

1. INTRODUCTION

- 1.1 **Instruction:** I am instructed by Taylor Brammer Landscape Architects Pty Ltd to inspect the tree population at 168 Norton Street, Leichhardt and to provide an arboricultural report to accompany a planning proposal. This report investigates the impact of the proposed development on trees and provides the following guidelines for appropriate tree management and protective measures:
- a schedule of the relevant trees to include basic data and a condition assessment;
 - an appraisal of the impact of the proposal on trees and any resulting impact that has on local character and amenity.
- 1.2 **Purpose of this report:** This report provides an analysis of the impact of the development proposal on trees. Its primary purpose is for the council to review the tree information in support of the planning submission and use as the basis for issuing a planning consent or engaging in further discussions towards that end. Within this planning process, it will be available for inspection by people other than tree experts so the information is presented to be helpful to those without a detailed knowledge of the subject.
- 1.3 **Qualifications and experience:** I have based this report on my site observations and the provided information, and I have come to conclusions in the light of my experience. I have experience and qualifications in arboriculture, and include a summary in Appendix 1.
- 1.4 **Documents and information provided:** Taylor Brammer Landscape Architects Pty Ltd provided me with copies of the following documents:
- Survey Plan, Dwg No. 3765B-2, by Project Surveyors; and
 - Plans (indicative architectural plans) by Young and Metcalf Architects dated 1 September 2016.
- 1.5 **Scope of this report:** This report is only concerned with ten trees, seven located within the subject site and three adjacent to it, on public property. It takes no account of other trees, shrubs or groundcovers within the site unless stated otherwise. It includes a preliminary assessment based on the site visit and the documents provided, listed in 1.4 above.



2. THE LAYOUT DESIGN

- 2.1 **Tree AZ method of tree assessment:** The TreeAZ assessment method determines the worthiness of trees in the planning process. TreeAZ is based on a systematic method of assessing whether individual trees are important and how much weight they should be given in management considerations. Simplistically, trees assessed as potentially important are categorised as 'A' and those assessed as less important are categorised as 'Z'. Further explanation of TreeAZ can be found in Appendix 3.

In the context of new development, all the Z trees are discounted as a material constraint in layout design. All the A trees are potentially important and they dictate the design constraints. This relatively simple constraints information is suitable for use by the architect to optimise the retention of the best trees in the context of other material considerations.

2.2 Site visit and collection of data

- 2.2.1 **Site visit:** I carried out an unaccompanied site visit on 28 November 2016. All my observations were from ground level and I estimated all dimensions unless otherwise indicated. Aerial inspections, root or soil analysis, exploratory root trenching and internal diagnostic testing was not undertaken as part of this assessment. The weather at the time of inspection was clear and dry with good visibility.
- 2.2.2 **Brief site description:** 168 Norton Street is located in the residential suburb of Leichhardt (refer figure 1). The site is on the western side of the road and surrounded by residential and commercial development. The property consists of a large three and four storey building that is currently unoccupied and centrally set on the site. A variety of ornamental, coniferous and indigenous trees are scattered throughout the site courtyard and around the site boundaries.

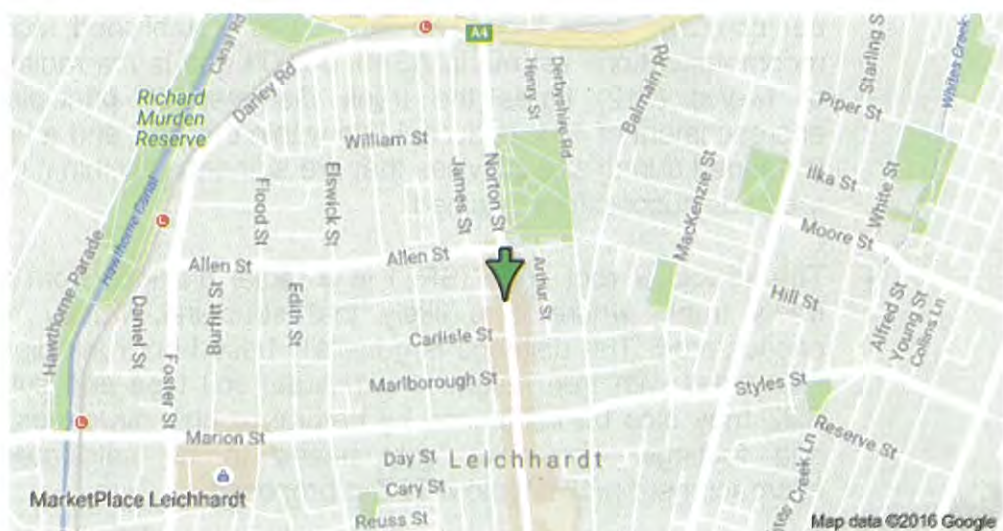


Figure 1: The location of the subject site (www.googlemaps.com).



- 2.2.3 **Collection of basic data:** I inspected each tree and have collected information on species, height, diameter, maturity and potential for contribution to amenity in a development context. I have recorded this information in the tree schedule included, with explanatory notes, in Appendix 2. Each tree was then allocated to one of four categories (AA, A, Z or ZZ), which reflected its suitability as a material constraint on development.
- 2.2.4 **Identification and location of the trees:** I have illustrated the locations of the significant trees on the Tree Management Plan (Plan TMP01) included as Appendix 8. This plan is for illustrative purposes only and it should not be used for directly scaling measurements.
- 2.2.5 **Advanced interpretation of data:** Australian Standard *Protection of trees on development sites* (AS4970-2009), recommends that the trunk diameter measurement for each tree is used to calculate the tree protection zone (TPZ), which can then be interpreted to identify the design constraints and, once a layout has been consented, the exclusion zone is to be protected by barriers.
- 2.2.6 **Plan updates:** During my site visit, I noted seven trees (4, 5, 6, 7, 8, 9 and 10) that were not shown on the land survey. I have illustrated their approximate locations on plan TMP01 but these positions have not been accurately surveyed. I do not consider that this has affected the conclusions of this report but if their locations are considered important, they should be accurately surveyed.
- 2.3 **The use of the tree information in layout design:** Following my inspection of the trees, the information listed in Appendix 2 was used to provide constraints guidance based on the locations of all the A trees. All the Z trees were discounted because they were not considered worthy of being a material constraint. This guidance identified two zones of constraint based on the following considerations:
- The tree protection zone (TPZ) is an area where ground disturbance must be carefully controlled. The TPZ was established according to the recommendations set out in AS4970-2009 and is the radial offset distance of twelve (x12) times the trunk diameter. In principle, a maximum encroachment of 10% is acceptable within the TPZ and a high level of care is needed during any activities that are authorised within it if important trees are to be successfully retained.
 - The structural root zone (SRZ) is a radial distance from the centre of a tree's trunk, where it is likely that structural, woody roots would be encountered. The distance is generally based on trunk diameter, although this varies with tree height, crown area, soil type and soil moisture. The SRZ may also be influenced by natural or built structures, such as rocks and footings. The SRZ only needs to be calculated when major encroachment (>10%) into a TPZ is proposed.



3. ARBORICULTURAL IMPACT APPRAISAL

- 3.1 **Summary of the impact on trees:** I have assessed the impact of the proposal on trees by the extent of disturbance in TPZs and the encroachment of structures into the SRZ (as set out briefly in 2.3 above and more extensively in Appendix 2). All the trees that may be affected by the development proposal are listed in Table 1

Table 1: Summary of trees that may be affected by development

Impact	Reason	Important trees		Unimportant trees	
		AA	A	Z	ZZ
Retained trees that may be affected through disturbance to TPZs	Demolition and construction activity and site access		1, 2	3	
Trees to be removed	Building construction and/or level variations within TPZ			4, 6, 8, 9	5, 7, 10

3.2 Detailed impact appraisal

- 3.2.1 **Category A trees that could potentially be adversely affected through TPZ disturbance:** Two category A trees (1 and 2) could potentially be adversely affected through disturbance to their TPZs as follows:

- Trees 1 and 2: These are important trees with a high potential to contribute to amenity so any adverse impacts on them should be minimised. The proposed works remain well outside the TPZ of these trees and impacts are not expected. I have reviewed the situation carefully and my experience is that these trees could be successfully retained without any adverse effects or tree protection requirements.

