
DEVELOPMENT APPLICATION

SUMMARY SHEET

REPORT TITLE:	36-40A CULWORTH AVENUE, KILLARA – DEMOLITION OF FOUR EXISTING DWELLINGS AND CONSTRUCTION OF A RESIDENTIAL FLAT BUILDING COMPRISING 57 UNITS, INCLUDING BASEMENT CAR PARKING, FRONT FENCE AND LANDSCAPING
WARD:	Gordon
DEVELOPMENT APPLICATION N^o:	DA0173/11
SUBJECT LAND:	36 – 40A Culworth Avenue, Killara
APPLICANT:	Matthew Romanous – Mackenzie Architects
OWNER:	Ellyanty Sut Jipto-Chong, Simon Shee Kong Chong, Robert Herweyer, Wijke Herweyer and Tzeng Jwu Ing Liu
DESIGNER:	Dugal Mackenzie – Mackenzie Architects
PRESENT USE:	Residential
ZONING:	Residential 2(d3)
HERITAGE:	Yes
PERMISSIBLE UNDER:	Ku-ring-gai Planning Scheme Ordinance (KPSO)
COUNCIL'S POLICIES APPLICABLE:	KPSO - LEP 194, DCP 31 - Access, DCP 40 – Construction and Waste Management, DCP - 43 Car Parking, DCP 47 - Water Management, DCP - 55 - Multi-unit Housing, DCP - 56 Notification, Section 94 Contribution Plan
COMPLIANCE WITH CODES/POLICIES:	No
GOVERNMENT POLICIES APPLICABLE:	SEPP 1 – Development Standards, SEPP 55 – Remediation of Land, SEPP 65 – Design Quality of Residential Flat Development, BASIX 2004, SEPP Infrastructure 2007, SREP 2005 – (Sydney Harbour Catchment)
COMPLIANCE WITH GOVERNMENT POLICIES:	No
DATE LODGED:	14 April 2011
40 DAY PERIOD EXPIRED:	24 May 2011
PROPOSAL:	Demolition of four existing dwellings and construction of a residential flat buildings comprising 57 units including basement car parking, front fence and landscaping.
RECOMMENDATION:	Refusal

DEVELOPMENT APPLICATION N^o	0173/11
PREMISES:	30 – 40A CULWORTH AVENUE, KILLARA
PROPOSAL:	DEMOLITION OF FOUR EXISTING DWELLINGS AND CONSTRUCTION OF A RESIDENTIAL FLAT BUILDING COMPRISING 57 UNITS INCLUDING CAR PARKING, FRONT FENCE AND LANDSCAPING
APPLICANT:	MATTHEW ROMANOUS – MACKENZIE ARCHITECTS
OWNER:	ELLYANTY SUT JIPTO-CHONG, SIMON SHEE KONG CHONG, ROBERT HERWEYER, WIJKE HERWEYER AND TZENG JWU ING LIU
DESIGNER	DUGALD MACKENZIE – MACKENZIE ARCHITECTS

PURPOSE FOR REPORT

To determine Development Application No.0173/11, for demolition of four existing dwellings and construction of a residential flat building comprising 57 units, including basement car parking, front fence and landscaping.

The application is required to be reported to the Joint Regional Planning Panel as the cost of works (CIV) exceeds \$10 million.

EXECUTIVE SUMMARY

Issues:

- non compliance with deep soil landscape area and site coverage
- non compliance with SEPP BASIX
- concentration of density on 38, 40 and 40A
- excessive bulk
- accessibility of eastern entrance
- single orientation unit depth
- cross-ventilation

Submissions:

Five (5) submissions

Land & Environment Court
Appeal:

No

Recommendation:

Refusal

HISTORY

Development Application No.696/10

11 August 2010

A Pre-DA meeting took place for demolition of existing dwellings and site facilities and construction of multi-unit dwellings comprising

	56 units and basement parking for 86 vehicles including 14 visitor spaces.
23 September 2010	DA0696/10 is lodged.
19 November 2010	Council sent a letter to the applicant raising fundamental issues with the DA, including survey information incorrect, non-compliance with height, number of storeys, floor space at top storeys and deep soil landscape area development standards. No SEPP 1 objections were submitted. Non compliance with SEPP BASIX and non compliance with provisions of SEPP 65. It was recommended the application be withdrawn.
19 November 2010	Council officers met with the applicant regarding the issues raised by Council's letter, dated 19 November 2010.
25 November 2010	The application is withdrawn.
1 December 2011	Meeting took place with Council's Urban Design Consultant and applicant to discuss design concerns and possible design responses in any future development application.
Development Application No.173/11	
14 April 2011	DA0173/11 lodged.
29 April – 29 May 2011	Application notified.
12 August 2011	Council sent a letter to the applicant raising issues with the DA including invalid BASIX certificate, non compliance with SEPP (Infrastructure) 2007, building separation, unit depth and layout, solar access, private open space, aesthetics, non-compliance with deep soil landscape area, number of storeys and storage. landscape concerns relating to front setback, communal open space and landscape screening, insufficient information and inaccuracies between drawings.
23 August 2011	Council officers met with the applicant regarding the issues raised by Council's letter, dated 12 August 2011.
23 – 27 September 2011	Applicant submits amended plans.

29 September 2011	Council Officers brief the JRPP on the application.
2 November 2011	Council wrote to the applicant and again advised of engineering issues and non compliance with deep soil landscape area and SEPP BASIX.
8 November 2011	RailCorp requests further survey information from the applicant and detailed plans regarding excavation.
9 November 2011	Council wrote to the applicant and formally advised that the amended plans and information submitted on 23 September 2011 in response to Council's earlier concerns have been assessed. The purpose of this letter was to formally advise that the issues raised in Council's letter, dated 12 August 2011, have still not been resolved.
17 November 2011	The applicant submits additional information in response to the requests for information on 2 and 8 November 2011.
15 December 2011	RailCorp requests the statutory referral fee be paid by the applicant.
19 December 2011	RailCorp is provided with referral fee.
22 December 2011	The applicant submits amended plans.
23 December 2011	RailCorp concurrence is provided.

THE SITE

Zoning:	Residential 2(d3)
Visual Character Study Category:	1920-45
Lot Number:	Lot 3 in DP 375028 (36 Culworth Avenue), Lot D in DP 370629 (38 Culworth Avenue), Lot G in DP 376789 (40 Culworth Avenue) and Lot B in DP 402381(40A Culworth Avenue)
Area:	4,378.7m ²
Side of Street:	Western
Cross Fall:	North to South
Stormwater Drainage:	By gravity to Culworth Avenue
Heritage Affected:	Yes – within vicinity of 33 and 25 and 25A Werona Avenue and 8, 10, 14 and 21 Lorne Avenue.
Integrated Development:	No
Bush Fire Prone Land:	No

Endangered Species:	Yes – Sydney Blue Gum High Forest. The proposed development will not have an impact.
Urban Bushland:	No
Contaminated Land:	No

THE SITE AND SURROUNDING AREA

The site

The site comprises four lots and is located on the western side of Culworth Avenue and opposite the northern rail line. The site has a combined area of 4,378.7m². The site comprises the following allotments:

- (i) Lot 3 within DP 375028 which is known as 36 Culworth Avenue and has an area of 836.7m². This lot is irregular in shape with a width of 21.64 metres, a northern (side) boundary length of 39.08 metres and southern boundary depth of 39.985 metres. The lot is burdened by a drainage easement 1.52 metres in width along the northern boundary.

The lot presently contains a two storey dwelling house, whilst vehicular access from Culworth Avenue adjacent to the southern side boundary. The lot has a 1.525 metres wide easement along the northern side boundary.

- (ii) Lot D within DP370629, known as 38 Culworth Avenue has an area of 990m². The lot is trapezoidal in shape with a frontage of 21.045 metres and a rear boundary length of 16.55 metres. The lot has a depth of 50.585 metres along the northern boundary and 53.595 metres along the southern boundary.

The lot contains a two storey dwelling house and a swimming pool at the rear.

- (iii) No. 40 Culworth Avenue is identified as Lot G within DP 376789. The lot is rectangular in shape with an area of 1034m². The lot has a frontage of 21.355 metres to Culworth Avenue and a rear boundary of 21.02 metres. The lot has a depth of 48.02 metres along the northern boundary and 50.585 metres along the southern boundary.

The lot contains a single dwelling house with significant vegetation within the front and rear setbacks.

- (iv) No. 40A Culworth Avenue is a battle axe allotment accessed from Culworth Avenue via a driveway. The lot access is 4.345 metres in width and has a length of 47.65 metres along the northern boundary. The lot is irregular in shape with a width of 37.56 metres along the eastern boundary, 34.235 metres along the southern side boundary, 36.695 metres along the western boundary and 33.375 metres along the northern boundary. The lot has an area of 1518m².

The lot contains a two storey dwelling house, garage and tennis court adjacent to the eastern boundary in addition to a swimming pool in the south-eastern corner of the property.

Along Culworth Avenue the site falls from the north (RL114.77) to south (RL111.34). At the rear, it falls north (RL113.85) to south (RL112.50). The site is relatively flat with a gentle cross fall.

Surrounding development

The site is bounded by Pacific Highway to the west and the North Shore Railway Line to the east. The site is adjoined to the north by a partially constructed residential flat building and single residential dwelling houses to the south along Culworth Avenue. A partially constructed residential flat building development also adjoins the rear, south – western corner of the site.

