36 – 40A CULWORTH AVENUE, KILLARA – SUPPLEMENTARY REPORT

EXECUTIVE SUMMARY

PURPOSE FOR REPORT:	To address the issues raised by the Sydney West Joint Regional Planning Panel (JRPP) at the 23 February 2012 meeting and for the JRPP to determine DA0173/11 for the demolition of four existing dwellings and construction of a residential flat building comprising 57 units, including basement car parking, front fence and landscaping.
BACKGROUND:	An assessment report was considered by the JRPP on 23 February 2012, the JRPP resolved to defer its determination pending further information and amended plans from the applicant to address the officer's reasons for refusal of the application.
COMMENTS:	The additional information and amended plans are addressed in this report.
RECOMMENDATION:	Approval

PURPOSE FOR REPORT

To address the issues raised by the Sydney West Joint Regional Planning Panel (JRPP) at the 23 February 2012 meeting and for the JRPP to determine DA0173/11 which proposes demolition of four existing dwellings and construction of a residential flat building comprising 57 units, including basement car parking, front fence and landscaping.

BACKGROUND

The Panel deferred the determination of the development application to allow the applicant to address the issues raised in the officer's recommendation for refusal by submission of additional information and amendments. In particular, the JRPP requested the applicant to:

A. *Supply a cross section diagram for garbage truck access based on correct survey data demonstrating compliance with the 2.6m clearance.*
B. *Submit a complying BASIX Certificate and in particular correcting the garden area connected with Unit 3.*
C. *Improve the disabled access generally which may include moving accessible units closer to the street, and better safety by design with the re-entrant access for 31 units.*
D. *Provide ease of access generally and clearly register the front entrance.*
E. *Improve casual surveillance generally.*
F. *Setback the penthouse to 9m separation*
G. *Address the issues by redesign, of the reasons for refusal in Council's report under the headings Residential Amenity and Unit Layout.*

The Panel asks the Council to assess amended plans already received and the two SEPP 1 Objections.

AMENDED PLANS AND INFORMATION

The applicant submitted amended plans and information on 23 March 2012, which included:

- BASIX Certificate 333613M_09, dated 21 March 2012
- a solar impact report, prepared by PSN matter, reviewed 16/06/2012
- a written statement by Chapman Planning Pty Ltd, dated 23 March 2012
- SEPP 1 objections to Clause 25I(2) and 25I(6)
- letter from Advanced Treescape Consulting, dated 23 March 2012
- natural ventilation statement prepared by Windtech, dated 23 March 2012
- landscape plan LPDA 11 – 67/1F, dated March 2012
- penthouse planters LPDA 11 – 67/4C, dated March 2012
- BASIX calculations plan LPDA 11 – 67/3G, dated March 2012
- roof, longitudinal section SK-01D, dated 2012.03.14
- car park 02 SK-02B, dated 2011.11.14
- car park 01 SK-03C, dated 2011.11.14
- ground floor SK-04D, dated 2012.03.14

- first floor SK-05D, dated 2012.03.14
- second floor SK-06D, dated 2012.03.14
- third floor SK-07D, dated 2012.03.14
- penthouse SK-08D, dated 2012.03.14
- sections SK-09D, dated 2012.03.14
- east front fence, north, south elevations 01 SK-10D, dated 2012.03.14
- west and east elevations 02 SK-11D, 2012.03.14
- site coverage plan SL-12C, dated 2012.03.14
- FSR ground floor plan SK-16D, dated 2012.03.14
- FSR first floor plan SK-17D, dated 2012.03.14
- FSR second floor plan SK-18D, dated 2012.03.14
- FSR third floor plan SK-19D, dated 2012.03.14
- FSR penthouse plan SK-20D, dated 2012.03.14
- deep soil area plan SK-21D, dated 2012.03.14
- longitudinal plan SK-22D, dated 2012.03.14
- cross ventilation plan SK-23B, dated 2012.03.14
- cross ventilation section SK24A, dated 2012.03.14
- main entry diagram SK-25A, dated 2012.03.14
- pre-adaption and post-adaption plan SK-26A, dated 2012.03.14

Amended plans submitted on 9 May 2012 included the following:

- roof, longitudinal section SK-01E, dated 2012.05.07
- ground floor SK-04E, dated 2012.05.07
- longitudinal plan SK-22E, dated 2012.05.07
- BASIX calculation plan LPDA 11 – 67/3G and dated March 2012
- landscape plan LPDA 11 – 67/1F, dated March 2012
- cover sheet, general notes and drawing schedule DA1.01 Revision 2, and dated 20/04/2012
- concept stormwater management plan, basement car park level 2 DA3.01 Revision 2 and dated 20/04/2012
- concept stormwater management plan, basement car park level 1 DA3.02 Revision 2 and dated 20/04/2012
- concept stormwater management plan, ground level DA3.03 Revision 7 and dated 20/04/2012
- detail sheet, sheet 1 of 2 DA4.01 Revision 2 and dated 20/04/2012
- detail sheet, sheet 2 of 2 DA4.03 Revision 3 and dated 20/04/2012
- supplementary letter by Varga Traffic Planning and dated 8 May 2012.

CONSULTATION - WITHIN COUNCIL

Urban Design

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

> **"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 observations regarding the amalgamation pattern and concentration of density on 38, 40 and 40A Culworth Avenue remain as described previously. The amalgamation pattern for this site is considered a contributory factor that puts pressure on the bulk, length and amenity performance of the building. Council should consider introducing a form of control relating to amalgamations that takes into account the location of site constraints such as easements, riparian corridors, significant stands of trees, and the like. It would be best if amalgamations were to follow as closely as possible along the lines of these constraints so that they do not 'cut sites up' as has happened here. This would assist the achievement of buildable footprints and development yield outcomes.

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.

The penthouse floor plan has been satisfactorily revised to ensure that habitable windows on all sides are set back a minimum of 9m from the boundary. The issue with the bulk and length of the building has been described previously.

Many single orientation apartments remain at over 8 metres deep, however all main habitable spaces of these apartments now have sufficient light and air being within 8 metres of a window.

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 accessibility of the Culworth Avenue front doors has been resolved by moving the entry path further down the hill so as to be generally level with the front door. This is a straightforward and acceptable solution and far superior to the previously shown stairway platform lift. This addresses the issue with accessibility of the letterboxes and lessens the unsuitability of the secondary entrance to the eastern building on the southern side.

While Units 5, 8, 18 and 21 remain unchanged, Units 31, 34, 43 and 46 have been revised to include a 'ventilation shaft' above their stairwells which pass through Units 53, 54 and 55 to expel above the roof. This is a convoluted solution to a problem which is created by the overall design approach to the site, however, it cannot be said to be ineffective. The 'ventilation shaft' appears that it would achieve its purpose of providing cross ventilation and therefore 34 of 57 (60%) apartments are now cross-ventilated, complying with the RFDC stipulation of 60% (using its own criteria, not that of the consultant report). An improvement

to these apartments might be made by locating the stovetop on the side wall so that the wall height between the benchtop and the stair can be kept to a minimum rather than be encumbered by a splashback, rangehood or overhead cupboards.

The privacy and safety conflict across the re-entrant corner between Units 35 and 47 with 46 remains as described previously. This should be resolved.

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 subject of density has been described previously.

The comments provided in the assessment report 23 February were as follows:

> *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.*

The amended design has improved the amenity of apartments.

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.

Provision of car parking is in excess of that required by some 18% as described previously. Given the excellent location near Killara train station, additional car parking reduces the broader environmental benefits of living near, utilising and encouraging public transport as per KLEP194 clause 25C(f) and DCP55 objective 5.1 O-7. It is noted, however, that there is no maximum car parking control and that this aspect is compliant. Council might in future consider introducing a control for a maximum number of parking spaces, instead of a minimum, in order to better achieve these objectives.

The overall amenity of apartments has been improved through redesign.

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 deep soil areas previously identified to be verified appear to have been addressed in the revised drawings. The incorporation of planter boxes is still desirable as described previously.

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.

