

**BEFORE THE INDEPENDENT HEARING PANEL ON PROPOSED PRIVATE PLAN
CHANGE 13 TO THE OPERATIVE HAMILTON CITY DISTRICT PLAN**

IN THE MATTER of the Resource management Act 1991 (the Act)

AND

IN THE MATTER of proposed Private Plan Change 13 to the Hamilton
City District Plan

**Statement of Evidence of Stuart Mackie on behalf of the Waikato Racing
Club Incorporated
(Urban Design)
Dated: 26 July 2023**

MAY IT PLEASE THE INDEPENDENT HEARING PANEL

INTRODUCTION

1. My full name is Stuart Anderson Mackie.
2. I have been engaged by the Waikato Racing Club Incorporated (**WRCI**) to provide urban design advice in respect of the application by WRCI to request a Plan Change, namely Plan Change 13 (**PC13**) to change part of Te Rapa Racecourse to a Medium Density Residential Precinct. (referred to as “the Application” or “the proposal”).
3. I have prepared this statement of evidence at the request of WRCI.
4. In preparing this evidence I have read the Council’s report Section 42A Hearing Report dated 1 July 2023 and titled Report on Plan Change 13 – Te Rapa Racecourse private Plan Change.
5. In addition to these I have reviewed the submissions made with respect to the Application, where these relate to urban design matters.

Qualifications and Experience

6. I am a Senior Principal in the Auckland Office of Chow: Hill Architects Ltd, which was founded in 1992. I joined the company in 2001.
7. I hold a First-Class Honours Degree in Architecture and a Master’s Degree in Architecture from the Mackintosh School of Architecture and Glasgow University. I am an Architect Member of the NZIA, a UK Registered Architect and a member of the Royal Institute of British Architects and the Royal Incorporation of Architects Scotland.
8. I have 30 years professional experience in private practice, with the last 27 years having a particular focus on Urban Design. I have worked for several firms covering the fields of architecture and urban design,

both in New Zealand and overseas and have been involved in a range of projects, including larger urban schemes and detailed building projects.

9. I have appeared as an Expert Witness in several Council hearings.
10. My evidence is given on behalf of WRCI in support of its request for the proposed PC13 to the Hamilton City District Plan.
11. I have been providing urban design and architectural advice to WRCI since 2016. This has included initial design workshops and preparation of concepts for the potential redevelopment of parts of the Te Rapa Racecourse site.

CODE OF CONDUCT

12. I have read and am familiar with the Code of Conduct for Expert Witnesses in the current Environment Court Practice Note (2023), have complied with it, and will follow the Code when presenting evidence at the hearing. I also confirm that the matters addressed in this statement of evidence are within my area of expertise, except where I state that I am relying on the opinion or evidence of other witnesses. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

PURPOSE AND SCOPE OF EVIDENCE

13. In my evidence, I will provide an overview of the urban design matters that are relevant to PC13. I will also provide responses to urban design matters associated with:
 - (a) Section 42A report prepared for Hamilton City Council by Kylie O'Dwyer.
 - (b) Submissions received.

EVIDENCE

PROPOSED URBAN DESIGN CONTEXT

Development Context

14. The Waikato Racing Club was established on the original 400-acre site at Te Rapa in 1924. At the time, the site was on the fringe of the city and in a relatively rural setting, albeit with the North Island Main Trunk Line (NMIT) immediately to its west.
15. Over time, the road network and property development spread around the site, as the city expanded from the south. More commercial and industrial uses were developed along Te Rapa Road to the east and north of the WRC site. This is also the case with the land on the western side of the NMIT. More residential and open space uses emerged to the south, with some local retail provision at the junction of Te Rapa Road and Garnett Avenue.
16. In the last 20 years, the Forest Lake Gardens Retirement Village and the BUPA Foxbridge Retirement Village have been built at the southern end of the WRCI site, taking advantage of the racetrack outlook. Both developments include low-rise housing and some apartment accommodation.

Opportunities and Constraints.

17. With reducing demand for space on the WRCI site for stabling and other associated uses, I was involved in the process from 2016 to consider how the site could be utilised differently. The preferred direction was to consider how the site could be successfully developed for residential uses, as there were seen to be an appeal for some people to live near the Racecourse. In some respects, this follows on from the development of the retirement housing noted previously.

18. To test the validity of future development of the available land, urban design concepts were developed. These would not necessarily reflect the final built outcome but could establish the key design features and success factors underpinning successful development of the site.
19. Numerous concepts were considered for the site, which initially focussed on the more obvious physical characteristics of the site. These included the parts of the site that needed to be retained for WRCI purposes, the types of uses around the periphery of the site as a whole and the general aim of improving the setting for the Racecourse and other WRCI activities.
20. One aspect that was generally common to all options of the site was to ensure there was a clear relationship between new development and the racetrack itself. This was based on early thinking during project design workshops, that the appeal of any new development was its proximity to the racetrack, rather than just being another property development anywhere.
21. A significant idea in this respect was that new development provide an attractive frontage toward the racecourse grandstands and other uses. In addition, the concept was for the new development and the grandstands to frame the edges of an attractive central open space. This would effectively be the “front garden” of the racetrack and the development overall. To support this, the intention was to include a street pattern and rear laneways to avoid the need for vehicle access and garaging to be located on the main frontages facing north and west.
22. Overlaid on this was the aim to allow direct views and opportunities for movement from the new development to the racetrack. The existing approach to the site via Sir Tristam Avenue already provides such a connection. While this is not necessarily a perfectly straight road that allows a view of the track from the east, it does allow a sense

of procession towards the racetrack, which is not obstructed by any built form. Early thinking was to provide a similar opportunity on the southern side of the grandstand from Ken Browne Drive, as reflected in the current concept plan. Such visual connections are also apparent in the southernmost street in the concept running from north-east to south-west. A parallel street to this is incorporated into the scheme which provides a visual link from the development toward the grandstand.