- 3.2.3 **Low category tree to be retained:** Tree 3 is located adjacent to the rear lane access. Although this tree remains outside the works area, care should be taken to prevent damage caused by heavy vehicles accessing the site.

- 3.2.4 **Low category trees to be removed:** The proposed development will necessitate the removal of seven trees of low and very low retention value. These include Trees 4, 5, 6, 7, 8, 9 and 10. None of these trees are considered significant or worthy of special measures to ensure their preservation. It should be noted that Trees 5, 7 and 10 are self-seeded Class 4 Weeds and should be removed irrespective of the proposal.



3.3 Proposals to mitigate any impact

- 3.3.1 **Summary of the impact on local amenity:** Seven low category trees will be lost because of this proposal. However, they are not visible from outside the ensuring there is no impact on the wider setting. The proposed changes may adversely affect one low category tree if appropriate protective measures are not taken. However, if adequate precautions to protect the retained trees are specified and implemented through the arboricultural method statement included in this report, the development proposal will have no adverse impact on the contribution of trees to local amenity or character.

4. OTHER CONSIDERATIONS

- 4.1 **Trees subject to statutory controls:** The subject trees are legally protected under Inner West Council's Tree Preservation Order, it will be necessary to consult the council before any pruning or removal works other than certain exemptions can be carried out. The works specified above are necessary for reasonable management and should be acceptable to the council. However, tree owners should appreciate that the council may take an alternative point of view and have the option to refuse consent.
- 4.2 **Trees outside the property:** Trees 1, 2 and 3 are located in the adjacent properties effectively out of the control of the owners of 168 Norton Street, Leichhardt.

5. BIBLIOGRAPHY

5.1 List of references:

Australian Standard AS4373-2007 *Pruning of Amenity Trees*.
Standards Australia.

Australian Standard AS4970-2009 *Protection of trees on development sites*.
Standards Australia.

Barrell, J (2009) Draft for Practical Tree AZ version 9.02 A+NZ
Barrel Tree Consultancy, Bridge House, Ringwood BH24 1EX

Matheny, N.P. & Clark, J.R. (1998) Trees & Development: A Technical Guide to Preservation of Trees During Land Development
International Society of Arboriculture, Savoy, Illinois.

Mattheck, Dr. Claus R., Breloer, Helge (1995) The Body Language of Trees - A Handbook for Failure Analysis;
The Stationery Office, London. England.



6. DISCLAIMER

6.1 Limitations on use of this report:

This report is to be utilized in its entirety only. Any written or verbal submission, report or presentation that includes statements taken from the findings, discussions, conclusions or recommendations made in this report, may only be used where the whole of the original report (or a copy) is referenced in, and directly attached to that submission, report or presentation.

ASSUMPTIONS

Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible: however, Naturally Trees can neither guarantee nor be responsible for the accuracy of information provided by others.

Unless stated otherwise:

- *Information contained in this report covers only those trees that were examined and reflects the condition of those trees at time of inspection: and*
- *The inspection was limited to visual examination of the subject trees without dissection, excavation, probing or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future.*

Yours sincerely



Andrew Scales
Dip. Horticulture / Arboriculture
Mobile: 0417 250 420



APPENDIX 1

Brief qualifications and experience of Andrew Scales

1. Qualifications:

Associate Diploma Horticulture	Northern Sydney Institute of TAFE	1995-1998
Certificate in Tree Surgery	Northern Sydney Institute of TAFE	1998
Associate Diploma Arboriculture	Northern Sydney Institute of TAFE	1999-2006

- 2. Practical experience:** Being involved in the arboricultural/horticultural industry for in excess of 10 years, I have developed skills and expertise recognized in the industry. Involvement in the construction industry and tertiary studies has provided me with a good knowledge of tree requirements within construction sites.

As director of Naturally Trees, in this year alone I have undertaken hundreds of arboricultural consultancy projects and have been engaged by a range of clients to undertake tree assessments. I have gained a wide range of practical tree knowledge through tree removal and pruning works.

3. Continuing professional development:

Visual Tree Assessment (Prof. Dr. Claus Mattheck)	Northern Sydney Institute of TAFE	2001
Wood Decay in Trees (F.W.M.R.Schwarze)	Northern Sydney Institute of TAFE	2004
Visual Tree Assessment (Prof. Dr. Claus Mattheck)	Carlton Hotel, Parramatta NSW	2004
Tree A-Z / Report Writing (Jeremy Barrell)	Northern Sydney Institute of TAFE	2006
Up by Roots – Healthy Soils and Trees in the Built Environment (James Urban)	The Sebel Parramatta NSW	2008
Tree Injection for Insect Control (Statement of Attainment)	Northern Sydney Institute of TAFE	2008
Quantified Tree Risk Assessment (QTRA) Registered Licensee #1655	South Western Sydney Institute	TAFE 2011
Practitioners Guide to Visual Tree Assessment	South Western Sydney Institute	TAFE 2011
Quantified Tree Risk Assessment (QTRA) Registered Licensee #1655	Richmond College NSW TAFE	2014

4. Current professional memberships:

Arboriculture Australia – (Registered Consulting & Practising Arborist #2136)



APPENDIX 2

Tree schedule

NOTE: Colour annotation is AA & A trees with green background; Z & ZZ trees with blue background; trees to be removed in red text.

No.	Genus species	Height	Spread	DBH	TPZ	Foliage %	Age class	Defects/Comment	Location	Services	Significance	Tree AZ
1	<i>Eucalyptus scoparia</i>	16	12	600	7.2	80%	M	Nil	Garden bed	Adjacent structure	H	A1
2	<i>Eucalyptus nicholii</i>	14	12	500	6.0	80%	M	Nil	Sealed surfaces	Adjacent structure	H	A1
3	<i>Robinia pseudoacacia</i>	9	7	300	3.6	80%	M	Nil	Garden bed	Adjacent structure	L	Z10
4	<i>Cupressus sp.</i>	12	6	350	4.2	70%	M	Co-dominant	Garden bed	Adjacent building	M	Z10
5	<i>Celtis sinensis</i>	14	10	400	4.8	80%	M	Nil	Garden bed	Adjacent building	M	ZZ3
6	<i>Cupressus sp.</i>	14	3	300	3.6	70%	M	Nil	Garden bed	Adjacent building	M	Z10
7	<i>Celtis sinensis</i>	14	10	400	4.8	80%	M	Nil	Garden bed	Adjacent building	M	ZZ3
8	<i>Howea forsteriana</i>	6	3	150	2.0	90%	M	Nil	Garden bed	Nil	L	Z1
9	<i>Howea forsteriana</i>	6	3	150	2.0	90%	M	Nil	Garden bed	Nil	L	Z1
10	<i>Celtis sinensis</i>	12	5	250	3.0	70%	M	Nil	Garden bed	Adjacent building	L	ZZ3



Explanatory Notes

- **Measurements/estimates:** All dimensions are estimates unless otherwise indicated. Measurements taken with a tape or clinometer are indicated with a '*'. Less reliable estimated dimensions are indicated with a '?'.
- **Species:** The species identification is based on visual observations and the botanical name. In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigations. Where there is some doubt of the precise species of tree, it is indicated with a '?' after the name in order to avoid delay in the production of the report. The botanical name is followed by the abbreviation sp if only the genus is known. The species listed for groups and hedges represent the main component and there may be other minor species not listed.
- **Tree number:** relates to the reference number used on site diagram/report.
- **Height:** Height is estimated to the nearest metre.
- **Spread:** The average crown spread is visually estimated to the nearest metre from the outermost tips of the live lateral branches.
- **DBH:** These figures relate to 1.4m above ground level and are recorded in millimetres. If appropriate, diameter is measured with a diameter tape. 'M' indicates trees or shrubs with multiple stems.
- **Foliage Cover:** Percent of estimated live foliage cover for particular species range.
- **Age class:**

Y	Young = recently planted
S	Semi-mature (<20% of life expectancy)
M	Mature (20-80% of life expectancy)
O	Over-mature (>80% of life expectancy)
- **Tree AZ:** See reference for Tree AZ categories in Appendix 3.
- **Significance:** A tree's significance/value in the landscape takes into account its prominence from a wide range of perspectives. This includes, but is not limited to neighbour hood perspective, local perspective and site perspective. The significance of the subject trees has been categorized into three groups, such as: High, Moderate or Low significance.