The solar access of the apartments has been verified through a revised report with supporting graphic material. The report shows that 41 of 57 (72%) apartments receive a minimum of 3 hours sunlight in midwinter between 9am and 3pm to both their living areas and private open spaces. Solar access can now be confirmed as compliant with the RFDC 70% Rule of Thumb (p85). The report could be improved by employing the 'view from the sun' technique for the images which always places the camera angle at the sun location. Also, it would be preferable for the amount of solar access to be declared for all units so that the remaining 28% can be assessed to the same level. Council might consider requesting these items in future.

Cross ventilation of apartments is now compliant (see **PRINCIPLE 3: BUILT FORM**)

There remain many single-aspect apartments which are in excess of 8 metres deep from a window and do not accord with RFDC Rule of Thumb (p69). However, the design of these apartments has been improved primarily by reducing the size of the proposed internalised 'study' rooms. Previously, these rooms were of a size that they could be considered bedrooms and caused considerable concern in relation to the amenity they would provide occupants. Now, these studies have been made consistently less than 2 metres in dimension and would be difficult to convert to, or furnish as, a bedroom. In this instance, the studies could be considered acceptable as spaces which would be occupied less frequently than other living spaces. However, Council should note strongly that 'studies' are regarded as a habitable room under the RFDC (p118) and this project should not set a precedent for other projects in this regard. In general, it is still considered that single-aspect apartments greater than 8m deep from a window are sub-standard and should be questioned when they are proposed.

The kitchens to Units 6, 7 and 20 have been revised so that they are within 8 metres of a window.

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 issue with the southern entry to the eastern building has been lessened by providing unimpeded access from the entry facing Culworth Avenue. The southern entry is now a secondary entry and, whilst still concealed and unsurveilled as described previously, it is less of a security concern. This entry should be provided with good lighting to assist with safety.

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.

The accessibility directly from Culworth Avenue has been resolved (see **PRINCIPLE 3: BUILT FORM**) The issue with adaptable Units 4, 17, 30 and 40 has been resolved by proposing alternative units as accessible. The bathroom layouts of these apartments may have to be adjusted, and the laundry to Units 23, 36 and 49 appears to be slightly too narrow, however, the overall arrangements for the adaptable apartments shown on SK26A appear to now be workable.

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.

No further comment required.

CONCLUSION/RECOMMENDATIONS

The proposal may be approved in its present form. Only previously highlighted issues have been looked at. A complete reassessment has not been undertaken. On this basis it can be said that all of the major outstanding urban design issues identified have been adequately dealt with."

Condition 32 is recommended to address the deficiencies in the design as identified by Council's Urban Design Consultant.

Subject to these recommended design changes, the proposal will be considered adequate with respect to SEPP 65.

Landscape

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

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 can be 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 arborist's 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. Landscape works on other nearby completed 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 and can be conditioned.

Stormwater plan

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

BASIX

BASIX certificate 333613M_09 dated 21/03/2012 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 development is consistent with the BASIX certificate landscape commitments.

Deep soil

By the applicant's amended calculations the proposed development will result in a deep soil landscaped area of 2218.02m² or 50.65% of the site area.

The applicant has submitted a SEPP 1 objection for deep soil non compliance which has been based from previously proposed plans. The modified plans have satisfactorily addressed the deep soil landscape area concerns previously raised.

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 (**Condition 32**). 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.*

Conclusion

The application to construct a five storey residential flat building, with basement car parking is considered satisfactory on landscape grounds, subject to recommended conditions of consent.

Subject to the recommended condition, the proposal will be considered acceptable with respect of landscaping.

Engineering

Council's Development Engineer, commented on the proposal as follows:

The following amended documents have been used for this assessment:

- *Conzept Landscape Plan LPDA 11-67/1F and 67/3G;*
- *Mackenzie Architects drawings SK-01E, SK-02B, SK-03C, SK-04E and SK-22E;*
- *BASIX Certificate 333613M_09 dated 21 March 2012;*
- *Northrop Drawings DA1.01/2, DA3.01/2, DA3.02/2, DA3.03/7 DA4.01/2 and DA4.02/3.*

Water management

The site is affected by a drainage easement running from west to east along the northern boundary of 36 Culworth Avenue, containing a 600 mm diameter pipe. The pipe conveys runoff from upstream properties and Wallaroo Close and is therefore a Council pipe.

The current proposal is for a landscaped flood storage basin to be provided on 36 Culworth Avenue with no building over. This is considered to be a sensible approach.

The Flood Management Report still refers to a building on 36 Culworth Avenue, but this is left over from the previous report. The architectural plans confirm that no building is proposed over the flood storage basin. The report does confirm that freeboard is provided to the driveway entry and to the ground floor.

The report has been prepared on the basis of a maximum flood level which is the same as the level of Culworth Avenue, a conservative estimate which does not take account of the pipe or culvert under the railway line (due to no information being readily available about this system). This approach is supported, although the actual 100 year ARI flood level is expected to be lower than RL108.60.

The BASIX water commitments include a 25 000 litres rainwater tank, collecting runoff from at least 960 square metres of roof, with re-use for toilet flushing in Units 1 to 25. The stormwater management plans have been slightly amended with regard to the depth of the detention basins, but are still consistent with the BASIX commitments and Council's DCP 47 Water management.

Parking and vehicular access

The site is within 400 metres of Killara Station, so 57 resident and 15 visitor parking spaces are required. The drawings show 71 resident and 14 visitor parking spaces, so it will be necessary for one resident space to be amended to be a visitor space. This can be done on the Construction Certificate drawings, given that the oversupply of resident spaces. The number of accessible resident and visitor parking spaces is correct.

The longitudinal section through the entry driveway has now been amended to incorporate the level at the boundary which will be required to achieve the low level vehicular crossing. It is approximately the same level as the back of the footpath which is shown on the survey plan. A slight non-compliance with Clause 3.3(a) of AS2890.1:2004 Off street car parking results, but this is justified by the minor nature of the non-compliance, as discussed in the supplementary letter by Varga Traffic Planning, dated 8 May 2012.

Waste management

Architectural Drawing SK-22E contains a longitudinal section through the basement driveway, which demonstrates that 2.6 metres minimum headroom will be available for the small waste collection vehicle.

The service bay has also been relocated adjacent to the garbage collection area, and space for the correct number of containers is shown.

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.

Geotechnical investigation

The report by Jeffery and Katauskas was based on a walkover and experience on nearby sites. The report states "…it is inferred from the water level readings taken in boreholes drilled in neighbouring properties that drainage is likely to be required both during construction and in the long term behind all retaining walls and below the basement floor slab."

NSW Office of Water has provided sample General Terms of Approval for developments of this nature where basement excavation may require dewatering.

The following conditions form part of the recommendation to address the issues identified by Council's Engineer **(Conditions 6, 12, 13, 14, 40, 44 – 47, 64, 65, 103 – 113).**

ASSESSMENT OF AMENDED PLANS AND DOCUMENTATION

The application was deferred to respond to the reasons for refusal contained within the assessment report considered by the JRPP on 23 February 2012 and to specifically address the following points:

A. Supply a cross section diagram for garbage truck access based on correct survey data demonstrating compliance with the 2.6m clearance.

The longitudinal section through the entry driveway has been amended to incorporate the level at the boundary which will be required to achieve the low level vehicular crossing. The applicant has demonstrated on drawing SK-2 that the 2.6 metres clearance is achieved.

The proposal does, however, result in is a minor non compliance with Clause 3.3(a) of AS2890.1:2004 *Off street car parking*, however, has been supported by a supplementary letter by Varga Traffic Planning, dated 8 May 2012.

The proposal has addressed the reason for refusal relating to access for waste collection.

B. Submit a complying BASIX Certificate and, in particular, correcting the garden area connected with Unit 3.

The applicant has submitted an updated BASIX Certificate 333613M_09, dated 21/03/2012 and is considered satisfactory. The amended BASIX Certificate has addressed the reason for refusal relating to State Environmental Planning Policy BASIX (2006).

C. Improve the disabled access generally which may include moving accessible units closer to the street, and better safety by design with the re-entrant access for 31 units.