23. The proposed development area at the southern corner of the site has been largely shaped by the adjacent site boundary, also providing some separation from the southern end of the grandstand. The eastern edge of this areas is an extension of the western boundary of Ken Browne Drive, as a way of preserving a direct view into the WRCI site when approaching from the south.
24. As further technical studies were conducted in relation to the site, further urban design concepts were developed to integrate their findings and requirements.
25. Early in the design process, it was recognised that direct vehicle movements through the site could be undesirable in terms of offering shortcuts relative to wider traffic movement. Consequently, the proposed urban form was adapted to allow for connectivity for all users but incorporate an indirect “zigzagging” vehicle route through the site.
26. Design concepts were further shaped by the emerging requirements of below ground infrastructure and overland stormwater flow. For example, the southern part of the site is crossed diagonally by a significant drainage line. As much as this appears to have influenced the layout of the existing commercial buildings to the south-east, this has also shaped the extent of development proposed on the WRCI site to avoid building over it.

27. In terms of stormwater, engineering analysis required the inclusion of stormwater control devices of a significant scale. The required stormwater management and performance was translated into a central wetland on the site, which could be integrated into the central landscape space as an amenity feature as well as a functional element. This feature was shaped to complement open space uses, the proposed driveway to the grandstand and some existing trees.

Landscape Buffer

28. To ensure efficient use of the available vacant land, earlier iterations of the site concept work was based on residential use adopting a direct “back-to-back” layout with the neighbouring commercial uses to the eastern and southern boundaries. This allowed internal streets to largely be double fronted.
29. After consulting with neighbouring landowners, it was determined that buildings should be setback 30m from the eastern and southern boundaries in response to concerns of reverse sensitivity associated with residential uses being located next to existing industrial and commercial uses. Figures 1 and 2 include photographs of the eastern boundary of the WRCI site. Based on this requirement and the range of other factors which had shaped the design to date, a further selection of concepts was tested to establish the most effective way that the land might be configured for development. The current concept plan was the preferred concept that resulted from this process and is illustrated by figures 3 to 10.
30. The landscape buffer is proposed to extend to Sir Tristram Avenue, cutting off the corner of the WRCI site, facing Te Rapa Road. With a relatively small area of approximately 1100 sq.m., it is proposed that this site be zoned for industrial use to match adjacent land use zoning along the western side of Te Rapa Road.

31. The proposed height limit of the PC13 site is 15m, which could accommodate buildings of up to four residential storeys, with available height for a roof form. A typical residential storey height for apartment buildings would be in the range of 3.0 to 3.5m floor-to-floor. Any less than 3.0m becomes difficult to accommodate building services and necessary acoustic separation. With buildings up to 15.0m high and a 30.0m wide setback from the boundary, the width of the setback space is around twice the height of the buildings. In design terms, this is expected to result in a street which feels spacious and has some of the characteristics of a tree-lined avenue.
32. The land to the east of the site is zoned industrial and forms part of the Te Rapa corridor. The maximum building permitted height for industrial land is 20.0m, compared to the 15.0m height proposed in PC13. Currently, the existing commercial buildings to the east and the south of the WRC site are generally one or two storeys in height, with a commercial floor to floor height of around 4 to 5 metres, giving an overall height of around 10 metres. It is noted that while the existing buildings could be replaced by larger buildings, the sites are relatively small sites compared to new development sites, with a front to back depth of around 55m. Typical portal frame structures, such as those in the vicinity of Te Rapa Road, have eaves heights of around 8 to 10m.
33. With respect to the proposed PC 13 setback, the most built-up cross section could be a 4-storey apartment, fronting a local street and then open space up to the edge of a potential 20m high industrial building.
34. The proposed buffer strip is intended to address reverse sensitivity issues relative to existing industrial areas. This should include retention of existing trees, where possible, as well as planting of new trees, preferably with potential to grow to 15-20m high. With respect to addressing issues of noise, a traditional technique is to provide screening between the source of noise and the receiving party. While

such screening, in the form of tree planting and vegetation, will have little impact on the actual noise levels, it can affect the perception of how loud the noise is.

35. The adoption of a relatively solid wall or acoustic fence at ground level is another element commonly used to address any noise or glare issues at low level and is a logical element to include on this site. In that regard, the requirement for a 1.8m high solid fence along the industrial zone boundary has been included in the plan provisions (Rule 4.8.12 f.).
36. I recommend that the landscape buffer be subject to detailed landscape design at the resource consent stage to ensure these outcomes are achieved.
37. To support measures associated with the landscape buffer, there are building design strategies that can reduce the effect of nearby noise or glare issues. I discuss these as follows.
38. The first strategy would be to arrange building forms and internal planning to locate less sensitive parts of the building, such as lifts or stairs, in the direction of the potential noise or glare. Conversely, living spaces or balconies could be located on the opposite side of the building to any possible sources of environmental impact.
39. The next level of detail relates to the design and specification of the external envelope of buildings and in particular, window design. With increasing requirements for the thermal efficiency and insulation of buildings, greater performance is being required of basic wall constructions and window specifications. As windows improve thermally, they will also tend to be more effective in terms of acoustic performance as well.
40. Where windows are openable for purposes of ventilation, this will obviously degrade their performance relative to external noise.