THE PROPOSAL

The application has been amended throughout the assessment process. The proposal as amended is for:

Construction of a residential flat building containing 57 units (20 x 1 bedroom, 23 x 2 bedroom and 14 x 3 bedroom) and parking over two levels with a total of 85 car spaces.

Details of each floor level are as follows:

Basement 2, RL 103.23	44 car parking spaces, including 4 disabled spaces and 2 lifts and stair access. Storage and plant room.
Basement 1 RL106.13	41 car parking spaces (including 3 disabled), service bay, bicycle storage area, toilet, 2 lifts, storage, garbage room, and stair access.
Ground Floor RL109.030	10 units (2 x 1 bedroom, 2 x 2 bedroom, 4 x 1 bedroom + study, 2 x 2 bedroom + study and 1 x 3 bedroom (2 adaptable units 02,04)). 4 x ground floor elements of two storey units.
First Floor RL 112.030	15 units (2 x 1 bedroom, 7 x 2 bedrooms, 1 x 3 bedroom, 3 x 1 bedroom + study and 2 x 2 bedroom + study (2 adaptable units 15, 17)
Second Floor RL115.030	11 units (1 x 1 bedroom, 3 x 2 bedroom, 4 x 1 bedroom + study, 1 x 2 bedroom + study and 2 x 3 bedroom (2 adaptable units 28,30). 4 x lower floor elements of two storey units.
Third Floor RL118.030	15 units (1 x 1 bedroom, 6 x 2 bedrooms, 3 x 3 bedroom, 3 x 1 bedroom + study, 2 x 2 bedroom + study. 1 x lower floor element (1 adaptable unit 40)
Penthouse RL121.030	6 units (5 x 3 bedrooms and 1 x 3 bedroom + study)

Vehicular and pedestrian access

Vehicular access to the basement car park area is provided from Culworth Avenue via an entry/exit driveway ramp located at the south-eastern corner of the site. A pedestrian entrance is proposed from Culworth Avenue centrally located in addition to secondary entrances which runs adjacent to the side boundaries. The rear lift core is accessed via a pathway along the southern boundary. The adaptable units are accessed via the rear lift core.

CONSULTATION - COMMUNITY

In accordance with Council's Notification DCP, owners of adjoining properties were given notice of the application on 29 April 2011. In response, Council received five (5) submissions from the following:

- | | | |
|----|-----------------------------------|-----------------------------------|
| 1. | Sandra Reid | 16/17 - 19 Powell Street, Killara |
| 2. | Fraser's Property | 3 - 7 Lorne Avenue, Killara |
| 3. | Johana Pitman on behalf of strata | 3/17 Powell Street, Killara |
| 4. | Andrew & Cynthia Alexander | 34 /2 Wallaroo Close, Killara |
| 5. | Ernst and Young | 40 – 42 Culworth Avenue, Killara |

The submissions raised the following issues:

Building setback from Culworth Avenue

The proposal complies with the front setback control in DCP 55.

Privacy screening along northern elevation in relation to 40 – 42 Culworth Avenue

No screening is proposed along the northern elevation at the penthouse level. The adjoining development at 40 – 42 Culworth Avenue is higher than the subject site and this, combined with the spatial separation from the shared boundary, means the proposal would not result in any adverse loss of privacy to the adjoining development.

The main walkway to Killara Station for pedestrians will be impacted by the proposed development. The development will also impact upon pedestrian safety

The applicant has submitted a construction management plan which demonstrates that the works will be carried out within the site and that adequate measures will be implemented to ensure the safety of pedestrians.

Traffic impacts upon Culworth Avenue from additional residents

The proposal has been supported by a traffic impact assessment which has been reviewed by Council's Engineers. The proposal is not considered to result in any adverse impacts upon local traffic.

The roadway is not wide enough for this level of traffic and turning vehicles

The proposal has been considered by Council's Engineers and no concerns were raised regarding the roadway width and traffic generation.

Loss of privacy to 2& 7 Wallaroo Close, 34 Culworth Avenue and 3 – 7 Lorne Avenue

Concern is raised regarding the visual separation provided from 7 Wallaroo Close which is located adjacent to the north-western boundary shared with the subject site.

The proposal will not result in an unreasonable loss of privacy to 3 – 7 Lorne Avenue or 2-6 Wallaroo Close. The proposal complies with the required spatial separation from both properties.

Shadow impact to 2 & 7 Wallaroo Close, 34 Culworth Avenue and 3 – 7 Lorne Avenue

The proposal will result in some overshadowing of adjoining properties. Nos 2 and 7 Wallaroo Crescent and 34 Culworth Avenue will, however, maintain reasonable sunlight through out the day. The greatest impact occurs to 3 – 7 Lorne Avenue to the approved Building A adjacent to the shared boundary which will not receive 3 hours of sunlight. However, the control 4.5.1 C-6 of DCP 55 requires 3 hours of sunlight to be maintained to adjoining sites zoned Residential 2(c2) and not Residential 2(d3) and the proposal is therefore considered consistent with the control.

Damage to property (house and pool) at 7 Wallaroo Close during construction

If the application were recommended for approval, a requirement for a dilapidation survey of the adjoining dwellings and structures such as the swimming pool would be recommended.

Side setback and building separation is inadequate and does not achieve objective of the RFDC and KPSO

The proposal complies with the side setback requirements of DCP 55. The proposal does not provide adequate spatial separation from the western boundary (7 Wallaroo Crescent) and is considered unsatisfactory in this regard.

The south-western portion of the top storey is not setback from the boundaries

The proposal is not considered acceptable in this regard and this is included among the reasons for refusal in the recommendation.

Inadequate survey details regarding ground levels and relationship with adjoining properties

A survey has been submitted with the development application. The level of information is considered adequate to undertake an assessment of the proposal.

This site will become yet another long term abandoned, degraded site affecting the safety and aesthetics of the neighbourhood like 3 – 7 Lorne Avenue and 42-48 Culworth Avenue

This is not a relevant planning consideration.

Bulk of the development resulting in privacy and overshadowing impacts upon 17 Powell Street

Concern is raised regarding the bulk and scale of the development and inadequate separation. The proposal is, however, not considered to adversely impact upon the privacy and solar access presently available to 17 Powell Street.

The landscaping is effectively located off site at 36 Culworth Avenue

Significant concern is raised regarding the location of deep soil landscape area on 36 Culworth Avenue and is being disconnected from the remainder of the development.

Insufficient on street parking for construction workers which will impact local residents

A construction management plan was submitted with the application and is satisfactory. The proposal will provide parking on site for workers, parking is also available within the surrounding streets which are subject to parking restrictions.

The proposal fails the objectives of SEPP 65 in that it does not present a well articulated building form to Culworth Avenue

Concern has been raised regarding the presentation of the built form to Culworth Avenue and the entrance and access to the building. The design of the proposal, particularly the entrance to the built form, is one of the reasons for the recommendation for refusal of the application.

The separation to the adjoining properties to accommodate landscape corridors at each side of the building is barely adequate and poorly conceived

The proposal complies with the required 6 metres side setback control of DCP 55. The proposal has, however, located the deep soil landscape area upon 36 Culworth Avenue which isolates the sites landscaping from the position of the built form and this is contrary to the objectives of the KPSO in providing landscaping that is in scale with development.

The design does not comply with the principles of SEPP 65, RFDC, KPSO and DCP 55

The proposal is non compliant with the rules of thumb in the RFDC and concern is raised regarding the proposal's inconsistency with design principles of SEPP 65. The proposal has not demonstrated compliance with development standards within the KPSO and is inconsistent with controls within DCP 55. The proposal is non compliant with numerous controls resulting in unacceptable impacts and is contrary to the objectives of these policies.

Implications of truck routes in terms of the local road network

The proposal has been supported by a construction management plan which has been assessed by Council's Development Engineer. No concerns have been raised in this regard.

CONSULTATION – EXTERNAL TO COUNCIL

The application was referred to RailCorp as an adjoining property owner. RailCorp expressed concern regarding future occupants of the development being subjected to rail related noise and vibration from the adjacent rail corridor. Concern was also raised regarding the development impacting upon services and interfering with the rail line during construction works. RailCorp requested that Council include four conditions of development consent in accordance with the requirements of the Department of Planning which released the document "Development Near Rail Corridors and Busy Roads- Interim Guidelines".

CONSULTATION - WITHIN COUNCIL

Urban Design

Council's Urban Design Consultant, commented on the amended proposal as follows:

"Executive summary

This proposal should not be approved in its present form

Major issues

- cross-ventilation
- single orientation unit depth
- internalised studies
- accessibility of entrance from street/letterboxes
- safety of alternate eastern entry
- amalgamation pattern
- concentration of density on 38, 40 and 40A
- building bulk and length

Minor issues

- uppermost floor setbacks and separation
- kitchens further than 8m from a window
- privacy and safety conflict across re entrant corner
- provision of car parking spaces
- deep soil and building footprint (requires verification)
- sun access (requires verification)
- width of living rooms in adaptable apartments

Principle 1: Context

Good design responds and contributes to its context. Context can be defined as the key natural and built features of an area. Responding to context involves identifying the desirable elements of a location's current character or, in the case of precincts undergoing a transition, the desired future character as stated in planning and design policies. New buildings will thereby contribute to the quality and identity of the area.

