0.45
4	3.20	17.35	18	0.65
3	3.20	14.15	15	0.85
2	3.70	10.95		

Roof plant 2.00  
Roof allowance-fall+ballast 0.50  
Set down for wall setback 0.25  
Ground 4.50

Zonings in Site studies MU1 B2 B7

Legend  
xx new LEP HOB designation may be required

The calculation of the base building height is derived from the required minimum DCP floor to floor heights with the addition of an allowance for buildability and roof plant. HOB is derived from base building height. New whole metre increments may need to be added to the existing LEP HOB increments.

Some sites may not enable achievement of ADG solar access requirements, requiring non residential uses at ground and first floor levels.

Table 8 Calculation of HOB - Mixed use buildings table has been prepared for buildings in mixed use zones including MU1, B2, B4 and B7.

There are several R1 General Residential Areas in the south of the LGA in proximity to Botany Road Study Area with FSR of 1:1 and 12m HOB. Other parts of the LGA have 3:0.1 FSR paired with 25m HOB (North of Crescent Street at South Dowling Street). A comparative table for Apartment buildings in R2 zones would require 1.0 - 2.0m less height. Refer to Table 9 Calculation of HOB - Apartment buildings. New LEP HOB increments are shown in red text.

Table 9 Calculation of HOB - Apartments

recommended SDCP H (storeys)	allowance for each storey height etc. (m)	base building height (BBH) (m)	recommended LEP HOB (m)	LEP HOB - BBH (m)
10	3.20	34.75	35	0.25
9	3.20	31.55	32	0.45
8	3.20	28.35	29	0.65
7	3.20	25.15	26	0.85
6	3.20	21.95	22	0.95
5	3.20	18.75	19	0.25
4	3.20	15.55	16	0.45
3	3.20	12.35	13	0.65
2	3.20	9.15		

Roof plant 2.00  
Roof allowance-fall+ballast 0.50  
Set down for wall setback 0.25  
Ground 3.20

Residential zonings in Study areas R1

- Recommendations
- Adopt HOB in mixed use zones based on Table 8 Calculation of HOB - Mixed use.
  - Confine ground floor uses to the building footprint above, to enable achievement of deep soil landscape, unless significant other uses (such as retail or community) serving the local area are proposed.
  - Adopt alternate HOB in R1 zones based on Table 9 Calculation of HOB - Apartments.

Figure 2 - Tables calculating appropriate HOB for Mixed Use and Apartment buildings.