The amended plans nominate Units 23, 26, 36, 39, 49 and 50 as the adaptable units. These apartments are located within Building A fronting Culworth Avenue. The proposal previously had the adaptable apartments being Units 4, 17, 30 and 40 which were located at the rear of the site. An amended plan for the adaptable units shown on SK26A demonstrates the amended adaptable units are considered satisfactory.

The issue with the southern entry to the eastern building has been ameliorated to a degree by providing unimpeded access from the entry facing Culworth Avenue. The southern entry is now a secondary entry and, whilst still concealed, is less of a security concern. It is recommended a lighting plan be submitted prior to the issue of a construction certificate to ensure this area is well light to ensure the safety of occupants.

The amended plans have made the western entry the primary accessible entrance to the building. Therefore, the proposal is considered to have an acceptable outcome with regard to the primary entrance to the development.

D. Provide ease of access generally and clearly register the front entrance.

The accessibility of the Culworth Avenue front doors has been resolved by moving the entry path further down the hill so as to be generally level with the front door. This is a straightforward and acceptable solution and far superior to the previously shown stairway platform lift. This addresses the issue with accessibility of the letterboxes and lessens the unsuitability of the secondary entrance to the eastern building on the southern side.

The amendments detailed have addressed the reason for refusal.

E. Improve casual surveillance generally

The proposal provides five (5) access points to the building. There is a direct access from Culworth Avenue which, as the primary accessible entrance, affords good casual surveillance from both the streetscape and residential units above. The proposal provides two (2) secondary entrances to the front building to the north-east and south-east. Previously, the south eastern entrance was the primary entrance as it was the only accessible entrance. The amended plans have made this a secondary entrance and the lack of casual surveillance is less of a concern as it will not be as frequently used. Unit 9 contains a highlight window above the kitchen which over looks the secondary north-eastern entrance.

The south-western entrance to Building B does not contain any concealed corners and is considered to provide good sight lines for pedestrians. The amended proposal is considered to have responded adequately to this issue.

F. Setback the penthouse to 9m separation

The penthouse floor plan is satisfactorily revised to demonstrate that the habitable windows on all sides are set back a minimum of 9 metres from the boundary and complies with the control requirement. The amended plans have adequately addressed the reason for refusal by providing a compliant separation distance.

G. Address the issues by redesign, of the reasons for refusal in Council's report under the headings Residential Amenity and Unit Layout.

The reasons for refusal relating to Residential Amenity and Unit Layout were as follows:

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.

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.

The amended plans include the following design changes to respond to the reasons for refusal:

- Units 31, 34, 43 and 46 have been revised to include a 'ventilation shaft' above their stairwells which pass through Units 53, 54 and 55 to expel above the roof. The 'ventilation shaft' appears that it would achieve its purpose of providing cross ventilation and therefore 34 of 57 (60%) apartments are now cross-ventilating.

- The design of the single-aspect apartments which are in excess of 8 metres deep from a window have been improved by reducing the size of the proposed internalised 'study' rooms. These rooms were previously had a size capable of use as a bedroom. These studies are now less than 2 metres in dimension.

- The solar access of the apartments has been verified through a revised report with supporting graphic material. The report shows that 41 of 57 (72%) apartments receive a minimum of 3 hours sunlight in midwinter between 9am and 3pm to both their living areas and private open spaces. Solar access can now be confirmed as compliant with the RFDC 70% Rule of Thumb (p85).

- The kitchens to Units 6, 7 and 20 have been revised so that they are within 8 metres of a window.

- The amended plans nominate Units 23, 26, 36, 39, 49 and 50 as the adaptable units. These apartments are located within Building A fronting Culworth Avenue and comply with AS4299.

The amended proposal has satisfied the reasons for refusal relating to residential amenity and apartment layout for the reasons detailed below.

- The amended plans demonstrates compliance with the RFDC rule of thumb (p87) which states sixty per cent (60%) of residential units should be naturally cross ventilated with 34 of 57 (60%) being naturally cross ventilated.

- The proposal still maintains single aspect apartments which 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. However, these apartments have been reconfigured to reduce the size of the study. Concern was held regarding the provision of habitable rooms being located greater than 8 metres from an opening. The reduction in the room size to less than 2 metres in dimension would likely prevent the use of these areas as a bedroom, and would be difficult to convert to, or furnish as a bedroom. These spaces are less frequently occupied than living spaces and therefore the amenity level is considered reasonable on merit.

- Whilst there is no rule of thumb requiring windows for bathrooms and laundries, there was concern in relation to the general layout and design of the apartments which was further demonstrated by the enclosure of these rooms. These rooms are mechanically ventilation and artificially lit and the applicant has indicated these rooms are provided with adequate ventilation and light in accordance with the Building Code of Australia.

- A revised solar access report has been submitted which demonstrates the proposal complies with the RFDC rule of thumb (p85) with 41 of 57 (72%) of apartments receiving a minimum of 3 hours sunlight in midwinter between 9am and 3pm to both their living areas and private open spaces.

- Concern was previously expressed regarding the living spaces of the identified adaptable Units 4, 17, 30 and 40 which has narrow widths which did not comply with AS4299. The amended proposal has nominated Units 23, 26, 36, 39, 49 and 50 as the adaptable units. These apartments are sufficient in width and comply with AS4299. Additionally, these units are located within Building A which fronts Culworth Avenue, providing more convenient and direct access to the adaptable units.

Units 31, 34, 43 and 46 which have been revised to include a 'ventilation shaft' above their stairwells which pass through Units 53, 54 and 55 to expel above the roof, it is considered a further improvement to these apartments might be made by locating the stovetop on the side wall so that the wall height between the bench top and stair can be kept to a minimum rather than be encumbered by a splashback, range hood or overhead cupboards. **Condition 32** requires this design change prior to the issue of a Construction Certificate.

Council to assess amended plans and SEPP 1 objections submitted.

The amended plans demonstrate that the proposal achieves compliance with the development standards of deep soil landscape area Clause 25I(2) and site coverage Clause 25I(6) of the KPSO. The proposal does not breach these development standards.

The SEPP 1 objections submitted relate to superseded plans and the previous non compliances identified in the assessment report considered by the Panel on 23 February 2012.

The amended proposal therefore overcomes the reasons for refusal relating to non compliance with deep soil landscape area and site coverage.

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.

In the report to the JRPP on 23 February 2012, the following reason for refusal was advanced:

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.

There was fundamental concern regarding the residential amenity which resulted from locating 100% of the floor space upon 81% of the total site area. The residential amenity impacts were the creation of elongated apartment depths, non compliance with cross ventilation, uncertainty with solar access compliance and apartment layouts.

The amended plans now demonstrate compliance with solar access, cross ventilation, privacy requirements and are considered acceptable in this circumstance in relation to apartment depths. The proposal has reduced the size of the studys to prevent their use as a bedroom and now locates non habitable rooms where the depth of the apartment exceeds 8 metres resulting in a reasonable level of amenity to these apartments.

While the bulkiness of the built form has not been modified, the floor space and its form no longer results in unacceptable internal amenity. It was Council's position, that the internal amenity was a result of the positioning of the floor space and that the design would benefit from the provision of a third lift core and reduction in the number of units, creating an increased number of apartments types such as corner apartments and reduction in single

aspect apartments. However, the design approach by the introduction of mechanical lift shaft achieves an improved level of amenity which cannot be said to be ineffective.

The incorporation of 38 Culworth Avenue was seen as inappropriate and not promoting an orderly development of land as it provided the catalyst for poor design. The poor design lead to poor amenity for future occupants. The amended plans have demonstrated that reasonable amenity is now provided to the development.

Whilst an orderly and economic development of land would be achieved through the inclusion of 36 Culworth Avenue with the properties to the south, the proposal nevertheless demonstrates compliance with the deep soil landscape area and site coverage development standards, does not result in any adverse impacts upon adjoining properties and provides for an acceptable level of amenity to the proposed units, despite their siting on 81% of the site area and achieves an orderly and economic development of this land.

The proposal is consistent with the objects of Section 5(a)(ii) of the Environmental Planning and Assessment Act 1979.