The site, its context and the suitability of residential flat development in this location has been described positively previously.

The same reservations exist regarding the amalgamation pattern as before. Because a drainage easement crosses the northern edge of 36 Culworth Avenue, this effectively cuts 36 Culworth Avenue off from 38, 40 and 40a and forces 100% of the development floor space

onto 81% of the site. Whilst the presence of a large landscaped area on Culworth Avenue is not seen to be detrimental in itself, and it is understood that 36 Culworth Avenue is significantly flood affected, the effect of this amalgamation on the proposed design strategy is detrimental. It creates a relative bulkiness of built form which causes amenity issues for the proposed apartments. It is maintained that 36 Culworth Avenue would be better amalgamated with the sites to the south of it. The dimensions of the site to the south would be more suited to accepting the additional floor space created by this flood prone site than the proposed amalgamation is, and potentially a small portion of the site could also be used for building. The development on 38, 40 and 40a Culworth Avenue site would perform much better with a reduction in floor space equivalent to the contribution of 36 Culworth Avenue, being approximately 10 or 11 apartments.

Contrary to what is suggested, if 36 were amalgamated to the south and became the open space for 32-34 Culworth Avenue and 1 Lorne Avenue, it would not be overshadowed all day, rather it would receive adequate solar access before noon.

Principle 2: Scale

Good design provides an appropriate scale in terms of the bulk and height that suits the scale of the street and the surrounding buildings. Establishing an appropriate scale requires a considered response to the scale of existing development. In precincts undergoing a transition, proposed bulk and height needs to achieve the scale identified for the desired future character of the area.

Unit 51 still provides a large living room window which scales at less than 9m from the western boundary and will not achieve the required 18m separation from the top floor of the neighbouring 2(d3) site. Privacy screens are not acceptable to solve this issue as it can be addressed through an adjustment of built form. Overshadowing of neighbouring sites by Unit 51 and 52 appears to have been improved by moving these units further north on the plan, however the position of the air-conditioning units and lift core remain.

In terms of bulk, the development is negatively impacted by its concentration of floor space on to 38, 40 and 40a Culworth Avenue caused by the site constraint of the drainage easement along the northern boundary of 36 Culworth Avenue (as discussed in **Principle 1: Context**). The result is a single, long building with only two lift cores along its 60m+ length. Each proposed lift serves 6 or 7 units per typical floor (many units with long, inefficient internal corridors to reach the core). SEPP65 (p75) recommends that buildings over 15 metres long should consider using multiple entries and circulation cores. Here, an additional lift core would be beneficial, reducing the amount of units per floor to 4 or 5 and improving environmental amenity by increasing the number of cross-through apartments (in lieu of single orientation units).

This proposed built form also puts pressure on apartment frontages, where unit widths become too tight for the internal area served. All single orientation apartments, being 26 of 57 (46%), are partly or wholly over 8m deep which provides only compromised amenity to these units. This will be addressed further under **Principle 7: Amenity**.

Principle 3: Built form

Good design achieves an appropriate built form for a site and the building's purpose, in terms of building alignments, proportions, building type and the manipulation of building elements. Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including views and vistas, and provides internal amenity and outlook.

The built form is comprised of two attached buildings, one in front of the other, above a joint car park. The front door to the eastern building has the potential to address the street in a positive manner, however, the steps down to this front door results in this entrance not being

accessible. The accessible/visitable entry is instead located on the southern side of the building, hidden in an unsafe re-entrant corner (discussed further under **Principle 8: Safety and security** and **Principle 9: Social dimensions**). This is not an equitable building address. As previously advised, the levels should be worked so that the eastern entrance is accessible.

The issue of accessibility of the front entry directly to Culworth Avenue appears to have been dealt with through the incorporation of a folding stairway platform lift. This is not an ideal solution and is still considered to be compromised. This may cause issues with the accessibility of letterboxes. The safety of the accessible/visitable entry on the southern side of the building remains an issue.

The proposed single orientation apartment types remain of concern. Units 5, 8, 18, 21, 31, 34, 43 and 46 are the eight two storey, single orientation apartments. The location of the entry at the upper level of these apartments is counter-intuitive as the resident on the bedroom level needs to go up within the uni to go back down to the street level. Whilst it is understood that the lower apartments are organised this way to gain sunlight access for their living rooms, the entry could be redesigned to be at the lower bedroom floor by adjusting the stair position. For the upper apartments, it might be preferable to flip the apartments so the living is on the lower floor. These apartments are also too narrow on the bedroom level, with interlocked bedroom arrangement disadvantaging the master bedroom. These apartments cannot be considered cross ventilated (discussed further under **Principle 7: Amenity**).

Units 4, 17, 25, 26, 30, 38, 39, 40, 50, 57 are the single orientation apartments that provide a sub-optimal arrangement to satisfy the '8m deep to the back of the kitchen' RFDC Rule of Thumb (p69). The issues with these apartments have been described previously. That 'this unit layout has been accepted by Council on other residential flat building development approvals granted to the applicant' previously is not a reason to perpetuate a flawed design solution. Units 6, 7 and 20 also have kitchens that are further than 8m from a window.

The common circulation to the eastern building has been greatly improved by providing a window to the corridor at each level. This resolves the non-compliance with DCP55 control 4.5.1 C-3 and the contradiction with BASIX.

The privacy and safety conflict across the re-entrant corner between Units 9 and 22 with 21 appears to have been resolved, however the conflict of units 35 and 47 with 46 remains. The kitchen window of the north-eastern apartments on levels 1 and 3 overlook the living room balconies of the north facing two storey apartments (they are not noted as 'highlight' windows and do not appear to be on the elevations). At the ground level and level 2, the kitchen windows are too close to the bedroom windows creating a fire separation issue.

Principle 4: Density

Good design has a density appropriate for a site and its context, in terms of floor space yields (or number of units or residents). Appropriate densities are sustainable and consistent with the existing density in an area or, in precincts undergoing a transition, are consistent with the stated desired future density. Sustainable densities respond to the regional context, availability of infrastructure, public transport, community facilities and environmental quality.

The density of the proposal is numerically appropriate for its context and acceptable under the controls, however, the management of this density on this constrained site through built form could be improved. As highlighted above, the design strategy employed has significant implications for the amenity of apartments. Alternative strategies for the deployment of density over the site could include, for instance: a third lift core allowing more cross-through apartments; shallower apartment depths; and having primary address to the street through adjusting the floor levels. These would all substantially improve the design.

Principle 5: Resource, energy and water efficiency

Good design makes efficient use of natural resources, energy and water throughout its full life cycle, including construction. Sustainability is integral to the design process. Aspects include demolition of existing structures, recycling of materials, selection of appropriate and sustainable materials, adaptability and reuse of buildings, layouts and built form, passive solar design principles, efficient appliances and mechanical services, soil zones for vegetation and reuse of water.

The site has excellent access to public transport being located approximately 200m from the entrance of Killara train station. The provision of car parking is 13 spaces in excess of the minimum rate (85 rather than 72; 18% additional). This reduces the broader environmental benefits of living near, utilising and encouraging public transport. The car parking spaces should be therefore be reduced to meet these objectives. The parking space for removals vehicles also does not appear to have the required 7m manoeuvring area.

The amenity of the apartments is sub-optimal (discussed further under **Principle 7: Amenity**). There is marginal sunlight access; there are not enough cross-ventilated units; many single orientation units are too deep; and there are a high proportion of internalised service rooms with some common corridors internalised too. These issues all cause undesirable additional energy use to ventilate, light, heat and cool spaces.

Principle 6: Landscape

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in greater aesthetic quality and amenity for both occupants and the adjoining public domain. Landscape design builds on the site's natural and cultural features in responsible and creative ways. It enhances the development's natural environmental performance by co-ordinating water and soil management, solar access, micro-climate, tree canopy and habitat values. It contributes to the positive image and contextual fit of development through respect for streetscape and neighbourhood character, or desired future character. Landscape design should optimise usability, privacy and social opportunity, equitable access and respect for neighbour's amenity, and provide for practical establishment and long term management.

The applicant indicates the proposal complies with a deep soil area at 51.12%, but is a marginal compliance of 49m² and should be verified. Areas that should be checked in the Deep Soil Area diagram (SK21A) include: the area to the immediate north of the rocks at the re-entrant corner of the site; the bridge to the southern communal space; courtyards to Units 9 and 21; and the overhanging of unit 24. The building footprint area has been demonstrated graphically (SK12A) and appears to comply at 34.87%, but is a marginal compliance of 6m² and should be verified. Areas that should be checked include: fire stairs. Access to the main northern common space has been greatly improved with both cores having direct access to the space.

The southern space remains removed from the building, but as a secondary space this is acceptable. As an alternative, see previous comments regarding amalgamation of 36 Culworth Avenue with the sites to the south.

The generous roof terraces of the uppermost level would benefit from planter boxes to contain these large spaces and soften the edge of the building. Where the terraces is closest to the boundaries, the planter box would also assist with preventing overlooking of neighbouring properties.

Principle 7: Amenity

Good design provides amenity through the physical, spatial and environmental quality of a development. Optimising amenity requires appropriate room dimensions and shapes, access to sunlight, natural ventilation, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, outlook and ease of access for all age groups and degrees of mobility.