APPENDIX 3**TreeAZ Categories (Version 9.02 A+NZ)****Z Category Z: Unimportant trees not worthy of being a material constraint**

Local policy exemptions: Trees that are unsuitable for legal protection for local policy reasons including size, proximity and species

Z1	Young or insignificant small trees, i.e. below the local size threshold for legal protection, etc
Z2	Too close to a building, i.e. exempt from legal protection because of proximity, etc
Z3	Species that cannot be protected for other reasons, i.e. scheduled noxious weeds, out of character in a setting of acknowledged importance, etc

High risk of death or failure: Trees that are likely to be removed within 10 years because of acute health issues or severe structural failure

Z4	Dead, dying, diseased or declining
Z5	Severe damage and/or structural defects where a high risk of failure cannot be satisfactorily reduced by reasonable remedial care, i.e. cavities, decay, included bark, wounds, excessive imbalance, overgrown and vulnerable to adverse weather conditions, etc
Z6	Instability, i.e. poor anchorage, increased exposure, etc

Excessive nuisance: Trees that are likely to be removed within 10 years because of unacceptable impact on people

Z7	Excessive, severe and intolerable inconvenience to the extent that a locally recognised court or tribunal would be likely to authorise removal, i.e. dominance, debris, interference, etc
Z8	Excessive, severe and intolerable damage to property to the extent that a locally recognised court or tribunal would be likely to authorise removal, i.e. severe structural damage to surfacing and buildings, etc

Good management: Trees that are likely to be removed within 10 years through responsible management of the tree population

Z9	Severe damage and/or structural defects where a high risk of failure can be temporarily reduced by reasonable remedial care, i.e. cavities, decay, included bark, wounds, excessive imbalance, vulnerable to adverse weather conditions, etc
Z10	Poor condition or location with a low potential for recovery or improvement, i.e. dominated by adjacent trees or buildings, poor architectural framework, etc
Z11	Removal would benefit better adjacent trees, i.e. relieve physical interference, suppression, etc
Z12	Unacceptably expensive to retain, i.e. severe defects requiring excessive levels of maintenance, etc

NOTE: Z trees with a high risk of death/failure (Z4, Z5 & Z6) or causing severe inconvenience (Z7 & Z8) at the time of assessment and need an urgent risk assessment can be designated as ZZ. ZZ trees are likely to be unsuitable for retention and at the bottom of the categorisation hierarchy. In contrast, although Z trees are not worthy of influencing new designs, urgent removal is not essential and they could be retained in the short term, if appropriate.

A Category A: Important trees suitable for retention for more than 10 years and worthy of being a material constraint

A1	No significant defects and could be retained with minimal remedial care
A2	Minor defects that could be addressed by remedial care and/or work to adjacent trees
A3	Special significance for historical, cultural, commemorative or rarity reasons that would warrant extraordinary efforts to retain for more than 10 years
A4	Trees that may be worthy of legal protection for ecological reasons (Advisory requiring specialist assessment)

NOTE: Category A1 trees that are already large and exceptional, or have the potential to become so with minimal maintenance, can be designated as AA at the discretion of the assessor. Although all A and AA trees are sufficiently important to be material constraints, AA trees are at the top of the categorisation hierarchy and should be given the most weight in any selection process.

TreeAZ is designed by Barrell Tree Consultancy (www.treeaz.com/tree_az/)

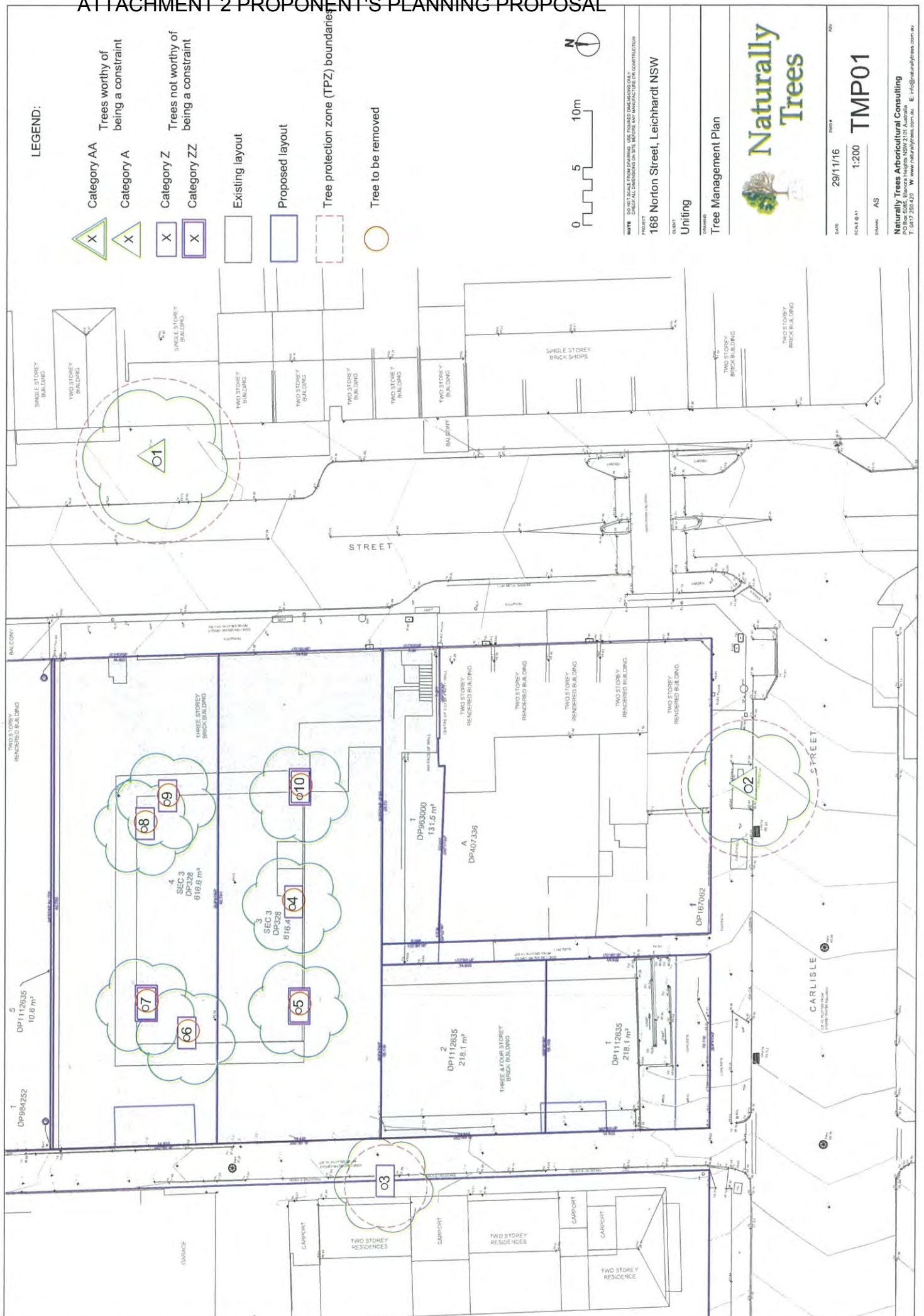


APPENDIX 4
Tree management plan

-refer attached Tree Management Plan, Dwg No. TMP01,
by Naturally Trees dated 29 November 2019



ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL



project advice notification



Project	168 Norton St Leichhardt	Project No	13005
Subject	Apartment Design Guide Checklist	Date	01.12.16

Issues relating to Part 2 “Developing the Controls” are discussed in Studio GL’s report.