However, as part of the move towards improved thermal performance of buildings, including housing, there is increasing awareness of the need to control the airtightness of buildings and consider the use of mechanical ventilation to minimise heat loss. This approach also reduces or removes the need for windows to be opened for fresh air ventilation, as mechanical systems will typically draw in fresh air through façade inlet grills and ductwork.

41. With the increasing prevalence of Greenstar, Homestar and Passive House measures, as well as recent improvements to the H1 Energy Efficiency section of the Building Code, mechanical ventilation of buildings will become more common, with the benefit that either odour or noise impacts from the surrounding environment can also be addressed. As a result, the acoustic treatment and ventilation systems described by Mr Bell-Booth in his evidence are not significantly different from modern residential design and construction standards and are consistent with occupants' expectations.

SUBMISSIONS RECEIVED

42. Of the submissions received, the following responses are limited to matters that relate to urban design issues.

Vehicle Clearance

43. In terms of the physical environment, FENZ have asked for the inclusion of a rule requiring a 4m vertical clearance relative to trees and parts of buildings, such as eaves.
44. The design of any development on the site should follow the requirements of the New Zealand Building Code Part C5 – Access and Safety for Firefighting Operations. Related to this, Part 6 of Amendment 2 of the Acceptable Solutions for Part C includes vehicle clearance dimensions consistent with the proposed requirement.

45. The height clearance requested is also included in the FENZ publication “Designers Guide to Firefighting Operations” which is aimed at ensuring building designs comply with the New Zealand Building Code C5 – Access and safety for firefighting operations, Clause C5.6.
46. From an urban and architectural design perspective, the Building Code requirements and the FENZ publication already define the vehicle access requirements. Consequently, I do not see any benefit in including it in Plan Change 13.

Height in Relation to Boundary

47. A Height in Relation to Boundary (HIRB) control is a measure that aims to control the effect of a building’s design on its surroundings. Its main purpose is to protect access to daylight or sunlight for neighbouring properties.
48. Kāinga Ora has requested a Height in Relation to Boundary (HIRB) requirement for the Medium Density Zone of 6.0m + 60 degrees. This compares with the proposed 4.0m + 60 degrees currently proposed for PC13. I do not support this proposed change to the HIRB for the reasons explained below.
49. In practice, the current PC13 would allow the ground floor of a building to adjoin a site boundary with 1m setback, while the Kāinga Ora proposal would likely allow the lower two floors of a building to adjoin a site boundary with a 1m setback. In addition, the Kāinga Ora approach could allow buildings to be slightly taller where they might, for example, be limited by HIRB from a rear boundary.
50. From my experience and observation, HIRB controls can be limiting in terms of efficient design outcomes and can sometime result in poor urban form. This does relate to the skills of individual designers and the nature of their brief, but I consider the 4.0m base dimension for

HIRB controls to be relatively suburban in character. The 6.0m base dimension suggests a more urban built environment.

51. The overall vision for development on the site is of buildings in a relatively green landscaped environment which may rise to three or four storeys. Other than the proposed 15.0m height limit, the anticipated outcome is not significantly different to what could be developed in typical low-rise residential areas with more restrictive HIRB requirements and reasonably generous spaces between built forms.
52. Consequently, I consider the proposed 4.0m +60 degrees currently proposed for PC13 to be preferable to the 6.0m + 60 degrees alternative proposed Kāinga Ora.

Lot Shape Factor

53. Kāinga Ora requested lot sizes and shapes be assessed through shape factor methodology, rather than just an area.
54. Lot shape factor is aimed at ensuring the shape and proportions of the perimeter of a lot are useable, even where the area of the lot would meet expectations. This can be assessed through the lot being tested for fit relative to a theoretical circle or other regular shape of a prescribed size. There are also calculations that relate perimeter length to lot area to achieve a ratio that falls within an acceptable range.
55. A key aspect of either lot area or shape factor is to achieve a useful lot size for the proposed use. From experience of various residential projects, the types of dwelling and their scales can be quite variable. While predetermined lot sizes can be effective for detached housing, they can be a limitation when considering either semi-detached, terraced housing or perhaps apartment building designs. In these

instances, it is often more effective to subdivide street-block portions of development once the specific dwelling designs are fixed.

56. Designing built outcomes in advance through prescriptive rules can work in some cases, but inevitably, there are always exceptions. While specific rules are easier to check for compliance, setting design expectations and principles may offer more design flexibility and still achieve quality outcomes. However, I understand the PC13 rules include sufficient flexibility through resource consents to take into account a wide variety of design outcomes.

Height Limit

57. Kāinga Ora seeks an 18.0 m height limit relative to PC13, compared to the 15.0m limit proposed in PC13. I do not support this proposed increase in height limit for the reasons explained below.
58. In terms of development context, the adjacent industrial zoned land has a height limit of 20.0m. While this might not be sensitive to neighbouring buildings of up to 18.0m, there would likely be increased exposure of residential uses to noise of light overspill from the industrial uses.
59. The dwellings on the northern boundary of Forest Lake Gardens would be most sensitive to higher buildings being built to their north. However, the proposed road locations, relatively domestic lot depth and height in relation to boundary controls would tend to limit new buildings heights in this area.
60. Further afield, the proposed PC13 height limit of 15m is comparable to the three to four storey portions of the Bupa Foxbridge Retirement Village to the south of the racing track. The apartment building at Forest Lake Gardens is also three storeys high.

61. Compared to a height limit of 15m, an 18m height limit could potentially add up to 20% to the extent of accommodation on the site. This would equally add to the infrastructure load by the same extent, which may be a limitation.
62. Considering these issues, a 15.0m height limit for the PC13 area fits with the emerging development context and allows a scale of development that is a step beyond one and two storey development. Three or four storey apartment buildings are still relatively low -rise and can complement lower buildings. Increasing the limit to 18.0m and allowing buildings up to five storeys would change the scale and character of the development and likely challenge the capacity of infrastructure to accommodate this.