EXEMPLARS  
Table 2 Summary

2.15

Project, Architect, Address	Lot width (m)	Lot depth (m)	Site area (m <sup>2</sup> )	Height/area	Small site < 650m <sup>2</sup>	Small site > 650m <sup>2</sup>	Small corner site < 650m <sup>2</sup>	Small triangular corner site < 650m <sup>2</sup>	Small irregular site > 650m <sup>2</sup>	Deep soil	Potential deep soil	Existing trees - (S) site (SI) street neighbour (N) street neighbour (NI)	Number of public footpaths (O) Opposite (D) Opposite	FSR	HOB from HOB/FSR Study	Styery height	Type	Situation	
<b>SMALL SITE - MU/APARTMENT</b> Substation, Hill Thalis, 114 Devonshire Street Surry Hills.	4.9	9	45.6										2 (C)	4.6*	19.4	24	6	Micro site, street and pocket park frontage; corner, street wall, addition to historic subdivision.	Established urban area, varied character including street wall buildings, heritage neighbour.
<b>SMALL SITE - MU/APARTMENT</b> Hill Thalis, 17-19 Mary Street Surry Hills	12.1	27.9	337										2 (C)	3.36	21.85	27	5/7	Small site, street wall / podium, central courtyard / lightwell.	Established urban area, varied character including street wall buildings, built to public boundaries; Rear lane, sloping site.
<b>FRONT + BACK</b> Short Lane, Surry Hills, Woods Bagot, 360 Bourke Street Surry Hills	14.1	25.7	364										2 (C)	3.2	24.6	27	7	One street and one lane frontage, maximum site cover, street wall, street lit, through site link, retained historic building neighbour.	Established urban area, varied character including street wall buildings, built to public boundaries.
<b>ADAPTATION + ADDITION</b> Hill Thalis, 44a Foveaux Street, Surry Hills (Commercial)	12	30	360						15%				3 (C)	3.2	18.3	21	5	Adaptation + addition, commercial use, street site, corners, two street frontages and one lane frontage.	Established urban area, varied character including street wall buildings, built to public boundaries.
<b>SMALL SITE - MU/APARTMENT</b> Studio 54, Hill Thalis, Waterloo Street, Surry Hills	7.1	20.5	126										2 (C)	2.43	15.8	21	5	Small site, street wall, corner, street and lane frontage.	Established urban area, varied character including street wall buildings, built to public boundaries.
<b>CORNER</b> Arkadia, DKD with Breathe and Oculus - 18 Hurstley Street Alexandria	135	78.4	5688						15%				2 (C)	2.2	9.45/ 23.71	24	3/6	Corner, large site, busy street frontage, two street frontages, street wall / podium.	Undergoing change, converting from industrial to mixed use park footage.
<b>PUBLIC DEDICATION</b> Mondrain - Stanislac - 2-4 Powell St Waterloo	94.8	74.6	5606						15%				4 (C)	2.02	11.5 - 19.2	27	4 + 7	Corner, street wall, two street frontages, street wall podium, courtyard, public dedication.	Historically undergoing change, converting from industrial to mixed use.
<b>FRONT + BACK</b> Bennett Murada, (675613) 761 Botany Road Rosebery D2015-449	42.1	37.2	1531						15%				2 (C)	2.0	22	27	7	Street wall / podium, one street frontage, one lane frontage.	Undergoing change, converting from industrial to mixed use.
<b>MAXIMUM SITE COVERAGE</b> Coda, Stanislac Architects, 29-37 Epsom Road Rosebery NSW.	72.3	26	1874						15%				2 (C)	2.0	24	27	7	Maximum basement site coverage, corner, street wall, three street frontages.	Undergoing change, converting from industrial to mixed use.
<b>WHOLE URBAN BLOCK</b> The Rochford, Erskineville, Fox Johnston, 75 MacDonald Street Erskineville	69.9	39.6	2774						15%				4 (C)	2.0	20.7	27	5/7	Whole urban block, four street frontages, corner, street wall / podium, one lane.	Undergoing change, converting from industrial to mixed use.
<b>COURTYARD</b> Asper, Turner, 265-729 Botany Road Rosebery NSW.	108	27	4023						15%				4 (C)	2.0	22.1	24	6	Courtyard, whole urban block, double courtyard, street wall, podium, corner, through site link, street and lane frontages.	Undergoing change, converting from industrial to mixed use.
<b>STREET WALL/PODIUM</b> SJB, 41 Birmingham Street, Alexandria.	28.4	28	795						15%				2 (C)	2.0	21.7	24	6	Street wall, maximum site cover, single street frontage.	Undergoing change, converting from industrial to mixed use.
<b>CORNER</b> Clarion Apartments, SJB - 19 Ralph Street Alexandria	12.6	42.5	536						15%				3 (C)	2.0	23.6	24	6	Corner, two street frontages, street wall, lightwell.	Undergoing change, converting from industrial to mixed use.
<b>THROUGH SITE LINK</b> Carba, SJB, 177-187 Philip Street, Waterloo.	45.5	95.6	4803						15%				2 (C)	2.0	15.18	24	4/5/6	Through site link, street wall, two street frontages, street wall opposite street, courtyard.	Undergoing change, converting from industrial to mixed use.
<b>SOUND BARRIER</b> Warren and Mahoney, 444-450 Gardeners Road Alexandria, D2017-240	87	59	2907						15%				2 (C)	2.0	25	24	6	Sound barrier, busy road frontage, one street frontage, street wall / podium, central courtyard.	Undergoing change, converting from industrial to mixed use.
<b>LARGE SITE</b> George and Allen, Waterloo, Turner Studio, 356 George Street, Waterloo	105	53	6018						15%				2 (C)	1.94	22.3	24	5/6	Large site, three courtyards, street wall / podium, corner, street frontages.	Undergoing change, converting to mixed use; Long north south site with two street frontages.
<b>SOUND BARRIER</b> Woolloomooloo Apartments, MWA, 81 Bourke Street and 13-15 Griffiths Street	69	40	1079						15%				3 (C)	1.97	14.9	21	4/5	Sound barrier, busy road frontage, two corners, three street frontages, street wall, central courtyard.	Established urban area, larger scale lot.
<b>STREET WALL/PODIUM</b> No 17 Danks, SJB, 17 Danks Street, Waterloo	37.9	56.8	2163						15%				2 (C)	1.8	15.5	18	4	Street wall / podium, courtyard, single street frontage, maximum site cover.	Undergoing change, converting from industrial to mixed use.
<b>SOUND BARRIER</b> MHND/Union, 903-921 Bourke Street Waterloo, D2021-1415			20794						15%				2 (C)	1.79	27.65/ 43.13	7/12		Sound barrier, two busy road frontage, large site, multiple SJB, street wall / podium, central courtyard, retained heritage elements.	Undergoing change, converting from industrial to mixed use.
<b>CORNER</b> Teracota Alexandria, Bennett Murada, 2 Mitchell Rd, Alexandria	92	63	2082						15%				2 (C)	1.7	12	15	3	Corner, street wall, one street frontage, one lane frontage, retained historic building on corner.	Established urban area, varied character including street wall buildings, built to public boundaries.
<b>SOUND BARRIER</b> Ridgen Mathison, 135-139 McEvoy Street Alexandria, D2018-1581	38.5	61	2420						15%				1	1.49	21.3	24	4/6	Sound barrier, busy road frontage, street wall / podium, central courtyard.	Undergoing change, converting from industrial to mixed use.
<b>SMALL SITE - MU/APARTMENT</b> Hill Thalis, 14 Bay Street Double Bay (Woolfaha Council)	6.1	30.5	185										2 (C)	2.38	16.6	21	4/5	Small site, street and lane frontage, central lightwell.	Established town centre undergoing gradual change.