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

An amended BASIX certificate 333613M_09 dated 21/03/2012 has been submitted. Numerous landscape area and low water use/indigenous plant species commitments have been for both private and common landscape areas. The Certificate is satisfactory.

State Environmental Planning Policy Infrastructure 2007 (SEPPI 2007)

The proposal is considered in accordance with the provisions of Clause 86 of SEPPI 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 **(Conditions 5, 27, 28, 29 and 116).**

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.

	Guideline	***Consistency with Guideline***
PART 02 **SITE DESIGN**		
Site Configuration		
Deep Soil Zones	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
Open Space	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**
Planting on Structures	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
Safety	Carry out a formal crime risk assessment for all residential developments of more than 20 new dwellings.	YES

Visual Privacy	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	YES
Pedestrian Access	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
Vehicle Access	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		
Apartment layout	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.	YES
	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 50m² - 2 bedroom apartment 70m² - 3 bedroom apartment 95m²	YES
Apartment Mix	Include a mixture of unit types for increased housing choice.	YES
Balconies	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

Ceiling Heights	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
Ground Floor Apartments	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
Internal Circulation	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
Storage	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		
Daylight Access	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
	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.	YES
Building Performance		
Waste Management	Supply waste management plans as part of the development application submission as per the NSW Waste Board.	YES
Water Conservation	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. The proposal is considered satisfactory in this circumstance given that the combined area is complaint.

Visual privacy

The amended plans demonstrate that Unit 51 is set back 9 metres from the western boundary and is compliant with the required separation distance.

Building configuration

Apartment layout

The design of the single-aspect apartments which are in excess of 8 metres deep from a window have been improved by reducing the size of the proposed internalised 'study' rooms. These rooms were previously had a size capable of use as a bedroom. These studies are now less than 2 metres in dimension.

The kitchens to Units 6, 7 and 20 have been revised so that they are within 8 metres of a window and comply with the rule of thumb.

Building amenity

Daylight access

The solar access of the apartments has been verified through a revised report with supporting graphic material. The report shows that 41 of 57 (72%) apartments receive a minimum of 3 hours sunlight in Midwinter between 9am and 3pm to both their living areas and private open spaces. Solar access can now be confirmed as compliant with the RFDC 70% Rule of Thumb (p85).

Cross ventilation

Units 31, 34, 43 and 46 have been revised to include a 'ventilation shaft' above their stairwells which pass through Units 53, 54 and 55 to expel above the roof. The 'ventilation shaft' appears that it would achieve its purpose of providing cross ventilation and therefore 34 of 57 (60%) apartments are now cross-ventilating.

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 consistent with the aims and objectives under Clause 25C and 25D of the KPSO for the following reasons:

(i) The development achieves an acceptable level of residential amenity with compliant solar access, cross ventilation, privacy, outdoor living spaces, and provision of storage.
(ii) The proposal provides a complaint level of deep soil landscape area on the development site.
(iii) The proposal provides side setbacks which enable effective landscaping.
(iv) The proposal complies with the site coverage development standard and deep soil landscape area which facilitates landscaping which is in scale with the proposed development.

COMPLIANCE TABLE		
Development standard	**Proposed**	**Complies**
Site area (min): 1200m²	4378.7m²	YES
Deep soil (min): 50% (2189.35m²)	50.65% (2218.02m²)	YES
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% (1532.5m²)	35%	YES
Top floor area (max): **60% of** level below	Penthouse 724.24m² Third Level 1205.06m² 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 33 – Aesthetic appearance

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

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	>657m²	YES
No. of tall trees required (min): 17 trees **Private outdoor space differentiation** Up to 1.2m solid wall with at least 30% transparent component	>17 trees proposed	YES
Part 4.2 Density:		
Building footprint (max):		
35% of total site area	35%	YES
Floor space ratio (max):		
1.3:1	1.29:1 (5650.87m²)	YES
Part 4.3 Setbacks:		
Street boundary setback (min):		
13 - 15 metres <40% of the zone occupied by building footprint) (110.85m²)	13m – 15m from Culworth Avenue 24% (26.6m²)	YES 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% (21.78m²)	<15%	YES
Part 4.4 Built form and articulation:		
Façade articulation:		
Wall plane depth >600mm	>600mm	YES
Wall plane area <81m²	<81m²	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	YES
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 1.8m at lift	 YES YES
Outdoor living:		
Ground floor apartments have a terrace or private courtyard greater than 25m² in area	12.09m² and 18.10m²	**NO**
Balcony sizes: - 10m² – 1 bedroom unit - 12m² – 2 bedroom unit - 15m² – 3 bedroom unit NB. At least one space >10m²	 >10m² for 1 bedroom >12m² for 2 bedrooms and >15m² for 3 bedrooms	 YES YES YES

primary outdoor space has a minimum dimension of 2.4m	>2.4 metres	YES
Common Open space (30% Of the site area	>30%	YES
Private open space adjoining common open space not to be enclosed with high solid fences	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 proposal demonstrates compliance with the 35% building footprint control and is considered satisfactory in this regard.

Part 4.5.2 Residential amenity

Solar access

The proposal demonstrates compliant solar access to 70% of the proposed apartments and is satisfactory.

Visual privacy

The proposal has been amended such that Unit 51 affords a 9 metres set back to the western boundary and will achieve the required 18 metres separation from the top floor of the neighbouring 2(d3) site.

Ground floor units

The proposed two storey units (Units 05, 18, 08 and 21) have a ground floor element 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 and this is considered satisfactory in this circumstance.

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 amended plans provide for the primary accessible entrance directly from Culworth Avenue which is considered acceptable. The proposal no longer relies upon the secondary entrance for accessible access. The amended plans have not been supported by an updated accessibility report, however conditions of consent are recommended to ensure the proposal is complaint with AS1428 (**Conditions 38 and 102**).The proposal is therefore considered to be consistent with the provisions of DCP 31.

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 of $1,154,716.15 (**Condition 54**).

CONSULTATION – COMMUNITY

The amended plans and additional information submitted by the applicant in response to the deferral by the JRPP did not require notification to neighbouring properties. The proposal is considered to be satisfactory and the amended plans have addressed the concerns raised regarding privacy. The recommended conditions of consent adequately address the other concerns raised by neighbouring properties.

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 amended plans and information submitted have adequately addressed the reasons for refusal contained in the assessment report considered by the Sydney West Joint Regional Planning Panel on 23 February 2012. The proposal demonstrates compliance with the deep soil landscape area and site coverage development standards. The proposal has been supported by a valid BASIX Certificate.

The proposed design has been amended to incorporate a mechanical ventilation shaft which achieves compliant cross ventilation to 60% of the proposed apartments. Further information has been submitted to demonstrate compliant solar access is provided to 72% of apartments consistent with the rules of thumb within the Residential Flat Design Code. The upper level has been set back to comply with the 9 metres separation required by the RFDC from the adjoining property.

The proposal still maintains single aspect apartments which are partly or wholly over 8 metres in depth. However, these apartments have been reconfigured to reduce the size of the study to prevent their use as a bedroom. The level of amenity now provided to these apartments is considered reasonable.

The amended proposal nominates Units 23, 26, 36, 39, 49 and 50 as the adaptable units. These apartments are located at the front of the site with direct access from Culworth Avenue. These apartments are sufficient in width and comply with AS4299.

The proposal has demonstrated that the 2.6 metres clearance height can be achieved for access of waste vehicles.

The amended proposal demonstrates an acceptable level of amenity is provided to apartments through the alternative design solution is providing a mechanical ventilation shaft as opposed to the introduction of a third lift core and reduction in floor space. The amended plans and information are considered to demonstrate a development which is consistent with the aims and objects of the Environmental Planning and Assessment Act 1979 and Ku-ring-gai Planning Scheme Ordinance. Accordingly, the proposal is recommended for approval.