30m setback from industrial zone

63. The width of the setback was determined by a combination of planning precedent, acoustic requirements, potential for screening and overall development practicality. This width of space is wide enough to accommodate local roads on one edge and provide a meaningful width of soft landscape space as part of the overall open space provision. This also offers the potential to retain existing mature trees and provide additional ones over time.
64. Overall, the proposed 30m width of the setback is generous enough to constitute a significant green margin to the site and support significant tree planting to screen views from west to east and vice versa. However, its width has not overly impacted the efficiency of the development area as a whole.

Off-street parking

65. The proposed concept design assumed off-street parking for all buildings, with an emphasis on vehicle access from rear laneways. This is intended to enhance street frontages through the omission of

driveways or garages. A further benefit is that due to the increased absence of vehicle crossings, there is more street length available for either street landscaping or parallel parking.

Retirement Housing

66. Metlifecare Limited seek consideration of the proposed zoning to allow for various dispensations for any rest home and retirement village accommodation. While retirement accommodation is still housing, my experience with such developments has consistently revealed that the provision of more shared and centralised common facilities can legitimately reduce the provision of private space that would typically go with private housing. Because ownership of such properties is more centralised, areas of open space and gardens tend to be more communal and not subdivided by extensive fencing.
67. Nevertheless, I understand that retirement villages are provided for in PC13 by rules which require resource consent to be obtained. I understand that this is appropriate at this early stage of rezoning the site. It follows that a proposal for retirement village accommodation will be assessed on its merits.

CONCLUSION

69. The Section 42A Hearing Report supports the proposed urban design approach of PC13.
70. In terms of the submissions lodged on PC13, in my opinion there are no justified reasons to change the proposed urban design basis of PC13. The proposals have evolved over a significant time and responded to a range of infrastructural and planning factors that have emerged.
71. The underlying urban design thinking that supports the precinct plan for the site incorporates a range of good practice urban design concepts. In addition, the plan also allows flexibility for the design and staging of different parts of the site, which are often needed as larger projects are implemented over time and respond to evolving demands.
72. In my opinion, proposed PC13 (as amended and explained by Mr Olliver in his evidence), is positive for the future development of the WRCI site and will facilitate good quality urban design outcomes.