Selected issues relating to Part 3 “Siting the Development” and Part 4 “Building” are discussed below.

This analysis and plans relating to it have been prepared to illustrate how an apartment building for seniors may be developed on the site and **are for the purpose of example only.**

Issues relating to general design relating to acoustic privacy, noise, facades, roof design, landscape design, awnings, energy efficiency, etc are not specific to this building type and resident age group.

Issues relating to universal design, adaptive re-use, mixed use and apartment mix may not be relevant to this project and these issues may be informed directly by client brief and resident group requirements.

ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL

Date: 01.12.16
Project: 168 Norton St Planning Proposal
Page: 2 of 7

Apartment Design Guide Section Reference	Building Concept Compliance
3D Communal and public open space	
Objective 3D-1 An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping	
1. Communal open space has a minimum area equal to 25% of the site	Cannot comply Communal open space area requirement for this site is 450 m ² The current scheme has communal open space over carpark slab, relating to the community centre and open walkways at approximately 180 m ²
2. Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9am and 3pm on 21 June (mid winter)	Partial compliance with design development
3E Deep Soil Zones	
Objective 3E-1 Deep soil zones...improve residential amenity and promote management of water and air quality.	
Deep soil zones are to meet the following minimum requirements.... For a site area greater than 1500m ² , a minimum dimension of 6m is required. Deep soil zone to be 7% of the site area	Cannot comply 7% site area required (1,800 x 7% m ²) = 126 m ² 6m minimum dimension not possible, 2m wide strip along laneway possible due to development envelope setback requirement
3F Visual Privacy	
Objective 3F-1 Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy	

ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL

Date: 01.12.16
 Project: 168 Norton St Planning Proposal
 Page: 3 of 7

1. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows: Building height up to 12m – 4 storeys Habitable rooms – 6m Non-habitable rooms – 3m Building height up to 25m – 5 - 8 storeys Habitable rooms – 9m Non-habitable rooms – 4.5m	Cannot comply Setbacks in the current scheme range from 0m on the side north and south boundaries to Levels 1,2 to maintain street frontage integrity, to 2m - 3m from laneway, as per suggested development envelope. Setbacks on Level 5 allow for the balcony edge to the building envelope generally for construction efficiencies, with the Level 5 apartment forms reducing on east, north and western facades, particularly allowing the corner balconies to reduce apparent bulk. Southern setback is approximately 1 m greater than the building envelope with 4 bedrooms on Level 5 potentially overlooking the roofs of properties to the south. Design features including directional skewed windows could ameliorate this potential overlooking aspect.
4A Solar and Daylight Access	
Objective 4A-1 To optimise the number of apartments receiving sunlight to habitable rooms and private open space	
1. Living rooms and private open spaces of at least 70% of apartments in a building to receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas	Can comply – see ADG Data Schedule Note: two storey or mezzanine apartment typologies are not suitable for this building useage. 73% compliance with solar access to living rooms and private open space – see solar compliance schedule. Design development and balcony adjustments can improve this percentage.
2. A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid winter	Can comply 4 apartments out of 44 (9%) currently receive no sun – design development may improve this
Objective 4A-2 Daylight access is maximised where sunlight is limited	

ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL

Date: 01.12.16
Project: 168 Norton St Planning Proposal
Page 4 of 7

Courtyards, skylights and high level windows (with sills of 1500mm or greater) are used only as a secondary light source in habitable rooms	Partial compliance Apartments 102, 103, 104, 202, 203, 204, 302, 303 second bedrooms suggest using a 1500mm sill height currently to maximise privacy for residents. In seniors living developments, many second bedrooms are used as guest accommodation or studies. A usual occupation rate per dwelling is approximately 1.3 persons maximum. Alternatively, screen edge of balcony and provide window with 600 – 750mm sill.
Objective 4A-3 Design incorporates shading and glare control, particularly for warmer months	Can comply
4B Natural Ventilation	
Objective 4B-1 All habitable rooms are naturally ventilated	Partial compliance See floor plans Studies where inboard may be studies or stores and may not have direct window to outside.
Objective 4B-2 The layout and design of single aspect apartments maximises natural ventilation	Partial compliance
Objective 4B-3 The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents	
1. At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building.	Can comply See ADG Data Schedule and floor plans Level 1: 101,102,103,104 Level 2: 201, 202, 203, 204, 206, 209, 212 Level 3: 301, 302, 303, 305, 307, 309 Level 4: 401, 402, 403, 405, 407, 409 Level 5: 501, 502, 503 (skylight), 504, 505 Total = 29/44, ie 66%
4C Ceiling Heights	

ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL

Date: 01.12.16
 Project: 168 Norton St Planning Proposal
 Page: 5 of 7

Objective 4C-1 Ceiling height achieves sufficient natural ventilation and daylight access	Partial compliance Habitable rooms – 2.7m ceiling height OK Non-habitable – may be less than 2.4m due to service ducting etc								
4D Apartment Size and Layout									
Objective 4D-1 The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity									
1. Apartments are required to have the following minimal internal areas: <table> <tr> <td>Studio</td><td>35 m²</td></tr> <tr> <td>1 bedroom</td><td>50 m²</td></tr> <tr> <td>2 bedroom</td><td>70 m²</td></tr> <tr> <td>3 bedroom</td><td>90 m²</td></tr> </table>	Studio	35 m ²	1 bedroom	50 m ²	2 bedroom	70 m ²	3 bedroom	90 m ²	Can comply
Studio	35 m ²								
1 bedroom	50 m ²								
2 bedroom	70 m ²								
3 bedroom	90 m ²								
Objective 4D-2 Environmental performance of the apartment is maximised									
1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height for open plan layouts	Partial compliance In this project that would limit an apartment depth to 6.75m. The site shape does not work well with this and other seniors living design parameters combined.								
2. In open plan layouts (where the living, dining and kitchen are combined) the maximum depth is 8m from a window	Partial compliance Level 1: 101,102,103,104, 105, 106 comply Level 2: 201, 202, 203, 204, 205, 206, 207, 208, 209, comply (210, 211, 212 are 8.6m to 8.8m deep, due to raking boundary on Norton St) Level 3: 301, 302, 303, 304, 305, 306, comply (307, 308, 309 are 8.2m to 8.8m deep, due to raking boundary on Norton St) Level 4: 401, 402, 403, 404, 405, 406, comply (407, 408, 409 are 8.2m to 8.8m deep, due to raking boundary on Norton St) Level 5: 502, 504, comply (501, 503 and 505 are 8.2 – 8.4m deep) Total = 29/44, ie 66%								

ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL

Date: 01.12.16
Project: 168 Norton St Planning Proposal
Page: 6 of 7

Objective 4D-3 Apartment layouts are designed to accommodate a variety of household activities and needs	Can comply Within the range of activities likely due to the age of prospective occupants
	These particular apartment interiors are generally designed using the principles of the Seniors SEPP, which standards are more onerous than the ADG due to circulation requirements at doorways, kitchens, bathrooms and other kitchen layout relationship restrictions etc.
4E Private open space and balconies	
Objective 4E-1 Apartments provide appropriately sized private open space and balconies to enhance residential amenity	Can comply
1. All apartments are required to have primary balconies as follows: Studio apartments 4 m ² 1 bedroom apartments 8 m ² /2m 2 bedroom apartments 10m ² /2m 3+ bedroom apartments 12m ² /2.4	Can comply
2. For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m ² and a minimum depth of 3m	N/A
Objective 4E-2 Primary private open space and balconies are appropriately located to enhance livability for residents	Can comply
4F Common circulation and spaces	
Objective 4F-1 Common circulation spaces achieve good amenity and properly service the number of apartments	
1. The maximum number of apartments off a circulation core on a single level is eight	Cannot comply Site constraints show possible 13 dwellings off the common circulation space. Design development will seek opportunities to provide natural light and ventilation into corridors

ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL

Date: 01.12.16
Project: 168 Norton St Planning Proposal
Page: 7 of 7

4G Storage									
Objective 4G-1 Adequate well designed storage is provided in each apartment									
1. In addition to the storage in kitchen, bathrooms, and bedrooms, the following storage is provided: 2. <table><tr><td>Studio apartments</td><td>4m³</td></tr><tr><td>1 bedroom apartments</td><td>6m³</td></tr><tr><td>2 bedroom apartments</td><td>8m³</td></tr><tr><td>3+ bedroom apartments</td><td>10m³</td></tr></table>	Studio apartments	4m ³	1 bedroom apartments	6m ³	2 bedroom apartments	8m ³	3+ bedroom apartments	10m ³	Can comply
Studio apartments	4m ³								
1 bedroom apartments	6m ³								
2 bedroom apartments	8m ³								
3+ bedroom apartments	10m ³								

Christine Young
DIRECTOR ARBN 4385

Young+Metcalf Architects

ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL

ADG Data Schedule

This Data Schedule relates to concept design drawings prepared by Young+Metcalf Architects to assist in the submission of a planning proposal for the site 13005/SK.01.1, SK.03.1, SK.04.01, SK.05.01, SK.06.01, SK.07.01, SK.08.01, issue H, dated 30 November, 2016

Planning Proposal for 168 Norton St Leichhardt

Further design development at DA stage may alter the size of dwellings, balconies, setbacks and other design features listed below

Floor Level	Apartment Number	Accommodation	Aspect	Natural ventilation	Private open space sq m balcony area	Apartment Layout single aspect
1	101	1 bed, 1 bath	west and south	YES	8+	
1	102	2 bed, 1 bath	west and east	YES	10+	
1	103	2 bed, 1 bath	west and east	YES	10+	
1	104	2 bed, 1 bath	west	YES	10+	YES
1	105	2 bed, 2 bath	west	NO	10+	YES
1	106	1 bed, 1 bath	south	NO	8+	YES

2	201	2 bed, 2 bath	west and south	YES	10+	
2	202	2 bed, 1 bath	west and east	YES	10+	
2	203	2 bed, 1 bath	west and east	YES	10+	
2	204	2 bed, 1 bath	west	YES	10+	YES
2	205	2 bed, 2 bath	west	NO	10+	YES
2	206	2 bed, 2 bath	west and east	YES	10+	
2	207	1 bed, int. study	north	NO	8+	YES
2	208	1 bed, int. study	west and east	NO	8+	
2	209	2 bed, 2 bath, study	east	YES	12+	YES
2	210	1 bed, int. study	east	NO	8+	YES
2	211	1 bed, int. study	east	NO	8+	YES
2	212	2 bed, 2 bath	west and east	YES	10+	
2	213	1 bed, 1 bath	south	NO	8+	YES

3	301	2 bed, 2 bath	west and south	YES	10+	
3	302	2 bed, 1 bath	west and east	YES	10+	
3	303	2 bed, 1 bath	west and east	YES	10+	
3	304	2 bed, 2 bath, study	west	NO	12+	YES
3	305	2 bed, 2 bath, study	west and north	YES	12+	
3	306	2 bed, 2 bath	north	NO	10+	YES
3	307	2 bed, 2 bath	north and east	YES	10+	
3	308	1 bed, int. study	east	NO	8+	YES
3	309	2 bed, 2 bath	east and south	YES	10+	
3	310	1 bed, 1 bath	south	NO	8+	YES

4	401	1 bed, 1 bath	west and south	YES	8+	
4	402	2 bed, 1 bath	west and east	YES	10+	
4	403	2 bed, 1 bath	west and east	YES	10+	

ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL

4	404	2 bed, 2 bath, study	west	NO	12+	YES
4	405	2 bed, 2 bath, study	west and north	YES	12+	
4	406	2 bed, 2 bath	north	NO	10+	YES
4	407	2 bed, 2 bath	north and east	YES	10+	
4	408	1 bed, int. study	east	NO	8+	YES
4	409	2 bed, 2 bath	east and south	YES	10+	
4	410	1 bed, 1 bath	south	NO	8+	YES

5	501	2 bed, 2 bath, study	west and south	YES	12+	
5	502	2 bed, 2 bath, study	west and north	YES	12+	
5	503	2 bed, 2 bath, study	north	NO	12+	YES
5	504	2 bed, 2 bath, study	north and east	YES	12+	
5	505	2 bed, 2 bath, study	east and south	YES	12+	

ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL

13005 - 168 NORTON ST LEICHHARDT SOLAR STUDY

	9am		10am		11am		12noon		1pm		2pm		3pm			COMPLIANCE
	Living	Private open space	Living	Private open space	Living	Private open space	Living	Private open space	Living	Private open space	Living	Private open space	Living	Private open space		
101	N	N	N	N	N	N	N	N	N	Y	N ONLY SMA	Y	Y	Y		
102	N	N	N	N	N	N	N	Y	N	Y	Y	Y	Y	Y		YES
103	N	N	N	N	N	N	N	Y	N ONLY SMA	Y	Y	Y	Y	Y		YES
104	N	N	N	N	N	N	N	Y	N ONLY SMA	Y	Y	Y	Y	Y		YES
105	N	N	N	N	N	N	N	Y	N ONLY SMA	Y	Y	Y	Y	Y		YES
106	N	N	N	N	N	N	N	N	N ONLY SMA	N	N	N	N	N		CAN MAKE COMPLY
201	N	N	N	N	N	N	N	Y	N	Y	Y	Y	Y	Y		YES
202	N	N	N	N	N	N	N	N	N	Y	N	Y	Y	Y		
203	N	N	N	N	N	N	N	Y	N	Y	N ONLY SMA	Y	Y	Y		
204	N	N	N	N	N	N	N	Y	N	Y	N ONLY SMA	Y	Y	Y		
205	N	N	N	N	N	N	N	Y	N	Y	N	Y	Y	Y		
206	N	N	N	N	Y	Y	N	Y	N	Y	Y	Y	Y	Y		YES
207	N	N	N ONLY SMA	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N		YES
208	N	N	N ONLY SMA	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N		YES
209	Y	Y	Y	Y	N ONLY SMA	Y	N	N	N	N	N	N	N	N		YES
210	Y	Y	Y	Y	N ONLY SMA	Y	N	N	N	N	N	N	N	N		YES
211	Y	Y	Y	Y	N ONLY SMA	Y	N	N	N	N	N	N	N	N		YES
212	Y	Y	Y	Y	N ONLY SMA	Y	N	N	N	N	N	N	N	N		YES
213	N	N	N	N	N	N	N	N	N	N	N	N	N	N		CAN MAKE COMPLY
301	N	N	N	N	N	N	N	Y	N	Y	N ONLY SMA	Y	Y	Y		
302	N	N	N	N	N	N	N	Y	N	Y	Y	Y	Y	Y		YES
303	N	N	N	N	N	N	N	Y	N ONLY SMA	Y	N ONLY SMA	Y	Y	Y		
304	N	N	N	N	N	N	N	Y	N	Y	Y	Y	Y	Y		YES
305	N	Y	N ONLY SMA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		YES
306	N ONLY SMA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		YES
307	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		YES
308	Y	Y	Y	Y	N ONLY SMA	Y	N	N	N	N	N	N	N	N		YES
309	Y	Y	Y	Y	N ONLY SMA	Y	N	N	N	N	N	N	N	N		YES
310	N	N	N	N	N	N	N	N	N	N	N	N	N	N		CAN MAKE COMPLY
																YES
401	N	N	N	N	Y	Y	N	Y	N ONLY SMA	Y	Y	Y	Y	Y		YES
402	N	N	N	N	N	N	N	Y	N ONLY SMA	Y	N ONLY SMA	Y	Y	Y		CAN MAKE COMPLY
403	N	N	N	N	N	N	N	Y	N ONLY SMA	Y	Y	Y	Y	Y		YES
404	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y		YES
405	N	Y	N ONLY SMA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		YES
406	N ONLY SMA	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		YES
407	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		YES
408	Y	Y	Y	Y	N ONLY SMA	Y	N	N	N	N	N	N	N	N		YES
409	Y	Y	Y	Y	N ONLY SMA	Y	N	N	N	N	N	N	N	N		YES
410	N	N	N	N	N	N	N	N	N	N	N	N	N	N		CAN MAKE COMPLY

ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL

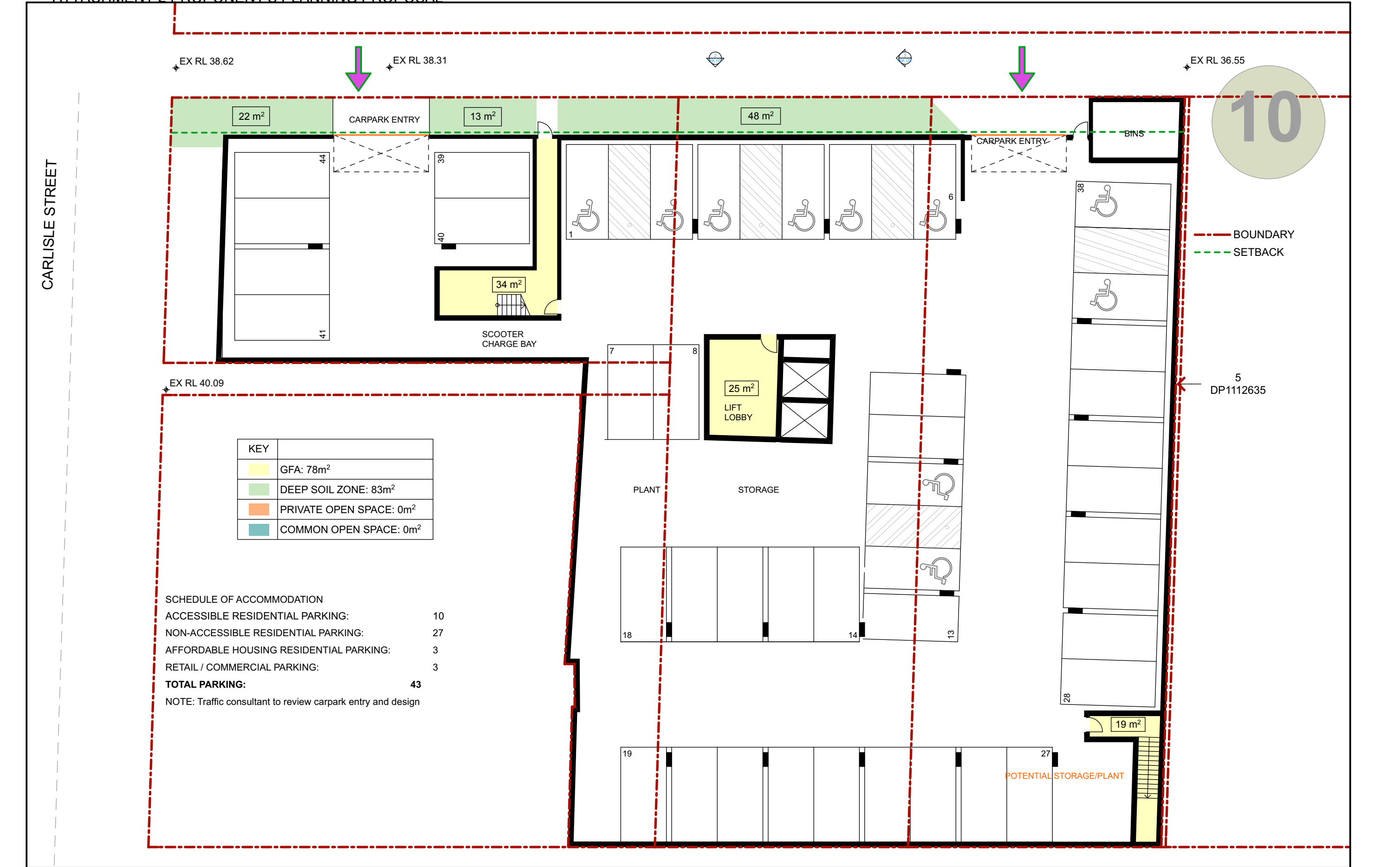
	9am		10am		11am		12noon		1pm		2pm		3pm			COMPLIANCE
	Living	Private open space	Living	Private open space	Living	Private open space	Living	Private open space	Living	Private open space	Living	Private open space	Living	Private open space		
501	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y		CAN MAKE COMPLY
502	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		YES
503	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		YES
504	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y		YES
505	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y		YES
																73% COMPLIANCE

SCHEDULE OF ACCOMMODATION			
KEY	ACCOMMODATION TYPE	GFA	BRIEF
	RETAIL / COMMERCIAL	413m ²	
	COMMUNITY CENTRE	189m ²	
	TOTAL ILU's = 44		50
	1 BED = 6		8
	1 BED + STUDY = 6		3
	2 BED, 1BATH = 11		12
	2 BED, 2 BATH = 14		17
	2 BED + STUDY = 7		10

GFA CALCULATIONS BRIEF				
LEVEL	GFA AREA	PRIVATE OPEN SPACE	COMMUNAL OPEN SPACE	DEEP SOIL ZONE
BASEMENT	78m ²	0m ²	0m ²	83m ²
LEVEL 01	1360m ²	105m ²	179m ²	0m ²
LEVEL 02	1307m ²	182m ²	0m ²	
LEVEL 03	1024m ²	148m ²	0m ²	
LEVEL 04	975m ²	121m ²	0m ²	
LEVEL 05	650m ²	206	0m ²	
TOTAL	5395m ²	762m ²	179m ²	
SITE AREA	1800m ²			
FSR	3.0:1			