RECOMMENDATION

THAT the Sydney West Joint Regional Planning Panel, as the consent authority, grant development consent to Development Application DA0173/11 for demolition of four existing dwellings and construction of a residential flat building comprising 57 units, including basement car parking, front fence and landscaping on land at 36 – 40A Culworth Avenue, Killara, for a period of two years from the date of the Notice of Determination, subject to the following conditions of consent:

CONDITIONS THAT IDENTIFY APPROVED PLANS:

1. Approved architectural plans and documentation (new development)

The development must be carried out in accordance with the following plans and documentation listed below and endorsed with Council's stamp, except where amended by other conditions of this consent:

Plan no.	Drawn by	Dated
Cover Sheet Project No. 09/17	Mackenzie Architects	plot date 22/03/2012
Roof/Site Plan SK-01	Mackenzie	2012.05.07

Revision E	Architects	
Carpark 02 SK-02 Revision B	Mackenzie Architects	2011.11.14
Carpark 01 SK-01 Revision C	Mackenzie Architects	2011.11.14
Ground Floor SK-04 Revision E	Mackenzie Architects	2012.05.07
First Floor SK-05 Revision D	Mackenzie Architects	2012.03.14
Second Floor SK-06 Revision D	Mackenzie Architects	2012.03.14
Third Floor SK-07 Revision D	Mackenzie Architects	2012.03.14
Penthouse SK-08 Revision D	Mackenzie Architects	2012.03.14
Sections SK-09 Revision D	Mackenzie Architects	2012.03.14
Elevations 01 SK-10 Revision D	Mackenzie Architects	2012.03.14
Elevations 02 SK-11 Revision D	Mackenzie Architects	2012.03.14
Site Coverage SK-12 Revision C	Mackenzie Architects	2012.01.31
FSR Ground Floor SK-16 Revision D	Mackenzie Architects	2012.03.14
FSR First Floor SK-17 Revision D	Mackenzie Architects	2012.03.14
FSR Second Floor SK-18 Revision D	Mackenzie Architects	2012.03.14
FSR Third Floor SK-19 Revision D	Mackenzie Architects	2012.03.14
FSR Penthouse SK-20 Revision D	Mackenzie Architects	2012.03.14

Deep Soil Area SK-21 Revision D	Mackenzie Architects	2012.03.14
Longitudinal Section SK-22 Revision E	Mackenzie Architects	2012.05.07
Cross Ventilation SK-23 Revision B	Mackenzie Architects	2012.03.14
Cross Ventilation Section SK24 Revision A	Mackenzie Architects	plot date 22/03/2012
Main Entry 3D SK-25 Revision A	Mackenzie Architects	plot date 22/03/2012
Adaptable Units SK-26 Revision A	Mackenzie Architects	plot date 22/03/2012
Basix Calculations LPDA 11-67/3G	Conzept Landscape Architects	March 2012
Penthouse Planters LPDA 11 – 67/4C	Conzept Landscape Architects	March 2012
Landscape Plan LPDA 11 - 67/1F	Conzept Landscape Architects	March 2012
Tree Protection Zone Tree 14 SK-27 Rev A	Mackenzie Architects	plot date 22/03/2012
Cover Sheet, general notes and drawing schedule DA1.01 Revision 2	Northorp	20/04/2012
Concept stormwater management plan, basement car park level 2 DA3.01 Revision 2	Northorp	20/04/2012
Concept stormwater management plan, basement car park level 1 DA3.02 Revision 2	Northorp	20/04/2012
Concept stormwater	Northorp	20/04/2012

management plan, ground level DA3.03 Revision 2		
Detail sheet, sheet 1 of 2 DA4.01 Revision 2	Northorp	20/04/2012
Detail sheet, sheet 2 of 2 DA4.03 Revision 3	Northorp	20/04/2012

Document(s)	**Dated**
Colours and finishes schedule prepared by Mackenzie Architects	Received by Council 14 April 2011
Basix certificate No.333613M_09	21 March 2012
Prelimianry Geotechnical Investigation prepared by Jeffery and Katauskas Ref 21983V. Killara	3 April 2008
Geotechnical Investigation and Finite Element Modelling for Proposed Residential Development, prepared by Jeffrey and Katauskas Ref 21983Lrpt	23 September 2011
Assessment of Impact on RailCorp Infrastructure from Proposed Development prepared by Pells Sullivan Meynink Ref PSM1756 – 001L9081	20 September 2011
Structural Report prepared by Jones Nicholson Pty Ltd Ref Am20110149RPT and Structural Drawings 110149-S02-6 and 110149-S03-6	15 November 2011
Waste Management Plan	30/03/2011
Arboricultural Impact Assessment prepared by Advanced Treescape Consulting	16 September 2010
Statement by Advanced Treescape Consulting	23 March 2012
Access Report prepared by Accessibility Solutions Pty Ltd	11 April 2011
Acoustic Report Ref2010769.1/2508A/R3/HM Revision 3 prepared by Acoustic Logic	25/08/2010
Stormwater Management Plan Report 11201-DG02 Rev 1 preapred by Northorp	16.09.2011
Flood Management Report Ref 11201-DG01 Rev 2 prepared by Northorp	16.09.2011

Construction Traffic Management Plan 10188 prepared by Varga Traffic and Planning	15.11.2011
Traffic and Parking Assessment Report Ref 10188 prepared by Varga Traffic and Planning	29 March 2011
Solar Impact Report Ref 4184_CULWORTH prepared by PNS Matter	April 2011
Natural Ventilation Statement WB326-01F02(REV2) prepared by Windtech	23 March 2012
Fire Safety Schedule prepared by unknown	Received by Council 14 April 2011

Reason: To ensure that the development is in accordance with the determination.

2. Inconsistency between documents

In the event of any inconsistency between conditions of this consent and the drawings/documents referred to above, the conditions of this consent prevail.

Reason: To ensure that the development is in accordance with the determination.

3. Approved landscape plans

Landscape works shall be carried out in accordance with the following landscape plan(s), listed below and endorsed with Council's stamp, except where amended by other conditions of this consent:

Plan no.	Drawn by	Dated
Penthouse Planters LPDA 11 – 67/4C	Conzept Landscape Architects	March 2012
Landscape Plan LPDA 11 - 67/1F	Conzept Landscape Architects	March 2012

Reason: To ensure that the development is in accordance with the determination.

CONDITIONS TO BE SATISFIED PRIOR TO DEMOLITION, EXCAVATION OR CONSTRUCTION:

4. Road opening permit

The opening of any footway, roadway, road shoulder or any part of the road reserve shall not be carried out without a road opening permit being obtained from Council (upon payment of the required fee) beforehand.

Reason: Statutory requirement (Roads Act 1993 Section 138) and to maintain the integrity of Council's infrastructure.

5. Safe work method statement

Prior to any excavation and/or construction works commencing a Risk Assessment/Management Plan and detailed Safe Work Method Statements (SWMS) for the excavation and/or construction works are to be submitted to RailCorp for review and comment on the impacts on rail corridor. Demolition works shall not commence until written confirmation has been received from RailCorp confirming that this condition has been satisfied.

Reason: To ensure no adverse impacts upon the rail corridor.

6. Groundwater inflow predictions

1. The predicted instantaneous inflow rate (expressed in litres per second) and the predicted total groundwater extraction volume (expressed in megalitres) for the defined period of construction (expressed in months) of the development shall be determined and advised to the NSW Office of Water. The treatment, management and disposal of the pumped groundwater may be subject of approval by the appropriate regulatory authority.

2. The predicted instantaneous inflow rate (expressed in litres per second) and the predicted total groundwater extraction volume (expressed in megalitres per year) for the long-term operation of the development shall be determined and advised to the NSW Office of Water. The treatment, management and disposal of the pumped groundwater will be subject to approval by the appropriate regulatory authority.

Reason: To protect the environment.

7. Notice of commencement

At least 48 hours prior to the commencement of any development (including demolition, excavation, shoring or underpinning works), a notice of commencement of building or subdivision work form and appointment of the principal certifying authority form shall be submitted to Council.

Reason: Statutory requirement.

8. Notification of builder's details

Prior to the commencement of any development or excavation works, the Principal Certifying Authority shall be notified in writing of the name and contractor licence number of the owner/builder intending to carry out the approved works.

Reason: Statutory requirement.