Figure 3 - Height and FSR relationship from exemplars

RECOMMENDATIONS  
Aligning height and FSR 4.4

Table 10 Difficulties in confidently aligning existing FSR with new HOB with general controls

STUDIES - difficult to achieve ADG requirement or to align HOB and FSR	Lot width (m)	Lot depth (m)	Site area (m <sup>2</sup> )	Height/area	Small site < 650m <sup>2</sup>	Small site > 650m <sup>2</sup>	Small corner site < 650m <sup>2</sup>	Small triangular corner site < 650m <sup>2</sup>	Small irregular site > 650m <sup>2</sup>	Deep soil	Potential deep soil	Existing trees - (S) site (SI) street neighbour (N) street neighbour (NI)	Number of public footpaths (O) Opposite (D) Opposite	FSR	HOB from HOB/FSR Study	Styery height	Type	Situation	Notes	
																			Existing	Site studies
LS2 81-83 Paramatta Road CAMPEDOWN														3 (C)	22	3.0	6	23.75	24	Demonstrates challenges associated with achieving ADG solar access on sites with FSR greater than 3.1, on streets less than 18m wide
LS3 89-91 Paramatta Road CAMPEDOWN														2 (D)	22	3.0	6	23.75	24	Demonstrates challenges associated with achieving ADG solar access on sites with FSR greater than 3.1, on streets less than 18m wide
LS1 3-13 Mivandem Road CAMPEDOWN														3 (C)	22	3.0	9	33.35	34	Demonstrates challenges associated with achieving ADG solar access on sites with FSR greater than 3.1, on streets less than 18m wide
GS4 723-725 Elizabeth Street WATERLOO	>10													2 (C)	16	2.2-3	8	30.15	31	Exception to street styery height general recommendations due to a combination of many constraints (see table), and being predominantly landlocked with 70% private boundaries
MS1 119-133 McEvoy Street ALEXANDRIA	1.5			L shaped										3 (C)	22	1.65-1	7	26.95	27	Exception to general recommendations due to a combination of many constraints (see table), including many significant trees along >80% public frontages
MS2 2-10 Fountain Street ALEXANDRIA														2	12	1.65-1	7	26.95	24	Exception to general recommendations due to irregular site boundary geometry and being predominantly landlocked with >60% private boundaries

Issue  
Building height controls need to align with FSR.

Commentary

The alignment of building height and FSR has been considered in relation to site studies prepared as part of this study. Table 3 Site Studies Summary (p126) is synthesised into Table 11 Existing FSR + new HOB Recommendations.

The site studies showing variety not consistency, demonstrate challenges associated with achieving generic controls. The site study designs reported to variables:

- A Heritage
  - Heritage items, HCAs, adaptive reuse;
- B Situation
  - Park frontage and overshadowing;
  - Street width;
  - Orientation;
  - Aspect;
- C Site
  - Corner conditions, situation;
  - Lot dimensions, area, geometry and public frontage;
  - SP2 and footpath widening setbacks;
  - Existing trees;
- D Mix of uses;

Table 11 General Recommendations - Urban frame

Should suit almost all sites. Exceptions may occur due to the combined effect of the following: footprint of retained/heritage buildings, through site links, existing tree canopy, SP2 street widening, setback for footpath widening, ground wall buildings, irregular site geometry.