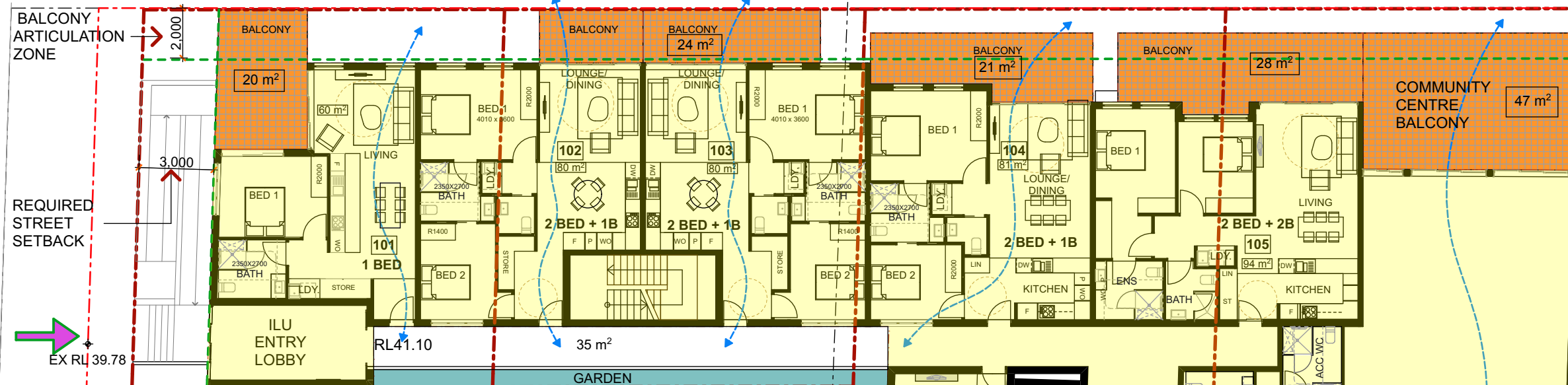
NOTE: THIS CONCEPT PLAN SUBJECT TO CLIENT REVIEW

PRELIMINARY



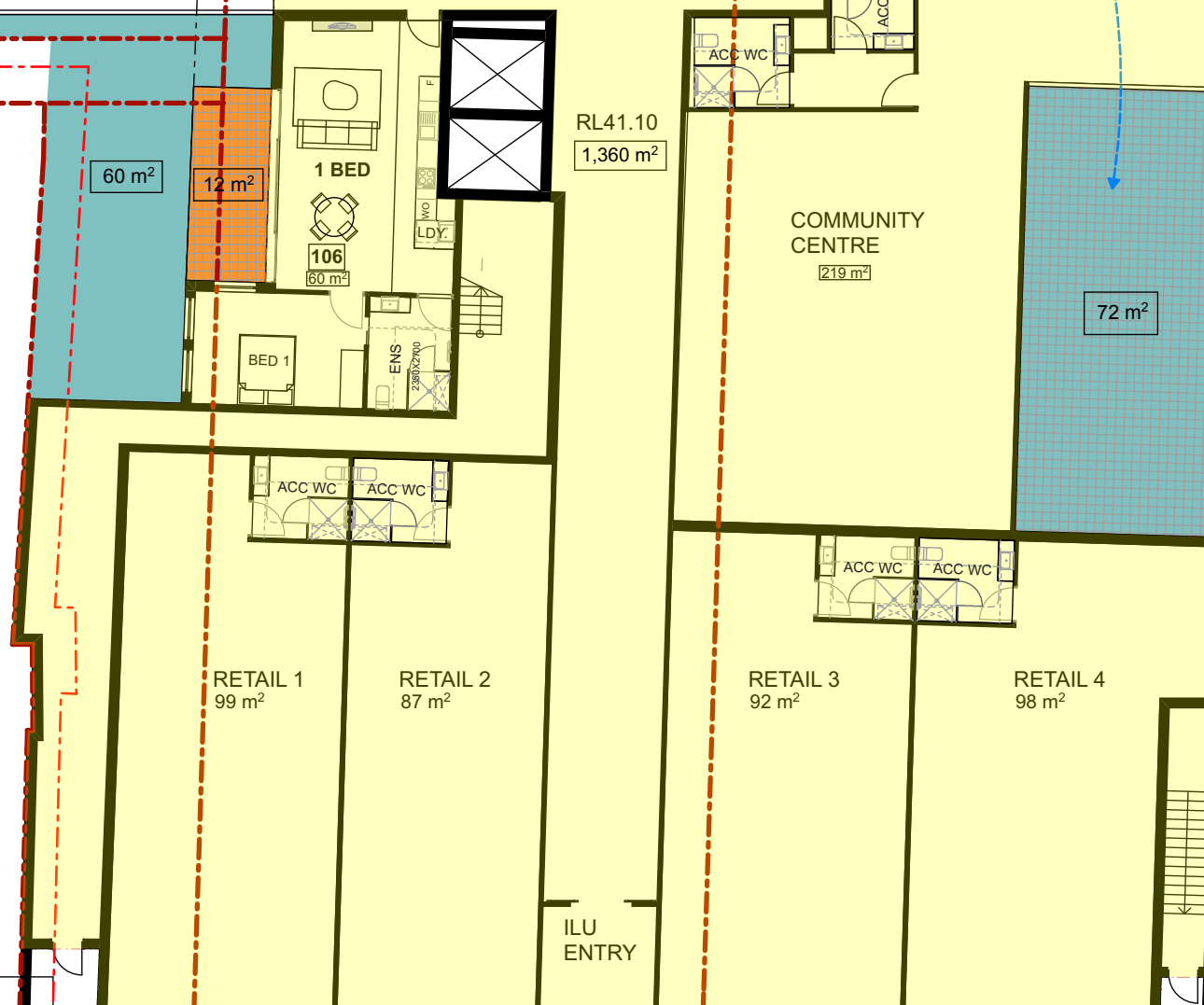
ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL

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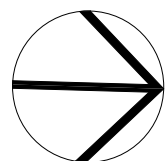


KEY	
	GFA: 1360m ²
	DEEP SOIL ZONE: 0m ²
	PRIVATE OPEN SPACE: 105m ²
	COMMON OPEN SPACE: 179m ²

SCHEDULE OF ACCOMMODATION		
KEY	ACCOMMODATION TYPE	GFA
	RETAIL / COMMERCIAL	376m ²
	COMMUNITY CENTRE	219m ²
	TOTAL ILU's = 6	
	1 BED = 2	
	1 BED + STUDY = 0	
	2 BED, 1BATH = 3	
	2 BED, 2 BATH = 1	
	2 BED + STUDY = 0	



REQUIRED AWNING ZONE @ L2



PRELIMINARY PLANNING PROPOSAL	G	18 / 11 / 16
Amendment/Issue	No.	Date

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PROJECT: 13005
Harold Hawkins Court
ILU - 168 Norton Street,
Leichhardt

SHEET TITLE:
GFA-L1

SCALE 1:200@A3 DATE 1/12/2016
DRAWN MJM CHECKED CY

DRAWING NUMBER SK.04.1
REV: H

REQUIRED BALCONY
SETBACK ZONE

10

BALCONY
ARTICULATION
ZONEREQUIRED
STREET
SETBACK--- BOUNDARY
--- SETBACK5
DP112635

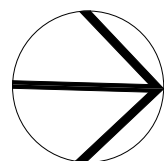
KEY	
	GFA: 1308m ²
	DEEP SOIL ZONE: 0m ²
	PRIVATE OPEN SPACE: 182m ²
	COMMON OPEN SPACE: 0m ²

SCHEDULE OF ACCOMMODATION

KEY	ACCOMMODATION TYPE	GFA
	TOTAL ILU's = 13	
	1 BED = 1	
	1 BED + STUDY = 4	
	2 BED, 1 BATH = 3	
	2 BED, 2 BATH = 4	
	2 BED + STUDY = 1	
	CIRCULATION	