Stuart A. Mackie

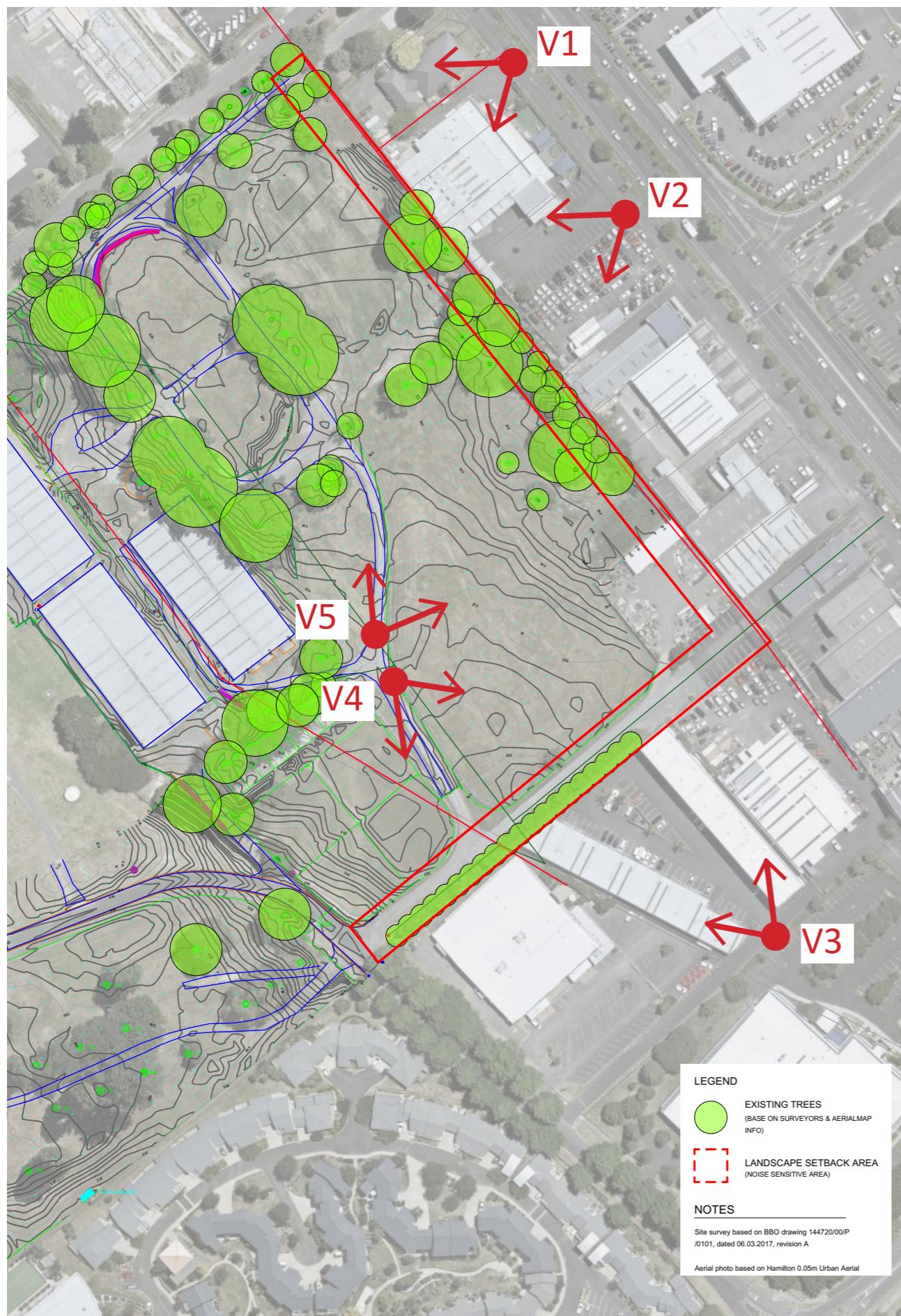
Dated 26 July 2023

PROPOSED PRIVATE PLAN CHANGE 13 TO THE HAMILTON CITY DISTRICT PLAN

URBAN DESIGN FIGURES

JULY 2023

chowhill





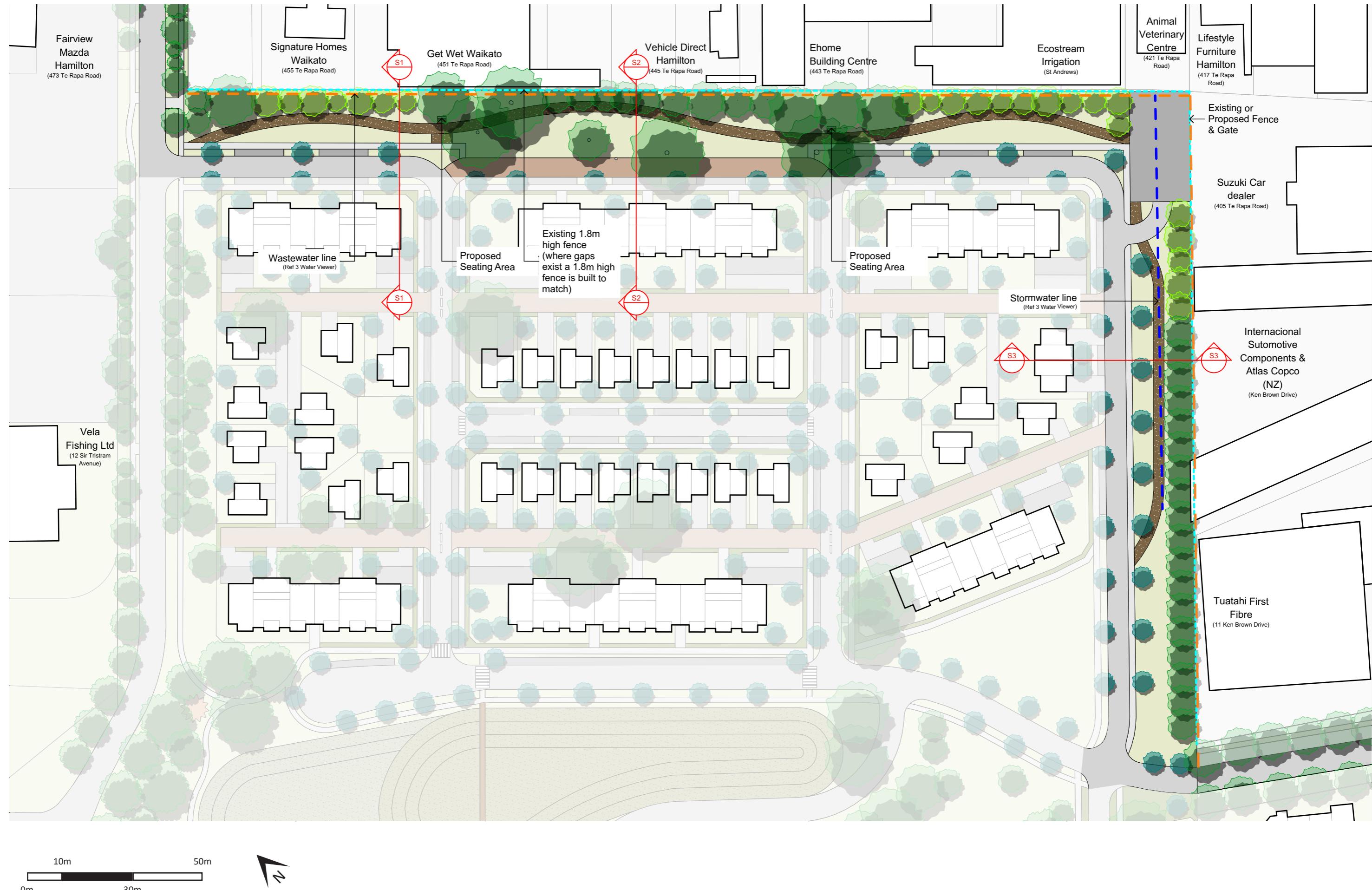


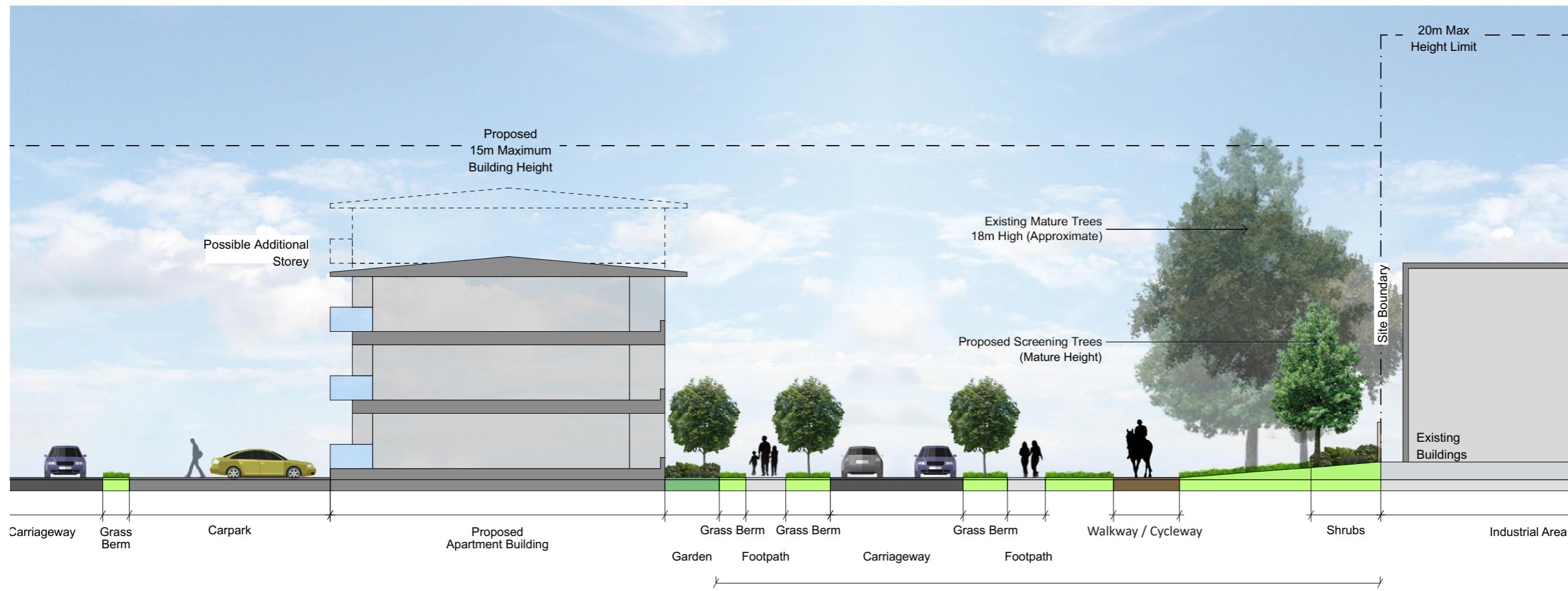
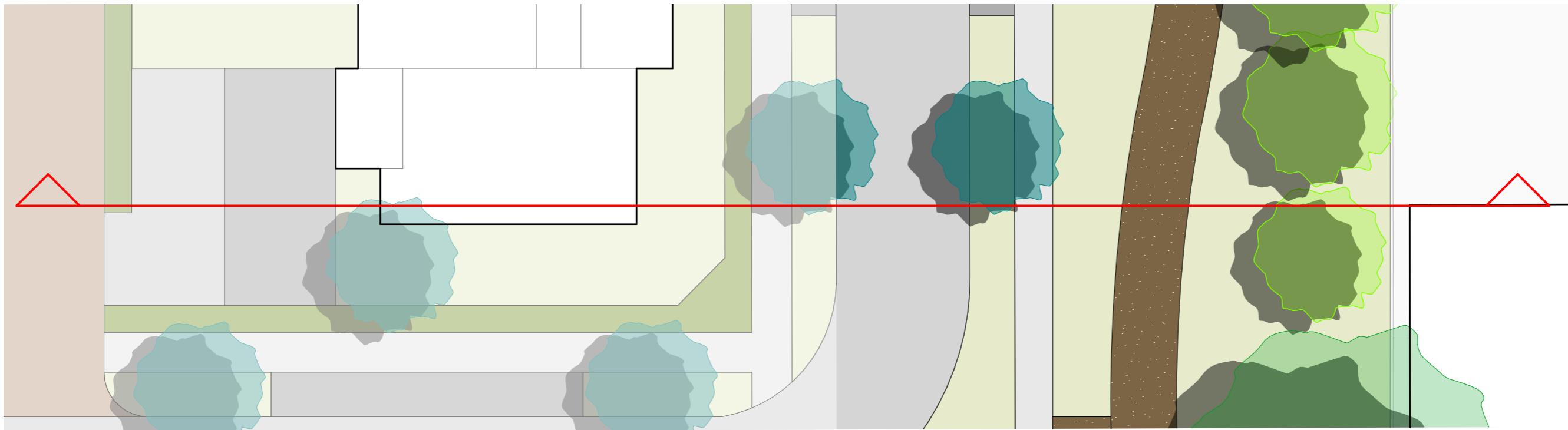