Compliance with sun access is marginal. According to the Solar Impact Report, only 40 of 57 (70%) apartments achieve three hours of sunlight to their living rooms and private open spaces (Unit 17 is omitted from the chart but would comply), and many of these only achieve three hours sunlight and no more. Whilst this appears to comply with the minimum standard, there is no graphic demonstration and this aspect should be verified by additional material. The report is also compromised by not commenting on the performance of the 17 non-compliant apartments. Also, for solar access, true north should be taken accurately from a survey, not from the SIX Viewer, as stated in the report Notes.

It does not appear that additional material has been submitted to graphically verify the solar access and provide comment on the performance of non-complying apartments. The issue of using a surveyed true north to calculate shadows has not been satisfactorily addressed.

Cross-ventilation of apartments remains non-compliant. Only 31 of 57 (54%) of apartments are cross-ventilated. 39 apartments are claimed in the Statement of Environmental Effects, but this figure seems to include the eight two-storey Units 5, 8, 18, 21, 31, 34, 43 and 46. Reliance on the RFDC Better Design Practice (p86) to: 'Utilise the building layout to increase the potential for natural ventilation [emphasis added]. Design solutions may include: Facilitating convective currents by designing units which draw cool air in at lower levels and allow warm air to escape at higher levels for example maisonette apartments and two-storey apartments' is flawed. Natural ventilation is not the same as cross ventilation.

The Rule of Thumb clearly states that 'Sixty percent (60%) of residential units should be naturally cross ventilated.' This is a primary and quantifiable rule that goes directly to the quality of amenity of apartments to resource and energy use. Non compliance with cross ventilation in this instance is not acceptable. It should be achieved.

Units with windows on only one elevation can never be considered cross-ventilated. This advice has been verified with an environmental engineer. Additionally, all 26 of the single orientation apartments are partly, or wholly over 8m deep as described previously. This does not comply with the RFDC Apartment Layout Rule of Thumb (p69) that 'Single-aspect apartments should be limited in depth to 8 metres from a window.' It means that some of the floor space of the apartments do not have adequate access to light and air and that, in this instance, all service rooms have been internalised.

Units 4, 17, 25, 26, 30, 38, 39, 40, 50 and 57 appear to have been amended to comply with the 8m deep to the back of the kitchen RFDC rule of thumb (p69). However, they still all, partly or wholly, exceed the 'Single-aspect apartments should be limited in depth to 8m from a window' RFDC Rule (p69). Whilst apartments like Units 26, 39 and 50 taper (having less floor space at the rear) and can be considered acceptable under the current regime of controls with only non habitable uses located in the unit depth (bathroom, laundry, store) units such as 4, 17, 30 and 40 cannot. These apartments have internalised 3m x 3m habitable rooms labelled as studies (note that studies are habitable under the RFDC definition p118) which could easily become bedrooms. Removing the sliding doors is not a solution, they can be easily retrofitted by the occupant. The simple problem with these apartments is they are too narrow and too deep causing too much floor space to not be adequately served by windows. This is what the 8m Rule of Thumb is for (even though it is not often invoked). The resulting poor amenity (light and air) in these units is not acceptable. In this instance it also means that all service rooms have been internalised. Units 11, 25, 38 and 57 are marginal with small studies but long corridors. Units 10, 23, 36 and 49 are also unacceptable with internalised rooms scaling at 2.5m x 2.6m.

Only 21 of 94 (22%) of bathrooms have a window; 0 of 57 (0%) laundries have windows; and 0 of 19 (0%) studies have windows. This is a poor environmental outcome with significant energy required to light and ventilate these spaces. The studies in Units 4, 10, 17, 23, 30, 36, 40 and 49 are of concern as they are large enough to be bedrooms.

The issue of storage space within apartments appears to have been addressed. With regard the acoustic issues, the western lift shaft still shares a wall with bedrooms in four apartments.

Principle 8: Safety and security

Good design optimises safety and security, both internal to the development and for the public domain. This is achieved by maximising overlooking of public and communal spaces while maintaining internal privacy, avoiding dark and non-visible areas, maximising activity on streets, providing clear, safe access points, providing quality public spaces that cater for desired recreational uses, providing lighting appropriate to the location and desired activities, and clear definition between public and private spaces.

The accessible, and therefore primary entry to the eastern building is tucked in a re-entrant corner of the building, located beneath a projecting part of the building, and partially concealed by a private courtyard fence to unit 13. This is poor quality space that is not acceptable as an address for 31 apartments. Apart from the window of Unit 13, with which there is a privacy conflict, this entry is not surveilled by any overlooking apartments and is therefore also potentially unsafe.

A lighting plan has not been provided as requested.

Principle 9: Social dimensions and housing affordability

Good designs respond to the social context and needs of the local community in terms of lifestyles, affordability, and access to social facilities. New developments should optimise the provision of housing to suit the social mix and needs in the neighbourhood or, in the case of precincts undergoing transition, provide for the desired future community. New developments should address housing affordability by optimising the provision of economic housing choices and providing a mix of housing types to cater for different budgets and housing needs.

As described above, the obvious primary address for the eastern building is not accessible, and the alternative entrance is poorly designed and inequitable. The issue of the accessibility of the eastern building directly from the street remains as described previously. The compliance of the entry ramps from Culworth Avenue with AS 1428.1 appears to have been resolved.

The living space of adaptable Units 4, 17, 30 and 40 is only 3.0-3.2m wide and may pose difficulties in providing a 2250mm clear space as required by AS4299 clause 4.7.1. A diagram showing furniture layout and access requirement templates is required to demonstrate compliance with AS 4299.

The issue of visitable apartments appears to have been addressed by providing a visitable toilet to Units 3, 13, 16, 29, 37 and 42 as per AS4299 figure 1.1.

Principle 10: Aesthetics

Quality aesthetics require the appropriate composition of building elements, textures, materials and colours and reflect the use, internal design and structure of the development. Aesthetics should respond to the environment and context, particularly to desirable elements of the existing streetscape or, in precincts undergoing transition, contribute to the desired future character of the area.

The central northern elevation has been broken down satisfactorily with a couple of more solid areas incorporated.

Conclusion/recommendations

This proposal should not be approved in its present form. The revisions to the drawings are only minor and do not address the major issues.

The proposal is non compliant on the amount of cross-ventilated apartments. This is a primary consideration and there is no satisfactory reason why this should not comply.

The non-compliance with the 8m depth for single aspect apartments Rule of Thumb also remains an issue. This Rule is to ensure that there is not an excess of internalised building area that is too far away from a window. In this instance, several of the units exhibit internal studies, long corridors and internalised service rooms which are sub-optimal. Of particular concern though are the eight apartments with internalised 'studies' that are large enough to be easily converted to bedrooms. These are not considered acceptable. The depth of these apartments is a flaw in the design which is very difficult to overcome through repeated small design changes. This is the fourth review of this project and this failing has yet to be adequately addressed.

The proposal is relatively bulky resulting from an undesirable amalgamation pattern and concentration of density on a constrained site. This bulk has a direct affect on the amenity of the apartments resulting in many compromised apartment layouts and internalised spaces.

Outstanding minor issues that remain include setback and separation of the uppermost floor, kitchens further than 8m from a window, privacy and safety conflicts across the re-entrant corner, provision of car parking spaces, and width of living rooms in adaptable apartments. Issues that remain to be verified include building footprint, deep soil landscape area and solar access."

Landscape

Council's Landscape Assessment Officer, commented on the proposal as follows:

"Site characteristics

The site is characterised by an established landscape setting with cultural plantings of mature trees and shrubs within formal garden beds and grassed expanses. The site is located at the lowest point in Culworth Avenue. All vegetation on site has been planted with no remnant species from the endemic plant community.

Tree impacts

*The development will result in the removal of numerous trees on site, including prominent trees located within the site frontage. The most prominent trees proposed for removal include a row of mature *Lophostemon confertus* (Brushbox) centrally located on site. Their central location on site spatially conflicts with the proposed development works and are located within the building setback areas. Given the scale of development proposed, their central location and other site constraints, their removal is supported.*

Tree 14 *Liquidambar styraciflua* (Sweet Gum) *located centrally adjacent to the eastern site boundary. The tree is the dominant tree on site within the site frontage and is proposed for retention. Previous concerns have been satisfactorily addressed within the updated arborists statement.*

Other tree removal identified is considered acceptable to accommodate the proposed development works. It is noted the immediate area is in a period of transition with significant development altering the streetscape and landscape character. New landscape works on other nearby development sites is establishing and replenishing the treed landscape character that has been lost.

Landscape plan/tree replenishment

The submitted landscape plan is considered satisfactory. Any modifications required are considered minor which can be conditioned.

Stormwater plan

No significant concerns are raised. Any changes required can be conditioned in consultation with the Development Engineer.

BASIX

BASIX certificate 333613M_04 dated 10/11/2011 has been submitted with the application. Numerous landscape area and low water use/indigenous plant species commitments have been for both private and common landscape areas. The assessing landscape officer is not satisfied that the development is consistent with the BASIX certificate landscape commitments. The areas in dispute include:

- *Unit 3 has an area of garden and lawn that is inconsistent with the BASIX certificate.*

Other landscape areas and commitments for indigenous/low water use species are consistent.

As BASIX is a SEPP compliance cannot be conditioned and the proposal is unsatisfactory in this regard.