VOID

VOID

REQUIRED
AWNING ZONE
@ L2

PRELIMINARY PLANNING PROPOSAL	G	18 / 11 / 16
Amendment/Issue	No.	Date

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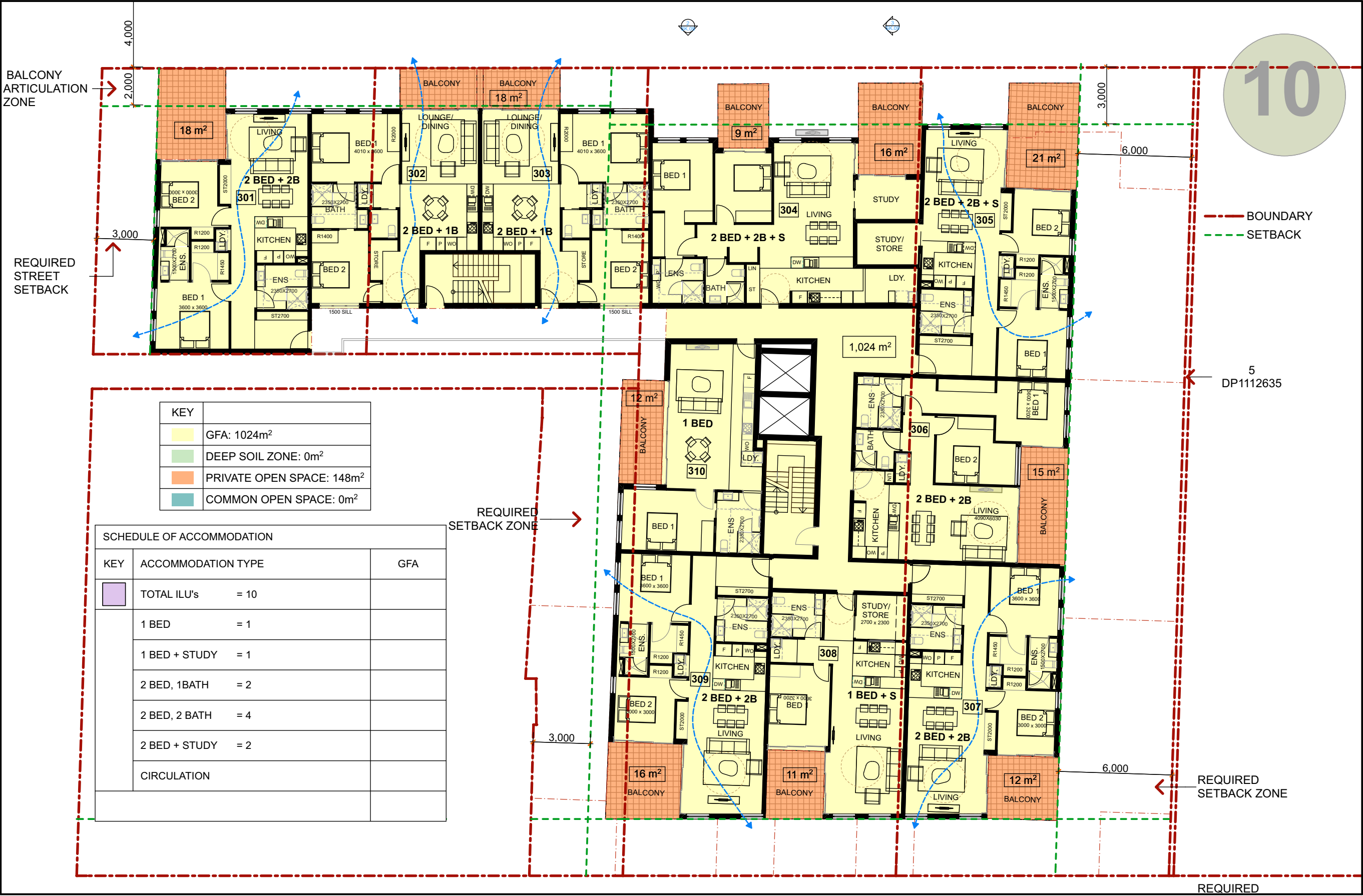
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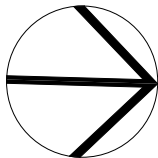
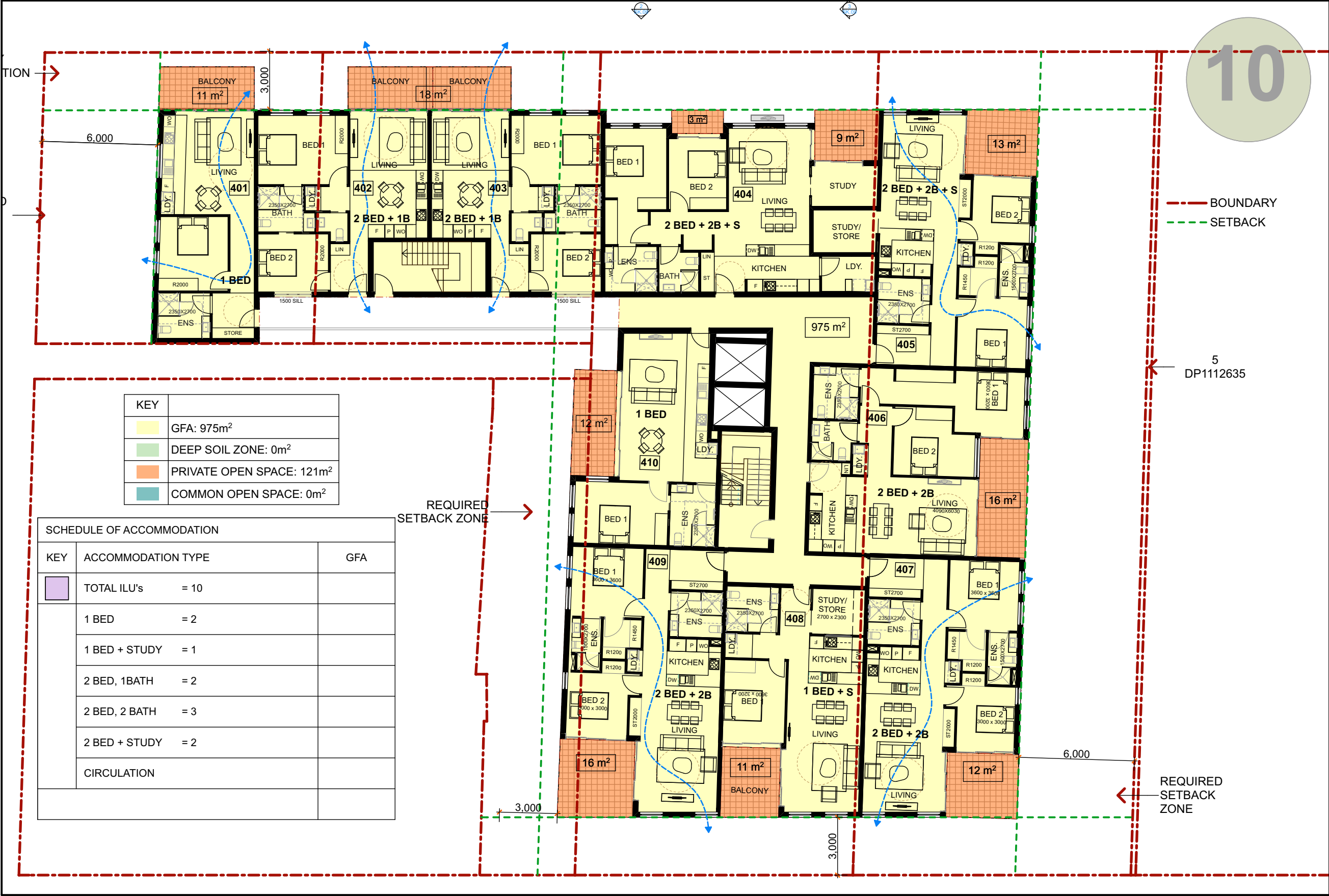
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SCALE 1:200@A3 DATE 1/12/2016

DRAWN MJM CHECKED CY

DRAWING
NUMBER SK.05.1REV:
H





PRELIMINARY PLANNING PROPOSAL	G	18 / 11 / 16
Amendment/Issue	No.	Date

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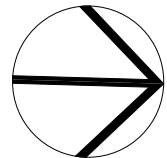
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PROJECT: 13005
**Harold Hawkins Court
ILU - 168 Norton Street,
Leichhardt**

SHEET TITLE:
GFA-L4

SCALE 1:200@A3 DATE 1/12/2016
DRAWN MJM CHECKED CY

DRAWING NUMBER SK.07.1
REV: H



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PROJECT: 13005
Harold Hawkins Court
ILU - 168 Norton Street,
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DRAWN	MJM	CHECKED	CY
DRAWING NUMBER			SK.08.1
			REV: H



ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL