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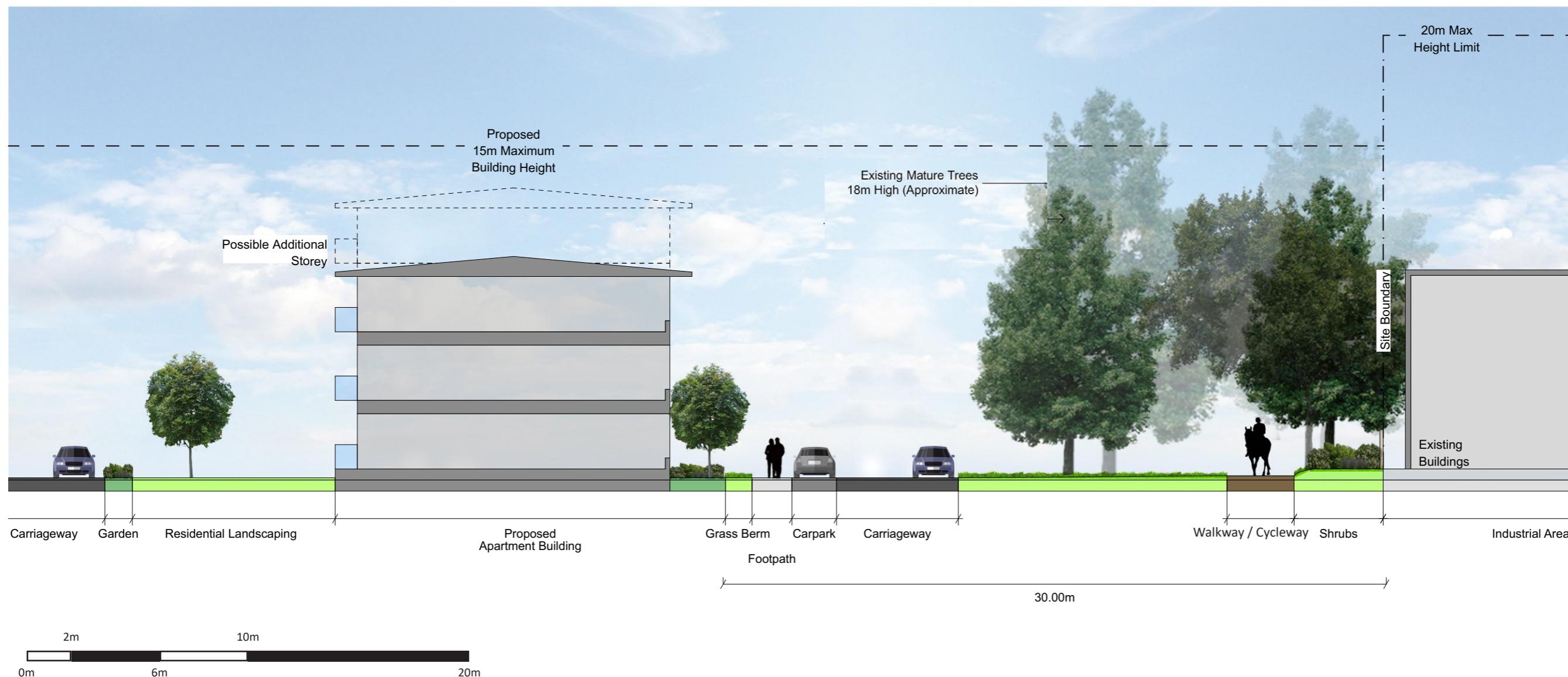
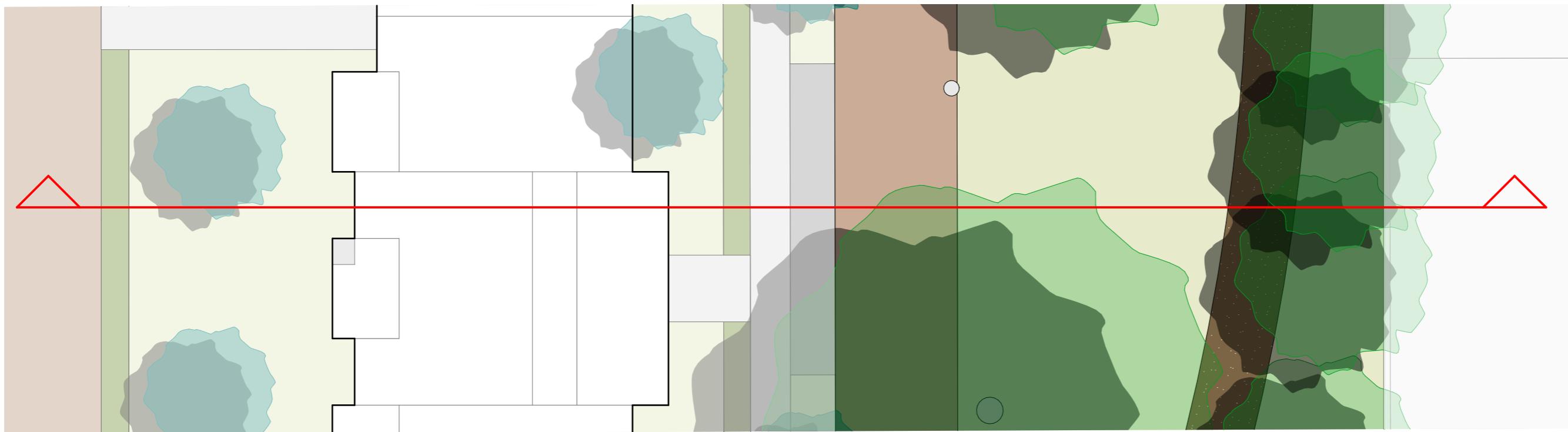