Deep soil

By the applicant's amended calculations the proposed development will result in a deep soil landscape area of 2229.6m² or 50.91% of the site area. By the applicant's calculable area there is a buffer of 40.3m² of available deep soil landscape area. The assessing landscape officer does not agree with all the areas included within the deep soil calculable area. The areas in dispute include:

- *paved terraces eg adjacent to north side of Unit 9 that extend beyond basement footprint*
- *garden beds less than 2.0m wide (as per definition) eg between rock scouring and access ramp, Unit 21 lower courtyard garden area*
- *neighbouring paths within private courtyards that are not separated therefore greater than 1.0m wide eg Units 4, 5, 6, 7, 8, 10, 11, 12 (as per LEP194 definition)*
- *paths greater than 1.0m wide eg path leading to Unit 9 terrace (as per LEP194 definition)*
- *paved areas associated with proposed terraces but excluded as paths eg Unit 3 external gate*

The proposal is considered likely to breach the development standard with these areas combined exceeding 40m². A SEPP 1 objection has not been submitted.

Other issues and comments

Front fence

No objection is raised to having a front fence subject to the fence being lightweight (non masonry) and having a maximum height of 1.2m. It is noted that the neighbouring property (high side) will not have a front fence as part of its construction. Boundary delineation is through planting.

Recommendation

The proposal is not supported for the following reasons:

- Inconsistencies with BASIX certificate.*
- Inconsistencies with the deep soil landscape area as defined by LEP194”*

Engineering

Council’s Team Leader, Engineering, commented on the proposal as follows:

“Railcorp has now issued concurrence and recommended conditions of consent, based on the amended Structural Report, which now includes shoring for support of the excavation at the front of the building.

Water management

The Northrop water management plans have been previously assessed and are satisfactory. It is noted that they are also supported by Council’s Landscape Officer.

Waste management

Architectural Drawing SK-22 contains a longitudinal section through the basement driveway, intended to demonstrate that 2.6 metres minimum headroom will be available for the small waste collection vehicle. However, the level shown at the boundary (RL108.692) is not consistent with the level shown on SK-04 (RL108.828) nor is it consistent with Council’s low level crossing profile. The effect of this is to raise the driveway levels and reduce the headroom by about 300mm, which could be critical. Because of the slope of Culworth Avenue, the section should have been taken through the high side of the vehicular crossing.

The service bay has also been relocated adjacent to the garbage collection area.

Construction traffic management

An amended Construction Traffic Management Plan has been submitted. The construction entrance to the site is now located on the northern side of the pipe and easement. This is satisfactory.

NSW Office of Water

The NSW Office of Water has now provided sample General Terms of Approval for developments of this nature where basement excavation may require dewatering. No further information is required at this stage.

Further information is required regarding access for the small waste collection vehicle to the basement carpark. At this stage, the following reason for refusal is identified:

Unsatisfactory access for waste collection

The applicant has not demonstrated that satisfactory access will be available for Council's small waste collection vehicle to enter the basement carpark in order to collect from the garbage storage area.

Particulars

- (a) Council's small waste collection vehicle requires a minimum head clearance of 2.6 metres.*
- (b) Drawing SK-22 contains a longitudinal section through the centre of the driveway and into the basement carpark.*
- (c) The level shown at the boundary on Drawing SK-22 (RL108.692) is not consistent with the level shown on SK-04 (RL108.828) nor is it consistent with Council's low level crossing profile.*
- (d) The effect of this discrepancy is that the driveway levels would be higher than shown and headroom would be reduced by 300mm, which could be critical. A minimum of 2.6 metres is required and 2.6 metres is shown on SK-22, so a reduction of 300mm would result in a headroom of 2.3 metres which is not adequate.*
- (e) Due to the slope of Culworth Avenue, the section should have been taken through the high side of the vehicular crossing."*

STATUTORY PROVISIONS

Environmental Planning and Assessment Act 1979

The objects of this Act are:

- (a) to encourage:*
 - (i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
 - (ii) the promotion and co-ordination of the orderly and economic use and development of land,*
 - (iii) the protection, provision and co-ordination of communication and utility services,*
 - (iv) the provision of land for public purposes,*
 - (v) the provision and co-ordination of community services and facilities, and*
 - (vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
 - (vii) ecologically sustainable development, and*
 - (viii) the provision and maintenance of affordable housing, and*
- (b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.*

The proposal seeks to take the benefit of a site area of 4,378.7m² without recognising the burden of the drainage easement which crosses the northern edge of 36 Culworth Avenue. By burdening it with all the deep soil landscape area, the proposal isolates 36 Culworth Avenue. With the floor space located entirely upon 38, 40 and 40A Culworth Avenue, the proposal positions 100% of the floor space across 81% of the site area. The placement of

the floor space creates a bulkiness in built form, from the length of the building along 38, 40 and 40A Culworth Avenue which also results in internal amenity issues for the proposed development.

The utilisation of 38 Culworth Avenue as part of this development site is inappropriate because it does not promote the orderly development of land. Rather, the incorporation of this parcel provides the nexus for poor design resulting from excessive floor space being located on the remaining three allotments, by virtue of the increased floor space which is permitted as a result of the benefit of including 36 Culworth Avenue as part of the site area. The proposal fails to recognise the constraint (being burdened by the drainage easement) of the site which in this circumstance may necessitate a reduction in yield. This is evident by the proposal's poor amenity and design which occurs from the location of the entire floor space over 81% of the site area.

It is considered that a more orderly and economic development of land would result through the inclusion of 36 Culworth Avenue with the properties to the south. The properties at 38, 40 and 40A Culworth Avenue are capable of development for residential flat building without the reliance upon the land area of 36 Culworth Avenue.

State Environmental Planning Policy No. 55 - Remediation of Land

The provisions of SEPP 55 require consideration of the potential for a site to be contaminated. The subject site has a history of residential use and, as such, it is unlikely to contain any contamination and further investigation is not warranted in this case.

State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development RFDC)

SEPP65 aims to improve the design quality of residential flat buildings across NSW and provides an assessment framework, the Residential Flat Design Code (RFDC), for assessing 'good design'.

Clause 50(1A) of the EPA Regulation 2000 requires the submission of a design verification statement from the building designer at lodgement of the development application. This documentation has been submitted and is satisfactory.

The SEPP requires the assessment of any development application for residential flat development against 10 principles contained in Clauses 9-18 and Council is also required to consider the matters contained in the publication "Residential Flat Design Code".

Pursuant to Clause 30(2) of SEPP 65 in determining a development application for a residential flat building the consent authority is to take into consideration the Residential Flat Design Code (RFDC). The following table is an assessment of the proposal against the guidelines provided in the RFDC.

	<i>Guideline</i>	<i>Consistency with Guideline</i>
PART 02		
SITE DESIGN		
Site Configuration		

<i>Deep Soil Zones</i>	A minimum of 25 percent of the open space area of a site should be a deep soil zone; more is desirable. Exceptions may be made in urban areas where sites are built out and there is no capacity for water infiltration. In these instances, stormwater treatment measures must be integrated with the design of the residential flat building.	YES
<i>Open Space</i>	The area of communal open space required should generally be at least between 25 and 30 percent of the site area. Larger sites and brown field sites may have potential for more than 30 percent.	YES
	The minimum recommended area of private open space for each apartment at ground level or similar space on a structure, such as on a podium or car park, is 25m ² .	NO
<i>Planting on Structures</i>	In terms of soil provision there is no minimum standard that can be applied to all situations as the requirements vary with the size of plants and trees at maturity. The following are recommended as minimum standards for a range of plant sizes: Medium trees (8 metres canopy diameter at maturity) - minimum soil volume 35 cubic metres - minimum soil depth 1 metre - approximate soil area 6 metres x 6 metres or equivalent	YES
<i>Safety</i>	Carry out a formal crime risk assessment for all residential developments of more than 20 new dwellings.	YES
<i>Visual Privacy</i>	Refer to Building Separation minimum standards - up to four storeys/12 metres - 12 metres between habitable rooms/balconies - 9 metres between habitable/balconies and non-habitable rooms - 6 metres between non-habitable rooms - five to eight storeys/up to 25 metres - 18 metres between habitable rooms/balconies - 13 metres between habitable rooms/balconies and non-habitable rooms - 9 metres between non-habitable rooms	NO
<i>Pedestrian Access</i>	Identify the access requirements from the street or car parking area to the apartment entrance.	YES.
	Follow the accessibility standard set out in Australian Standard AS 1428 (parts 1 and 2), as a minimum. Provide barrier free access to at least 20 percent of dwellings in the development.	YES
<i>Vehicle Access</i>	Generally limit the width of driveways to a maximum of six metres.	YES
	Locate vehicle entries away from main pedestrian entries and on secondary frontages	YES