9. Dilapidation survey and report (public infrastructure)

Prior to the commencement of any development or excavation works on site, the Principal Certifying Authority shall be satisfied that a dilapidation report on the visible and structural condition of all structures of the following public infrastructure, has been completed and submitted to Council:

Public infrastructure

- Full road pavement width, including kerb and gutter, of Culworth Avenue over the site frontage, including the full intersection with Lorne Avenue.
- All features opposite the subject site.

The report must be completed by a consulting structural/civil engineer. Particular attention must be paid to accurately recording (both written and photographic) existing damaged areas on the aforementioned infrastructure so that Council is fully informed when assessing any damage to public infrastructure caused as a result of the development.

The developer may be held liable to any recent damage to public infrastructure in the vicinity of the site, where such damage is not accurately recorded by the requirements of this condition prior to the commencement of works.

Note: A written acknowledgment from Council must be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority prior to the commencement of any excavation works.

Reason: To record the structural condition of public infrastructure before works commence.

10. Archival recording of buildings

Prior to the commencement of any development or excavation works on site, the Principal Certifying Authority shall be satisfied that an archival report has been submitted to Council's Heritage Advisor.

The report must consist of an archival standard photographic record of the building (internally and externally), its garden and views of it from the street illustrating its relationship to neighbouring properties and the streetscape. Recording shall be undertaken in accordance with the guidelines for "Photographic Recording of Heritage Items Using Film or Digital Capture (2006)" prepared by the New South Wales Heritage Office.

Information shall be bound in an A4 report format. It shall include copies of photographs, referenced to plans of the site. Two (2) copies (one (1) copy to include negatives or CD of images shall be submitted to Council's Heritage Advisor. The recording document will be held in the local studies collection of Ku-ring-gai Library, the local historical society and Council's files.

Note: A written acknowledgment from Council must be obtained (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority

prior to the commencement of any works.

Reason: To ensure the proper management of historical artefacts and to ensure their preservation.

11. Dilapidation survey and report (private property)

Prior to the commencement of any demolition or excavation works on site, the Principal Certifying Authority shall be satisfied that a dilapidation report on the visible and structural condition of all structures upon the following lands, has been completed and submitted to Council:

Address

- External walls of closest building to the boundary of 42-48 Culworth Avenue and 3-7 Lorne Avenue (if constructed)
- 7 Wallaroo Close
- 34 Culworth Avenue

The dilapidation report must include a photographic survey of adjoining properties detailing their physical condition, both internally and externally, including such items as walls ceilings, roof and structural members. The report must be completed by a consulting structural/geotechnical engineer as determined necessary by that professional based on the excavations for the proposal and the recommendations of the submitted geotechnical report**.**

In the event that access for undertaking the dilapidation survey is denied by a property owner, the applicant must demonstrate in writing to the satisfaction of the Principal Certifying Authority that all reasonable steps have been taken to obtain access and advise the affected property owner of the reason for the survey and that these steps have failed.

Note: A copy of the dilapidation report is to be provided to Council prior to any excavation works been undertaken. The dilapidation report is for record keeping purposes only and may be used by an applicant or affected property owner to assist in any civil action required to resolve any dispute over damage to adjoining properties arising from works.

Reason: To record the structural condition of likely affected properties before works commence.

12. Geotechnical report

Prior to the commencement of any bulk excavation works on site, the applicant shall submit to the Principal Certifying Authority, the results of the detailed geotechnical investigation comprising cored boreholes and standpipes as recommended in the letter report by Jeffery and Katauskas dated 3 April 2008. The report is to address such matters as:

- appropriate excavation methods and techniques

- vibration management and monitoring
- dilapidation survey
- support and retention of excavated faces
- hydrogeological considerations

The recommendations of the report are to be implemented during the course of the works.

Reason: To ensure the safety and protection of property.

13. Construction and traffic management plan

The applicant must submit to Council a Construction Traffic Management Plan (CTMP), which is to be approved prior to the commencement of any works on site.

The plan is to consist of a report with Traffic Control Plans attached.

The report is to contain commitments which must be followed by the demolition and excavation contractor, builder, owner and subcontractors. The CTMP applies to all persons associated with demolition, excavation and construction of the development.

The report is to contain construction vehicle routes for approach and departure to and from all directions.

The report is to contain a site plan showing entry and exit points. Swept paths are to be shown on the site plan showing access and egress for an 11 metre long heavy rigid vehicle.

The Traffic Control Plans are to be prepared by a qualified person (red card holder). One must be provided for each of the following stages of the works:

- Demolition
- Excavation
- Concrete pour
- Construction of vehicular crossing and reinstatement of footpath
- Traffic control for vehicles reversing into or out of the site.

Traffic controllers must be in place at the site entry and exit points to control heavy vehicle movements in order to maintain the safety of pedestrians and other road users.

When a satisfactory CTMP is received, a letter of approval will be issued with conditions attached. Traffic management at the site must comply with the approved CTMP as well as any conditions in the letter issued by Council. Council's Rangers will be patrolling the site regularly and fines may be issued for any non-compliance with this condition.

Reason: To ensure that appropriate measures have been considered during all phases of the construction process in a manner that maintains the environmental amenity and ensures the ongoing safety and protection of people.

14. Work zone

A Works Zone is to be provided in Culworth Avenue subject to the approval of the Ku-ring-gai Local Traffic Committee.

No loading or unloading must be undertaken from the public road or nature strip unless within a Works Zone which has been approved and paid for.

In the event the work zone is required for a period beyond that initially approved by the Traffic Committee, the applicant shall make a payment to Council for the extended period in accordance with Council's schedule of fees and charges for work zones prior to the extended period commencing.

Reason: To ensure that appropriate measures have been made for the operation of the site during the construction phase.

15. Erosion and drainage management

Earthworks and/or demolition of any existing buildings shall not commence until an erosion and sediment control plan is submitted to and approved by the Principal Certifying Authority. The plan shall comply with the guidelines set out in the NSW Department of Housing manual "Managing Urban Stormwater: Soils and Construction" certificate. Erosion and sediment control works shall be implemented in accordance with the erosion and sediment control plan.

Reason: To preserve and enhance the natural environment.

16. Tree protection fencing

To preserve the following tree/s, no work shall commence until the area beneath their canopy is fenced off at the specified radius from the trunk/s to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all demolition/building work on site.

Schedule	
Tree/Location	**Radius from trunk**
#7 *Camellia sasanqua* (Chinese Camellia) Adjacent to western site boundary	2.5m
#16 *Jacaranda mimosifolia* (Jacaranda) Centrally located within site frontage	5.0m
#25 *Brachychiton acerifolius* (Illawarra Flame Tree) Centrally located within site frontage	2.5m
#26 *Magnolia spp* (Magnolia) Centrally located adjacent to site frontage	2.5m
#40 *Franklinia axillaris* (Gordonia) Centrally located adjacent to site frontage	3.5m
#49 *Ceratopetalum gummiferum* (NSW Christmas Bush) Centrally located adjacent to site frontage	2.0m

#50 *Pittosporum undulatum* (Native Daphne) Adjacent to northeast site corner	4.0m

Reason: To protect existing trees during the construction phase.

17. Tree protection fencing excluding structure

To preserve the following tree/s, no work shall commence until the area within the tree protection zone (TPZ) excluding that area of the approved (residential flat building and driveway) shall be fenced off for the specified radius from the trunk to prevent any activities, storage or the disposal of materials within the fenced area. The fence/s shall be maintained intact until the completion of all demolition/building work on site:

Schedule	
Tree/Location	**Radius in metres**
#14 *Liquidambar styraciflua* (Sweet Gum) Centrally located within site frontage	14.4m

Reason: To protect existing trees during the construction phase.

18. Tree protective fencing type galvanised mesh

The tree protection fencing shall be constructed of galvanised pipe at 2.4 metre spacing and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres in height prior to work commencing.

Reason: To protect existing trees during construction phase.

19. Tree protection signage

Prior to works commencing, tree protection signage is to be attached to each tree protection zone, displayed in a prominent position and the sign repeated at 10 metres intervals or closer where the fence changes direction. Each sign shall contain in a clearly legible form, the following information:

Tree protection zone.