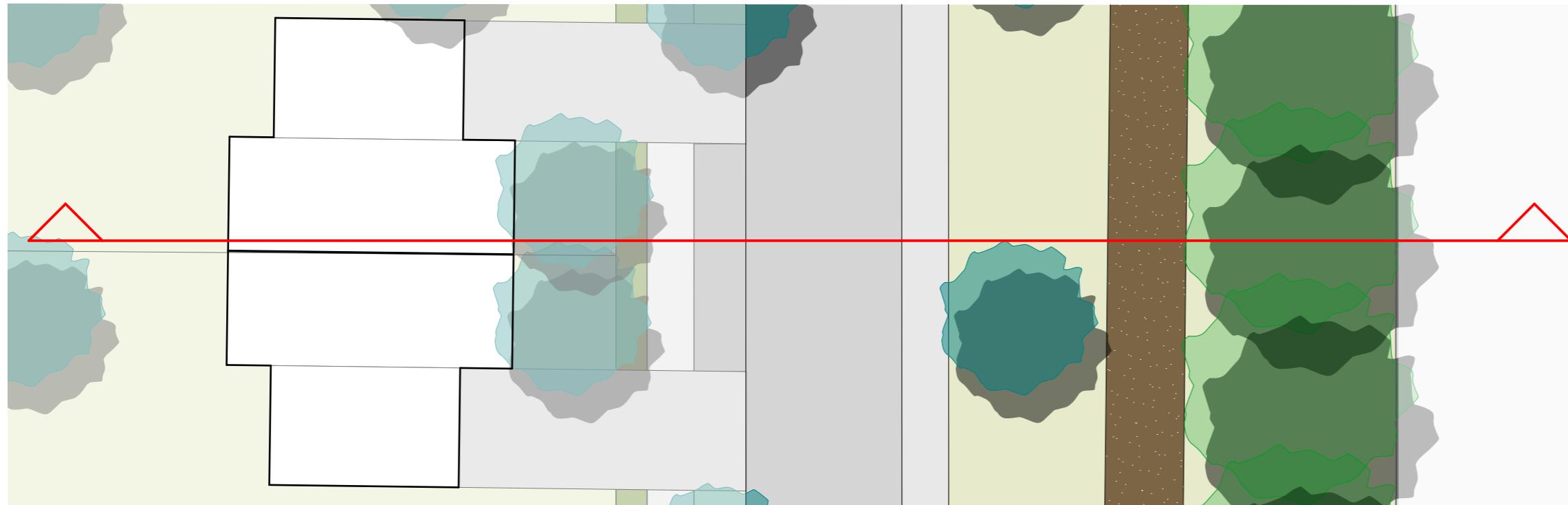




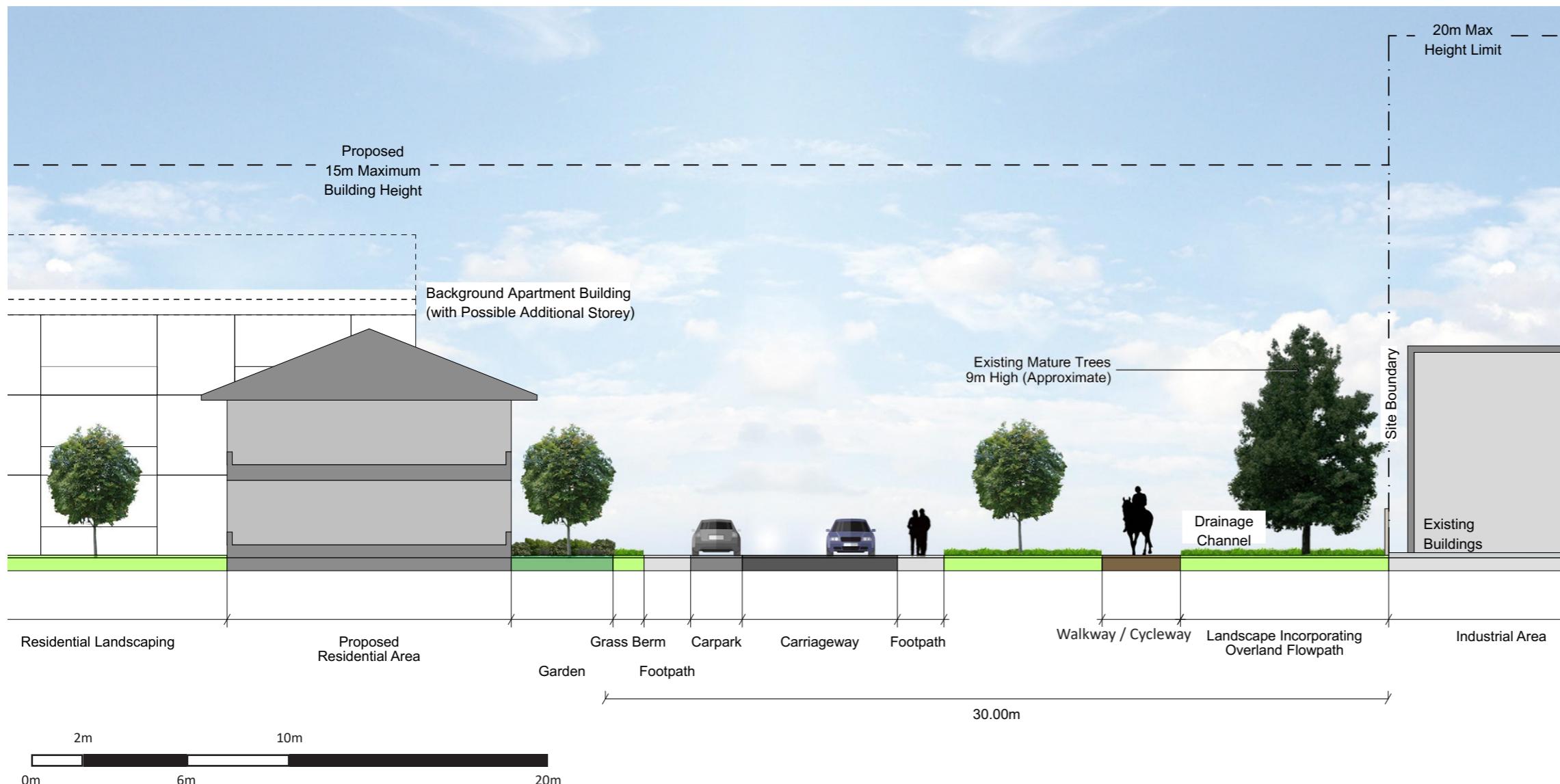
Plan View

Section View





Plan View



Section Location