PART 03 BUILDING DESIGN		
Building Configuration		
<i>Apartment layout</i>	Single-aspect apartments should be limited in depth to 8 metres from a window.	NO
	The back of a kitchen should be no more than 8 metres from a window.	NO
	The width of cross-over or cross-through apartments over 15 metres deep should be 4 metres or greater to avoid deep narrow apartment layouts.	YES
	If Council chooses to standardise apartment sizes, a range of sizes that do not exclude affordable housing should be used. As a guide, the Affordable Housing Service suggest the following minimum apartment sizes, which can contribute to housing affordability: (apartment size is only one factor influencing affordability) - 1 bedroom apartment 50m ² - 2 bedroom apartment 70m ² - 3 bedroom apartment 95m ²	YES
<i>Apartment Mix</i>	Include a mixture of unit types for increased housing choice.	YES
<i>Balconies</i>	Provide primary balconies for all apartments with a minimum depth of 2 metres. Developments which seek to vary from the minimum standards must demonstrate that negative impacts from the context-noise, wind – can be satisfactorily mitigated with design solutions.	YES
<i>Ceiling Heights</i>	The following recommended minimum dimensions are measured from finished floor level (FFL) to finished ceiling level (FCL). in residential flat buildings or other residential floors in mixed use buildings: in general, 2.7 metres minimum for all habitable rooms on all floors, 2.4 metres is the preferred minimum for all non-habitable rooms, however 2.25m is permitted.	YES
<i>Ground Floor Apartments</i>	Optimise the number of ground floor apartments with separate entries and consider requiring an appropriate percentage of accessible units. This relates to the desired streetscape and topography of the site.	YES
	Provide ground floor apartments with access to private open space, preferably as a terrace or garden.	YES
<i>Internal Circulation</i>	In general, where units are arranged off a double-loaded corridor, the number of units accessible from a single core/corridor should be limited to eight.	YES

<i>Storage</i>	In addition to kitchen cupboards and bedroom wardrobes, provide accessible storage facilities at the following rates: - studio apartments 6m ³ - one-bedroom apartments 6m ³ - two-bedroom apartments 8m ³ - three plus bedroom apartments 10m ³	YES
Building Amenity		
<i>Daylight Access</i>	Living rooms and private open spaces for at least 70 percent of apartments in a development should receive a minimum of three hours direct sunlight between 9 am and 3 pm in mid winter.	YES – refer to discussion regarding adequacy of information
	Limit the number of single-aspect apartments with a southerly aspect (SW-SE) to a maximum of 10% of the total units proposed.	YES
Natural Ventilation	Building depths, which support natural ventilation typically range from 10 to 18 metres.	YES
	Sixty percent (60%) of residential units should be naturally cross ventilated.	NO
Building Performance		
<i>Waste Management</i>	Supply waste management plans as part of the development application submission as per the NSW Waste Board.	YES
<i>Water Conservation</i>	Rainwater is not to be collected from roofs coated with lead- or bitumen-based paints, or from asbestos- cement roofs. Normal guttering is sufficient for water collections provided that it is kept clear of leaves and debris.	YES

Site configuration

Open space

The proposed two storey apartments (Units 05, 18, 08 and 21) have a ground floor presentation and courtyards less than 25m² in area. The courtyards vary in size between 12.09m² and 18.10m² and do not satisfy the control requirement. The proposed design relies upon first floor balconies to satisfy the overall requirement of 25m².

Visual privacy

The following separation distances between buildings are required under the RFDC for five storey buildings:

- *18 metres between habitable rooms/balconies*
- *13 metres between habitable/balconies and non-habitable rooms*
- *9 metres are provided between non-habitable rooms.*

The objectives of the suggested dimensions are to provide visual and acoustic privacy for existing and new residents, control overshadowing and ensure that new development is scaled to support the desired area character with appropriate massing and spaces between buildings, to allow for the provision of open space and to provide deep soil zones.

Unit 51 provides a large living room window which scales at less than 9m from the western boundary and will not achieve the required 18m separation from the top floor of the neighbouring 2(d3) site. Privacy screens are not acceptable to solve this issue as it can be addressed through an adjustment of built form.

Building configuration

Apartment layout

The application proposes 26 single orientated apartments, which are either partly or entirely over 8 metres in depth being inconsistent with the RFDC Apartment Layout Rule of Thumb (p69) that 'Single-aspect apartments should be limited in depth to 8 metres from a window.' The design of the apartment's results in only 22% of bathroom's having a window and neither the laundries or studies within the entire development having a window. This is of particular concern as the design leads to service rooms being internalised and some of the floor space within the apartments having inadequate access to light and air.

The internalised studies in Units 4, 10, 17, 23, 30, 36, 40 and 49, which are large enough to be bedrooms, have poor internal amenity.

Building amenity

Daylight access

The submitted Solar Impact Report indicates that compliance is achieved with 40 of 57 (70%) of apartments receiving three hours of sunlight to their living rooms and private open space. However, there is concern regarding the accuracy and level of detail provided in the information. The report does not provide comment on the performance on Unit 17 and the calculations have not been taken from true north. There has been no graphic demonstration of solar access to each unit with the report only addressing the solar access provided to 40 Units and not the entire development.

Cross ventilation

The proposal does not comply with the minimum cross ventilation requirement of 60% of units. Only 31 of 57 (54%) of units are cross ventilated. The proposal seeks rely upon 8 two storey units to achieve compliance with the control. However, this design facilitates natural ventilation and not cross ventilation. The control specifically states, 'Sixty percent (60%) of residential units should be naturally cross ventilated' and the reliance upon the two storey units is not supported. The two storey units contain windows in a single elevation only and cannot be considered cross ventilated.

State Environmental Planning Policy Infrastructure 2007 (SEPP 2007)

The proposal is considered in accordance with the provisions of Clause 86 of SEPP 2007 as the development involves excavation to a depth of at least 2 metres below the ground level of land which is within 25 metres of the rail corridor.

The consent authority is required to refer the application to RailCorp and take into consideration any response. The application has been referred to RailCorp, which subject to the provision of further information has requested conditions of consent being required

by Council if the application is approved. RailCorp has granted concurrence to the proposed development.

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

BASIX certificate 333613M_04 dated 10/11/2011 has been submitted with the application. Numerous landscape area and low water use/indigenous plant species commitments have been nominated for both private and common landscape areas. The proposal is not consistent with the BASIX landscape commitments which have been made and is unsatisfactory. Compliance cannot be conditioned and the proposal is unsatisfactory within the requirements of SEPP BASIX.

SREP (Sydney Harbour Catchment) 2005

Matters for consideration under SREP 2005 include biodiversity, ecology and environmental protection, public access to and scenic qualities of foreshores and waterways, maintenance of views, control of boat facilities and maintenance of a working harbour. The proposal is not in close proximity to, or within view, of a waterway or wetland and is considered satisfactory.

Ku-ring-gai Planning Scheme Ordinance (KPSO)

Part IIIA Clause 25A

Under Clause 25B (definitions) of KPSO – LEP 194, a residential flat building is defined as '*a building containing three or more dwellings*'. The residential flat buildings proposed on the land zoned 2(d3) is permissible with consent.

The development is considered to be contrary to the aims and objectives under Clause 25C and 25D of the KPSO for the following reasons:

- (i) The proposal does not achieve a high quality urban design and architectural design
- (ii) The development results in poor residential amenity as a result of the building length which leads to a large number of single aspect units, with large depths, poor cross ventilation and marginal solar access
- (iii) The proposal isolates the deep soil landscape area on 36 Culworth Avenue and does not provide landscaping in scale with the development where the bulk and scale of the development is greatest

COMPLIANCE TABLE		
Development standard	Proposed	Complies
Site area (min): 1200m ²	4378.7m ²	YES
Deep soil (min): 50% (2189.35m ²)	48.7%	NO
Street frontage (min): 30 m	101.6m to Culworth Avenue	YES
Number of storeys (max): 4 + top storey (maximum of 5 storeys)	5 storeys	YES
Site coverage (max): 35% (1532.5m ²)	36.1%	NO

Top floor area (max): 60% of level below	Penthouse 724.24m ² Third Level 1205.06m ² 60%	YES
Storeys and ceiling height (max): 5 storeys and 13.4m	5 storeys 13.2m	YES YES
Car parking spaces (min): 14 (visitors) 70 (residents) 84 (total)	14 71 85	YES YES YES
Zone interface setback (min): 9m	Adjoining 2(d3) sites	YES
Manageable housing (min): 10% or 6 units	7 units nominated 2,4,15,17,28,30 and 40	YES
Lift access: required if greater than three storeys	All lifts service all floors including basement levels.	YES

Clause 25I(2) Deep soil landscape area

The site area is greater than 1200m² and is required to provide 50% deep soil landscape area. The applicant indicates a deep soil landscape of 50.91% (2229.6m²) is provided on site and complies. The applicant indicates the proposal complies by 40.25m². However, the provided calculation is inconsistent with the definition of deep soil landscape area. It is considered the combined areas of elements which should be excluded from the calculation would exceed 40.25m² (being approximately 95m²) and the proposal would result in a deep soil landscape area of 48.7% and is non compliant with the development standard. A SEPP 1 objection has not been submitted. The application therefore cannot be approved.

Clause 25I(6) Site coverage

The proposal is for a residential flat building where the maximum permitted site coverage is 35%. The applicant relies upon drawing SK12(A) to achieve a site coverage of 34.87% (1523.83m²). The applicant contends the proposal complies by 8.67m².

The submitted drawing shows the building footprint in plan view from the third level (FFL188.030). The building footprint represented at this level differs from the building footprint at ground floor and therefore confirmation of compliance with the development standard cannot be determined as represented in **figure 1** below.



Figure 1 Overlay between floor levels

The proposal is calculated to result in a site coverage of 36.1% and does not comply with the development standard. No SEPP 1 objection has been made and as it is a development standard, compliance or otherwise must be determined and cannot be conditioned.

Clause 33 – Aesthetic appearance

The subject site is located within vicinity of the North Shore Railway Line. The proposal is considered to result in an unacceptable aesthetic appearance as detailed within this assessment report. The proposal as viewed from the railway is considered unsatisfactory.

Clause 61E – Development in the vicinity of heritage items

The site is in the vicinity of four local heritage items (No. 8, 10, 14 and 21 Lorne Avenue). The proposal is not considered to result in any adverse impacts upon these heritage items. The proposal is therefore considered satisfactory in this regard.

POLICY PROVISIONS

Development Control Plan No. 55 - Railway/Pacific Highway Corridor & St Ives Centre

COMPLIANCE TABLE		
Development control	Proposed	Complies
Part 4.1 Landscape design:		
Deep soil landscaping (min) 150m ² per 1000m ² of site area = 656.8m ²	>657m ²	YES
No. of tall trees required (min): 17 trees	>17 trees proposed	YES
Private outdoor space differentiation Up to 1.2m solid wall with at least 30% transparent component		
Part 4.2 Density:		
Building footprint (max):		

35% of total site area	>35%	NO
Floor space ratio (max): 1.3:1	1.29:1 (5650.87m ²)	YES
Part 4.3 Setbacks:		
Street boundary setback (min): 13 - 15 metres	13m – 15m from Culworth Avenue	YES
<40% of the zone occupied by building footprint) (110.85m ²)	24% (26.6m ²)	YES
Side and rear boundary setback (min): 6m	6m from northern, southern and western boundaries	YES
Setback of ground floor courtyards to street boundary (min): 11m	11m	YES
% of total area of front setback occupied by private courtyards (max): 15% (21.78m ²)	<15%	YES
Part 4.4 Built form and articulation:		
Façade articulation: Wall plane depth >600mm	>600mm	YES
Wall plane area <81m ²	<81m ²	YES
Built form: Building width < 36 metres	32m	YES
Balcony projection < 1.2 metres	< 1.2metres	YES
Part 4.5 Residential amenity		
Solar access: >70% of units receive 3+ hours direct sunlight in winter solstice	70%	YES
>50% of the principle common open space of the development receives 3+ hours direct sunlight in the winter solstice	The principal common open space located to the north east of the development will receive 3+ hours of direct sunlight in the winter solstice	YES
<15% of the total units are single aspect with a western orientation	<15%	YES
Visual privacy: Separation b/w windows and balconies of a building and any neighbouring building on site or adjoining site: Storeys 1 to 4 12 metres b/w habitable rooms	12m	YES
5th Storey 18 metres b/w habitable rooms	9m from west	NO
Internal amenity: Habitable rooms have a minimum floor to ceiling height of 2.7 metres	>2.7m	YES
Non-habitable rooms have a minimum floor to ceiling height of 2.4m	>2.7m	YES
1-2 bedroom units have a minimum plan dimension of 3m in all bedroom	All bedrooms have 3 metres minimum dimension	YES

3+ bedroom units have a minimum plan dimension of 3m in at least two bedrooms	All bedrooms have 3 metres minimum dimension	YES
Single corridors: serve a maximum of 8 units 1.8m wide at lift lobbies	8 units per floor 4 units at upper level	YES
	1.8m at lift	YES
Outdoor living: Ground floor apartments have a terrace or private courtyard greater than 25m ² in area	12.09m ² and 18.10m ²	NO
Balcony sizes: - 10m ² – 1 bedroom unit - 12m ² – 2 bedroom unit - 15m ² – 3 bedroom unit NB. At least one space >10m ² primary outdoor space has a minimum dimension of 2.4m	>10m ² for 1 bedroom >12m ² for 2 bedrooms and >15m ² for 3 bedrooms	YES YES YES
Common Open space (30% Of the site area	>2.4 metres	YES
Private open space adjoining common open space not to be enclosed with high solid fences	>30%	YES
No high solid fencing, timber to be used.		YES
Part 4.7 Social dimensions:		
Visitable units (min): 70%	70%	YES
Housing mix: Mix of sizes and types	20 x 1 bedroom, 23 x 2 bedroom and 14 x 3 bedroom units	YES
Part 5 Parking and vehicular access:		
Car parking (min): 70 resident spaces 14 visitor spaces 84 total spaces	71 spaces 14 spaces 85 spaces	YES YES YES

Part 4.2 Density

Building Footprint

The building footprint requirement is 35%. The applicant relies upon drawing SK12(A) to achieve a site coverage of 34.87% (1523.83m²). The applicant contends the proposal complies by 8.67m².

The submitted drawing shows the building footprint in plan view from the third level (FFL188.030). The building footprint represented at this level differs from the building footprint at ground floor. Given the small area of 8.67m² for compliance to be maintained, concern is held regarding the level of detail provided to demonstrate compliance.

Part 4.5.2 Residential amenity

Solar access

The submitted Solar Impact Report claims that compliance is achieved with 40 of 57 (70%) of units receiving three hours of sunlight to their living rooms and private open space. Concern is held regarding the accuracy and level of detail provided in the information. The report does not provide comment on the performance on Unit 17 and the calculations have not been taken from true north. There has been no graphic demonstration of solar access to each unit with the report only addressing the solar access provided to 40 units and not the entire development.

Visual privacy

Unit 51 provides a large living room window which scales at less than 9m from the western boundary and will not achieve the required 18m separation from the top floor of the neighbouring 2(d3) site. Privacy screens are not acceptable to solve this issue as it can be addressed through an adjustment of built form.

Ground floor units

The proposed two storey units (Units 05, 18, 08 and 21) have a ground floor presentation and courtyards less than 25m². The courtyards vary in size between 12.09m² and 18.10m² and do not satisfy the control requirement. The proposed design relies upon first floor balconies to satisfy the overall requirement of 25m².

Development Control Plan No. 31 Access

Matters for assessment under DCP 31 have been taken into account in the assessment of this application against DCP 55 and the proposal is unsatisfactory in this regard. The primary street address for the eastern side of the building is from a fold down lift and no confirmation has been submitted by the accessibility consultant that this access is acceptable. The alternative entrance to the building is poorly design and inequitable.

Development Control Plan No. 40 - Construction and Demolition Waste Management

Matters for assessment under DCP 40 have been taken into account in the assessment of this application against DCP 55 and the proposal is satisfactory in this regard.

Development Control Plan No. 43 - Car Parking

Matters for assessment under DCP 43 have been taken into account in the assessment of this application against DCP 55 and the proposal is satisfactory in this regard.

Development Control Plan No.47 - Water Management

Matters for consideration under DCP 47 have been taken into account in the assessment of this application against DCP 55 and the proposal is satisfactory in this regard.

Section 94 Plan

The development is subject to a Section 94 Contribution, however as the application is recommended for refusal no calculation has been made.

LIKELY IMPACTS

The likely impacts of the development have been considered within this report and are deemed to be unacceptable.

SUITABILITY OF THE SITE

The proposed development is not considered to be suitable for the subject site. The proposal locates 100% of the floor space upon 81% of the site area which results in a long building with excessive building bulk. The result of this design strategy creates long narrow apartments with an excessive number of single aspect apartments. The proposal results in poor amenity and is not considered suitable for the subject site.

ANY SUBMISSIONS

The matters raised in the submissions have been addressed in this report.

PUBLIC INTEREST

The public interest is best served by the consistent application of the requirements of the relevant Environmental Planning Instruments, and by Council ensuring that any adverse effects on the surrounding area and the environment are minimised. The proposal has been assessed against the relevant environmental planning instruments and policy provisions and is deemed to be unacceptable. On this basis, the proposal is considered to be contrary to the public interest.

CONCLUSION

This application has been assessed under the heads of consideration of Section 79C of the Environmental Planning and Assessment Act 1979 and all relevant instruments and policies.

The proposal does not comply with deep soil landscape area development standard and has failed to demonstrate compliance with the site coverage development standard. SEPP 1 objections have not been provided and the proposal cannot be approved. The proposal has not been supported by a satisfactory BASIX Certificate.

There is a concentration of density and building length and bulk which results in a flawed design. There are serious design concerns in relation to apartment layout, poor resultant internal amenity, non-compliant cross ventilation and an excessive amount of single orientated apartments which exceed 8 metres in depth. There are issues of accessibility and safety of the eastern entries in addition to minor issues relating to setback separation at the upper most level, kitchens further than 8m from a window, privacy and safety conflicts across the re-entrant corner, provision of car parking spaces, and width of living rooms in adaptable apartments. Given these issues, the proposal is unsatisfactory and accordingly it is recommended for refusal.

RECOMMENDATION

THAT the Sydney West Joint Regional Planning Panel, as the consent authority, refuse consent to Development Application DA0173/11 for demolition of four existing dwellings and other site works and construction of a residential flat building comprising 57 units including basement car parking, front fence and landscaping on land at 36 – 40A Culworth Avenue, Killara for the following reasons:

DEEP SOIL LANDSCAPE AREA

The development does not demonstrate compliance with the development standard of Clause 25I(2) of the KPSO. No objection pursuant to State Environmental Planning Policy No.1 (Development Standards) has been submitted.

Particulars:

- (a) The applicant nominates a deep soil landscape area of 2229.6m² or 50.91%.
- (b) The definition of 25I(2)(a) states deep soil landscaping within a minimum width of 2 metres is to be provided on the site area.
- (c) The following areas do not satisfy the definition for deep soil landscape area:
 - a. Paved terraces eg adjacent to north side of Unit 9 that extend beyond basement footprint.
 - b. Garden beds less than 2.0m wide eg between rock scouring and access ramp, Unit 21 lower courtyard garden area.
 - c. Neighbouring paths within private courtyards that are not separated therefore greater than 1.0m wide eg Units 4, 5, 6, 7, 8, 10, 11, 12
 - d. Paths greater than 1.0m wide eg path leading to Unit 9 terrace
 - e. Paved areas associated with proposed terraces but excluded as paths eg Unit 3 external gate.
- (d) The development breaches the development standard with a deep soil landscape area of approximately 48.7%. No objection has been made pursuant to SEPP 1. The development therefore cannot be approved.

SITE COVERAGE

The development does not demonstrate compliance with the development standard in Clause 25I(6) of the KPSO. No objection pursuant to State Environmental Planning Policy No.1 (Development Standards) has been submitted.

Particulars:

- (e) The proposal is for a residential flat building where the maximum permitted site coverage is 35%. The applicant nominates a site coverage of 1523.83m² or 34.87%.
- (f) The applicant contends the proposal complies by 8.67m².
- (g) Building footprint is defined as the total maximum extent of the two dimensional area of the plan view of a building including all levels, but excluding any part of the building below ground and minor ancillary structures such as barbeques, letterboxes and pergolas.
- (h) The applicant relies upon drawing SK12(A) which shows the building footprint in plan view from the third level. The building footprint represented at this level differs from the building footprint at ground floor. The difference between levels exceeds 8.67m² and compliance cannot be clearly determined.
- (i) The development breaches the development standard with a site coverage of at least 36.1%. No objection has been made pursuant to SEPP 1. The development therefore cannot be approved.

State Environmental Planning Policy BASIX (2006)

The BASIX Certificate submitted with the development application and the nominated commitments are inconsistent with the submitted architectural plans.

Particulars:

- (a) BASIX Certificate 333613M_04 dated 10/11/2011 has been submitted with the application.
- (b) The Certificate makes numerous landscape area and low water use/indigenous plant species commitments have been for both private and common landscape areas.
- (c) Unit 3 has an area of garden and lawn that is inconsistent with the BASIX Certificate.
- (d) The proposal is subject to the provisions of State Environmental Planning Policy BASIX (2006) and as a valid BASIX Certificate has not been provided the proposal cannot be approved.

ORDERLY AND ECONOMIC DEVELOPMENT OF LAND

The proposal is contrary to the objects of Section 5(a)(ii) of the Environmental Planning and Assessment Act 1979 which encourages the promotion and co-ordination of the orderly and economic use and development of land.

Particulars:

- (a) The proposal seeks to take the benefit of a site area of 4378.7m² without recognising the burden of the drainage easement which crosses the northern edge of 36 Culworth Avenue.
- (b) The proposal positions 100% of the floor space across 81% of the site area. The placement of the floor space creates a bulkiness in built form, from the length of the building along 38, 40 and 40A Culworth Avenue which results in amenity issues for the proposed development.
- (c) The proposal fails to recognise the constraint of the site which in this circumstance would necessitate a reduction in yield. This is evident by the proposal's poor amenity and design which occurs from the location of the entire floor space over 81% of the site area.
- (d) The properties at 38, 40 and 40A Culworth Avenue are capable of development for residential flat building without the reliance upon the land area of 36 Culworth Avenue.
- (e) The exclusion of 36 Culworth Avenue would result in a reduction in floor space equivalent to approximately 10 – 11 apartments which improves the performance of the development proposed on 38, 40 and 40A Culworth Avenue.
- (f) The proposed development is contrary to the aims and objectives of Clause 25C(2)(g) and 25D(2)(b), (c) and (e) of the KPSO and LEP 194. The proposal is contrary to the public interest.
- (g) The development is contrary to the aim of Part IIIA set out in Clause 25C(2)(g) of the KPSO which requires development to achieve a high level of residential amenity in building design for the occupants of the building through solar access, acoustic control, privacy protection, natural ventilation, passive security design, outdoor living, landscape design, indoor amenity and storage provision.

- (h) The development is contrary to the public interest for the reasons identified in this Notice of Determination. The proposal is contrary to Section 79C(1)(b) and (e) of the Environmental Planning and Assessment Act 1979.

RESIDENTIAL AMENITY

The amenity of the units is sub-standard. There is marginal sunlight access; there are not enough cross-ventilated units; many single orientation units are too deep; and there are a high proportion of internalised service rooms with some common corridors internalised. The proposal is to SEPP 65 and the RFDC rules of thumb.

Particulars:

- (a) Only 31 of 54 (54%) apartments are cross ventilated and does not comply with the RFDC rule of thumb (p87) which states sixty per cent (60%) of residential units should be naturally cross ventilated
- (b) The eight two storey Units 5, 8, 18, 21, 31, 34, 43 and 46 are not cross ventilated. These units have windows in a single elevation and cannot be described as cross ventilated.
- (c) Twenty-six (26) of the single orientated units are partly or wholly over 8 metres in depth and do not comply with the RFDC rule of thumb (p69) which states single aspect apartment should be limited in depth to 8 metres from a window.
- (d) Only 21 of 94 (22%) of bathrooms have a window; 0 of 57 (0%) laundries have windows; and 0 of 19 (0%) studies have windows.
- (e) The studies within units 4, 10, 17, 23, 30, 36, 40 and 49 are large enough to be utilised as bedrooms and defined as habitable rooms pursuant to the RFDC (p118) and have poor amenity.
- (f) Compliance with sun access is marginal. According to the Solar Impact Report, only 40 of 57 (70%) apartments achieve three hours of sunlight to their living rooms and private open spaces (unit 17 is omitted from the chart), and many of these only achieve three hours sunlight and no more. The solar access has not been taken from true north should be taken accurately from a survey, not from the SIX Viewer, as stated in the report Notes.

VISUAL PRIVACY

The development provides inadequate spatial separation at the top storey which results in visual privacy impacts on surrounding properties. This is contrary to the building separation requirements of the RFDC (page 29), which requires a 18 metres separation at the fifth storey.

Particulars:

- (a) Unit 51 provides a large living room window which scales at less than 9m from the western boundary and will not achieve the required 18m separation from the top floor of the neighbouring 2(d3) site. Privacy screens are not acceptable to solve this issue as it can be addressed through an adjustment of built form.
- (b) The development is contrary to the aim of Part IIIA set out in Clause 25C(2)(g) of the KPSO which requires development to achieve a high level of residential amenity in building design for the occupants of the building through solar access, acoustic control, privacy protection, natural ventilation, passive security design, outdoor living, landscape design, indoor amenity and storage provision.

UNIT LAYOUT

The proposed built form results in a flawed design with poor unit layouts regarding internal amenity in depth, cross ventilation, accessibility and are contrary to the requirements of the RFDC.

Particulars:

- (a) Units 4, 17, 25, 26, 30, 38, 39, 40, 50, 57 are the single orientation units that provide a sub-optimal arrangement to satisfy the '8m deep to the back of the kitchen' RFDC Rule of Thumb (p69).
- (b) The application proposes 26 single orientated apartment of all which are either partly, or entirely over 8 metres deep being inconsistent with the RFDC Apartment Layout Rule of Thumb (p69) that 'Single-aspect apartments should be limited in depth to 8 metres from a window.'
- (c) The design of the apartment's results in only 22% of bathroom's having a window and neither the laundries or studies within the entire development having a window.
- (d) The living space of adaptable Units 4, 17, 30 and 40 is only 3.0-3.2m wide and may pose difficulties in providing a 2250mm clear space as required by AS4299 clause 4.7.1. A diagram showing furniture layout and access requirement templates is required to demonstrate compliance with AS 4299.

SAFETY AND SECURITY

The proposal results in a poor entrance to the building which raises concern regarding privacy and safety to occupants.

Particulars

- (a) The accessible, and therefore primary entry to the eastern building is tucked in a re-entrant corner of the building, located beneath a projecting part of the building, and partially concealed by a private courtyard fence to Unit 13.
- (b) This is poor quality space that is not acceptable as an address for 31 units.
- (c) part from the window of unit 13, with which there is a privacy conflict, this entry is not surveilled by any overlooking apartments and is therefore also potentially unsafe.
- (d) The proposal is contrary to SEPP 65 Principle 8.

ACCESS FOR WASTE COLLECTION

The applicant has not demonstrated that satisfactory access will be available for Council's small waste collection vehicle to enter the basement carpark in order to collect from the garbage storage area.

Particulars

- (a) Council's small waste collection vehicle requires a minimum head clearance of 2.6 metres.

- (b) Drawing SK-22 contains a longitudinal section through the centre of the driveway and into the basement carpark.
- (c) The level shown at the boundary on Drawing SK-22 (RL108.692) is not consistent with the level shown on SK-04 (RL108.828) nor is it consistent with Council's low level crossing profile.
- (d) The effect of this discrepancy is that the driveway levels would be higher than shown and headroom would be reduced by 300mm, which could be critical. A minimum of 2.6 metres is required and 2.6 metres is shown on SK-22, so a reduction of 300mm would result in a headroom of 2.3 metres which is not adequate.
- (e) Due to the slope of Culworth Avenue, the section should have been taken through the high side of the vehicular crossing.

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Attachments:

- Zoning Extract**
- Location Sketch**
- Survey**
- Elevations**
- Architectural plans**
- Long Section**
- Landscape plan**