- This fence has been installed to prevent damage to the trees and their growing environment both above and below ground and access is restricted.
- Any encroachment not previously approved within the tree protection zone shall be the subject of an arborist's report.
- The arborist's report shall provide proof that no other alternative is available.
- The Arborist's report shall be submitted to the Principal Certifying Authority for further consultation with Council.
- The name, address, and telephone number of the developer.

Reason: To protect existing trees during the construction phase.

20. Tree protection mulching

Prior to works commencing and throughout construction, the area of the tree protection zone is to be mulched to a depth of 100mm with composted organic material being 75% Eucalyptus leaf litter and 25% wood.

Reason: To protect existing trees during the construction phase.

21. Tree protection – avoiding soil compaction

To preserve the following tree/s and avoid soil compaction, no work shall commence until temporary measures to avoid soil compaction (eg rumble boards) within the tree protection zone (TPZ) of the following tree/s is/are installed as per AS4970-2009:

Schedule	
Tree/Location	**Radius from trunk**
#14 *Liquidambar styraciflua* (Sweet Gum) Centrally located within site frontage	14.4m

Reason: To protect existing trees during the construction phase.

22. Tree fencing inspection

Upon installation of the required tree protection measures, an inspection of the site by the Principal Certifying Authority is required to verify that tree protection measures comply with all relevant conditions.

Reason: To protect existing trees during the construction phase.

23. Construction waste management plan

Prior to the commencement of any works, the Principal Certifying Authority shall be satisfied that a waste management plan, prepared by a suitably qualified person, has been prepared in accordance with Council's DCP 40 – Construction and Demolition Waste Management.

The plan shall address all issues identified in DCP 40, including but not limited to: the estimated volume of waste and method for disposal for the construction and operation phases of the development.

Note: The plan shall be provided to the Certifying Authority.

Reason: To ensure appropriate management of construction waste.

24. Noise and vibration management plan

Prior to the commencement of any works, a noise and vibration management plan is to be prepared by a suitably qualified expert addressing the likely noise and vibration from demolition, excavation and construction of the proposed development and provided to the

Principal Certifying Authority. The management plan is to identify amelioration measures to achieve the best practice objectives of AS 2436-2010 and NSW Department of Environment and Climate Change Interim Construction Noise Guidelines. The report shall be prepared in consultation with any geotechnical report that itemises equipment to be used for excavation works.

The management plan shall address, but not be limited to, the following matters:

- identification of the specific activities that will be carried out and associated noise sources
- identification of all potentially affected sensitive receivers, including residences, churches, commercial premises, schools and properties containing noise sensitive equipment
- the construction noise objective specified in the conditions of this consent
- the construction vibration criteria specified in the conditions of this consent
- determination of appropriate noise and vibration objectives for each identified sensitive receiver
- noise and vibration monitoring, reporting and response procedures
- assessment of potential noise and vibration from the proposed demolition, excavation and construction activities, including noise from construction vehicles and any traffic diversions
- description of specific mitigation treatments, management methods and procedures that will be implemented to control noise and vibration during construction
- construction timetabling to minimise noise impacts including time and duration restrictions, respite periods and frequency
- procedures for notifying residents of construction activities that are likely to affect their amenity through noise and vibration
- contingency plans to be implemented in the event of non-compliances and/or noise complaints

Reason: To protect the amenity afforded to surrounding residents during the construction process.

25. CCTV report of existing Council pipe system near works

Prior to the commencement of any works on site, qualified practitioners must undertake a closed circuit television inspection and then report on the existing condition of the Council drainage pipeline traversing the subject property. The report must be provided to Council's, Development Engineer and is to include a copy of the video footage of the pipeline. A written acknowledgment from Council's Development Engineer (attesting to this condition being appropriately satisfied) shall be obtained and submitted to the Principal Certifying Authority prior to the commencement of any works on site.

Reason: To protect Council's infrastructure.

26. Support for Council roads, footpaths, drainage reserves

Council property adjoining the construction site must be fully supported at all times during

all excavation and construction works. Details of shoring, propping and anchoring of works adjoining Council property, prepared by a qualified structural engineer or geotechnical engineer, must be submitted to and approved by the Principal Certifying Authority (PCA), before the commencement of the works. A copy of these details must be forwarded to Council. Backfilling of excavations adjoining Council property or any void remaining at completion of construction between the building and Council property must be fully compacted prior to the completion of works.

Reason: To protect Council's infrastructure.

CONDITIONS TO BE SATISFIED PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE:

27. Acoustic assessment

An acoustic assessment is to be submitted to Council prior to the issue of a Construction Certificate demonstrating how the proposed development will comply with the Department of Planning's document titled "Development Near Rail Corridors and Busy Roads – Interim Guidelines.

Reason: To ensure the amenity of future occupants from rail noise.

28. Electrolysis risk assessment

Prior to the issue of a Construction Certificate the Applicant is to engage an Electrolysis Expert to prepare a report on the Electrolysis Risk to the development from stray currents. The Applicant must incorporate in the development all the measures recommended in the report to control that risk. A copy of the report is to be provided to the Principal Certifying Authority with the application for a Construction Certificate.

Reason: To protect the amenity of future occupants from stray currents.

29. Aerial operations

Prior to the issuing of a Construction Certificate the Applicant is to submit to RailCorp a plan showing all craneage and other aerial operations for the development and must comply with all RailCorp requirements. The Principal Certifying Authority shall not issue the Construction Certificate until written confirmation has been received from RailCorp confirming that this condition has been satisfied.

Reason: To ensure the use of machinery does not interfere with the rail corridor.

30. Lot consolidation

Prior to issue of the Construction Certificate the Applicant must consolidate the existing Torrens lots which will form the development site. Evidence of lot consolidation, in the form of a plan registered with Land and Property Information, must be submitted for approval of the Certifying Authority prior to issue of the Construction Certificate.

Reason: To ensure continuous structures will not be placed across separate titles.

31. Lighting plan

A lighting plan is to be submitted to the Principal Certifying Authority prior to the issue of a Construction Certificate. The plan should identify safely lit pedestrian paths through the development.

Reason: To ensure the safe access of residents.

32. Design changes

Prior to the issue of a Construction Certificate the following design changes shall be made:

- Within Units 31, 43, 34 and 46 the stove shall be moved from in front of the stair to the side wall so that the range hood over is not in the cross ventilation path.
- The kitchen windows associated with Units 35, 46 and 47 are to be deleted.
- The living room window of Unit 13, located adjacent to the southern entry, shall be deleted and the window associated with the study should have an increased sill height to 1.6m above the FFL
- Planter boxes are to be provided along the perimeter of the building at penthouse level as marked in red on plan Penthouse SK-08 Revision D, prepared by Mackenzie Architects and dated 2012.03.14. The planter boxes are to be in accordance with the approved plan Penthouse Planters LPDA 11 – 67/4C prepared by Conzept Landscape Architects and dated March 2012
- The front fence shall have a maximum height of 1.2 metres and shall be constructed of lightweight materials such as palisades or timber and not masonry. Landscaping is to be provided along the front boundary in front of the fence.

Amended plans and specifications are to be submitted to the Principal Certifying Authority.

Reason: To protect the residential amenity of occupants and maintain streetscape character.

33. Long service levy

In accordance with Section 109F(i) of the Environmental Planning and Assessment Act a Construction Certificate shall not be issued until any long service levy payable under Section 34 of the Building and Construction Industry Long Service Payments Act 1986 (or where such levy is payable by instalments, the first instalment of the levy) has been paid. Council is authorised to accept payment. Where payment has been made elsewhere, proof of payment is to be provided to Council.

Reason: Statutory requirement.

34. Builder's indemnity insurance

The applicant, builder, developer or person who does the work on this development, must arrange builder's indemnity insurance and submit the certificate of insurance in

accordance with the requirements of Part 6 of the Home Building Act 1989 to the Certifying Authority for endorsement of the plans accompanying the Construction Certificate.