STUDIES - difficult to achieve ADG requirement or to align HOB and FSR	Lot width (m)	Lot depth (m)	Site area (m <sup>2</sup> )	Height/area	Small site < 650m <sup>2</sup>	Small site > 650m <sup>2</sup>	Small corner site < 650m <sup>2</sup>	Small triangular corner site < 650m <sup>2</sup>	Small irregular site > 650m <sup>2</sup>	Deep soil	Potential deep soil	Existing trees - (S) site (SI) street neighbour (N) street neighbour (NI)	Number of public footpaths (O) Opposite (D) Opposite	FSR	HOB from HOB/FSR Study	Styery height	Type	Situation	Notes	
																			Existing	Recommendations
														15-22	2.2-2.5	8	30.15	31	6	Indicates that one additional storey be allowed on sites with a combination of variables
														15-22	2.2-2.5	7	26.95	27	6	Adopt a consistent street wall height irrespective of site variables
														15-22	2	7	26.95	27	5	Indicates that one additional storey be allowed on sites with a combination of variables
														15-22	2	6	23.75	24	5	Adopt a consistent street wall height irrespective of site variables
														22	1.5-1.75	6	23.75	24	4	Indicates that one additional storey be allowed on sites with a combination of variables
														12	1.5-1.75	5	20.55	21	4	Adopt a consistent street wall height irrespective of site variables

Site studies demonstrate challenges in achieving ADG solar access particularly on sites with 3.0:1 FSR. Sites with large site area and / or with privileged positions fronting park lands and open spaces having 3.0:1 FSR, are better able to achieve solar access requirements. Distributed limited footprint tower forms would also assist.

Site studies with FSR of 3:1 addressing Paramatta Road rely on the solar access dispensation of ADG clause 4.1 Noise on this busy street, identified by TINSW as a Noise Assessment Road.

Most site studies are capable of achieving 25% deep soil (refer to Table 3 - column Potential to achieve 25% DS). From the site studies, design of projects on sites 30m deep or less, will find it challenging to achieve basement car parking.

General recommendations include additional height for a combination of various site attributes. Some sites may have a combination of site attributes which together make the design challenging but achievable. Table 10 reports on site study exceptions.

Recommendations

1. Site by site - in accordance with the Section 5.
2. Generic control in accordance with Table 11 General Recommendations - Urban Frame.

Figure 4 - Height and FSR relationship from site studies

## Appendix 2

### Hill Thalís - Residential housing types matrix – Excerpt

Public Domain	Dwelling/ha NET <small>based on site area (excludes allowances for public space)</small>	FSR		Height		Building Footprint	Building Typology	Deep soil landscape
		Residential	Commercial	Storeys	Metres			
30%+	<b>A</b> 25 - 60	0.5 - 1.0	-	Up to 3	11m	30 - 35%	Paired Housing Terrace/ Courtyard Walk-up Apartment	30 - 40%
35%+	<b>B</b> 60 - 100	0.9 - 1.3	-	4 - 4.5	14 - 18m	35 - 40%	Terrace Walk-up and Lifted + Garden Apartment	20 - 35%
40%+	<b>C</b> 80 - 125	1.2 - 1.8	-	5 - 5.5	14 - 20m	40 - 45%	Walk-up and Lifted + Garden Apartment	20 - 35%
40%+	<b>D</b> 120 - 160	1.2 - 1.8*	0.5 - 1.0**	5 - 5.5	14 - 22.5m	100% max 2 storeys 45 - 50% above 2 storeys	Shop Top Housing Town Centre	0 - 10%
45%+	<b>E</b> 150 - 200	1.8 - 2.4	-	6 - 6.5	17 - 22.5m	50 - 55%	Lifted Apartment Street Wall/Park Front Garden Apartment	20 - 30%
45%+	<b>F</b> 200 - 250	2.2 - 3.6	-	9 - 12	20 - 30m	Max footprint 600m <sup>2</sup>	Point Towers Lifted Apartment Park Front Ensembles	20 - 30%

Note: Noise attenuated building design required for all Canterbury Road frontages

Source - Hill Thalís

**hill thalís**  
ARCHITECTURE + URBAN PROJECTS PTY LTD

RE IMAGINING CANTERBURY ROAD  
City of Canterbury Bankstown