It is the responsibility of the applicant, builder or developer to arrange the builder's indemnity insurance for residential building work over the value of $20,000. The builder's indemnity insurance does not apply to commercial or industrial building work or to residential work valued at less than $20,000, nor to work undertaken by persons holding an owner/builder's permit issued by the Department of Fair Trading (unless the owner/builder's property is sold within 7 years of the commencement of the work).

Reason: Statutory requirement.

35. Outdoor lighting

Prior to the issue of a Construction Certificate, the Certifying Authority shall be satisfied that all outdoor lighting will comply with AS/NZ1158.3: 1999 Pedestrian Area (Category P) Lighting and AS4282: 1997 Control of the Obtrusive Effects of Outdoor Lighting.

Note: Details demonstrating compliance with these requirements are to be submitted prior to the issue of a Construction Certificate.

Reason: To provide high quality external lighting for security without adverse affects on public amenity from excessive illumination levels.

36. Air drying facilities

Prior to the issue of the Construction Certificate, the Certifying Authority shall be satisfied that a common open space area dedicated for open air drying of clothes is provided. This area is to be located at ground level behind the building line and in a position not visible from the public domain.

In lieu of the above, written confirmation that all units will be provided with internal clothes drying facilities prior to the Occupation Certificate is to be submitted to the Certifying Authority prior to the issue of the Construction Certificate.

Reason: Amenity & energy efficiency.

37. External service pipes and the like prohibited

Proposed water pipes, waste pipes, stack work, duct work, mechanical ventilation plant and the like must be located within the building. Details confirming compliance with this condition must be shown on construction certificate plans and detailed with construction certificate specifications. Required external vents or vent pipes on the roof or above the eaves must be shown on construction certificate plans and detailed with construction certificate specifications. External vents or roof vent pipes must not be visible from any place unless detailed upon development consent plans. Where there is any proposal to fit external service pipes or the like this must be detailed in an amended development (S96) application and submitted to Council for determination.

Vent pipes required by Sydney Water must not be placed on the front elevation of the building or front roof elevation. The applicant, owner and builder must protect the appearance of the building from the public place and the appearance of the streetscape by elimination of all external services excluding vent pipes required by Sydney Water and those detailed upon development consent plans.

Reason: To protect the streetscape and the integrity of the approved development.

38. Access for people with disabilities (residential)

Prior to the issue of the Construction Certificate, the Certifying Authority shall be satisfied that access for people with disabilities to and from and between the public domain, residential units and all common open space areas is provided. Consideration must be given to the means of dignified and equitable access.

Compliant access provisions for people with disabilities shall be clearly shown on the plans submitted with the Construction Certificate. All details shall be provided to the Principal Certifying Authority prior to the issue of the Construction Certificate. All details shall be prepared in consideration of the Disability Discrimination Act, and the relevant provisions of AS1428.1, AS1428.2, AS1428.4 and AS 1735.12.

Reason: To ensure the provision of equitable and dignified access for all people in accordance with disability discrimination legislation and relevant Australian Standards.

39. Adaptable units

Prior to the issue of the Construction Certificate, the Certifying Authority shall be satisfied that the nominated adaptable units within the development application, 23, 26, 36, 39, 49 and 50, are designed as adaptable housing in accordance with the provisions of Australian Standard AS4299-1995: Adaptable Housing.

Note: Evidence from an appropriately qualified professional demonstrating compliance with this control is to be submitted to and approved by the Certifying Authority prior to the issue of the Construction Certificate.

Reason: Disabled access & amenity.

40. Stormwater management plan

Prior to issue of the Construction Certificate, the applicant must submit, for approval by the Principal Certifying Authority, scale construction plans and specifications in relation to the stormwater management and disposal system for the development. The plan(s) **must be based on Northrop Drawings DA3.01/2, DA3.02/2, DA3.03/7, DA4.01/2 and DA4.02/3** and must include the following detail:

- exact location and reduced level of discharge point to the public drainage system
- Layout of the property drainage system components, including but not limited to (as required) gutters, downpipes, spreaders, pits, swales, kerbs, cut-off and intercepting

drainage structures, subsoil drainage, flushing facilities and all ancillary stormwater plumbing - all designed for a 235mm/hour rainfall intensity for a duration of five (5) minutes (1:50 year storm recurrence)

- location(s), dimensions and specifications for the required rainwater storage and reuse tanks and systems and where proprietary products are to be used, manufacturer specifications or equivalent shall be provided
- specifications for reticulated pumping facilities (including pump type and manufacturer specifications) and ancillary plumbing to fully utilise rainwater in accordance with Ku-ring-gai Council Development Control Plan 47 and/or BASIX commitments
- details of the required on-site detention tanks required by Ku-ring-gai Water Management DCP 47, including dimensions, materials, locations, orifice and discharge control pit details as required (refer Chapter 6 and Appendices 2, 3 and 5 of DCP 47 for volume, PSD and design requirements)
- the required basement stormwater pump-out system is to cater for driveway runoff and subsoil drainage (refer appendix 7.1.1 of Development Control Plan 47 for design)

The above construction drawings and specifications are to be prepared by a qualified and experienced civil/hydraulic engineer in accordance with Council's Water Management Development Control Plan 47, Australian Standards 3500.2 and 3500.3 - Plumbing and Drainage Code and the Building Code of Australia.

Reason: To protect the environment.

41. Paving near trees

Prior to the issue of the Construction Certificate, the Principal Certifying Authority shall be satisfied that paving works within the specified radius of the trunk/s of the following tree/s will be of a type and construction to ensure that existing water infiltration and gaseous exchange to the tree/s root system is maintained:

Schedule	
Tree/Location	**Radius from trunk**
#14 *Liquidambar styraciflua* (Sweet Gum) Centrally located within site frontage	7.0m on southern side 9.0m on western side 14.4m elsewhere

Note: Details of the paving prepared by a suitably qualified professional shall be submitted to the Principal Certifying Authority.

Reason: To protect existing trees.

42. Noise from plant in residential zone

Where any form of mechanical ventilation equipment or other noise generating plant is proposed as part of the development, prior to the issue of the Construction Certificate the Certifying Authority, shall be satisfied that the operation of an individual piece of equipment or operation of equipment in combination will not exceed more than 5dB(A) above the

background level during the day when measured at the site's boundaries and shall not exceed the background level at night (10.00pm –6.00 am) when measured at the boundary of the site.

C1. Note: A certificate from an appropriately qualified acoustic engineer is to be submitted with the Construction Certificate, certifying that all mechanical ventilation equipment or other noise generating plant in isolation or in combination with other plant will comply with the above requirements.

Reason: To comply with best practice standards for residential acoustic amenity.

43. Location of plant (residential flat buildings)

Prior to the issue of the Construction Certificate, the Certifying Authority shall be satisfied that all plant and equipment (including but not limited to air conditioning equipment) is located within the basement.

C1. Note: Architectural plans identifying the location of all plant and equipment shall be provided to the Certifying Authority.

Reason: To minimise impact on surrounding properties, improved visual appearance and amenity for locality.

44. Driveway crossing levels

Prior to issue of the Construction Certificate, driveway and associated footpath levels for any new, reconstructed or extended sections of driveway crossings between the property boundary and road alignment must be obtained from Ku-ring-gai Council. Such levels are only able to be issued by Council under the Roads Act 1993. All footpath crossings, laybacks and driveways are to be constructed according to Council's specifications "Construction of Gutter Crossings and Footpath Crossings".

Specifications are issued with alignment levels after completing the necessary application form at Customer Services and payment of the assessment fee. When completing the request for driveway levels application from Council, the applicant must attach a copy of the relevant development application drawing which indicates the position and proposed level of the proposed driveway at the boundary alignment.

This development consent is for works wholly within the property. Development consent does not imply approval of footpath or driveway levels, materials or location within the road reserve, regardless of whether this information is shown on the development application plans. The grading of such footpaths or driveways outside the property shall comply with Council's standard requirements. The suitability of the grade of such paths or driveways inside the property is the sole responsibility of the applicant and the required alignment levels fixed by Council may impact upon these levels.

The construction of footpaths and driveways outside the property in materials other than those approved by Council is not permitted.

Reason: To provide suitable vehicular access without disruption to pedestrian and vehicular traffic.

45. Driveway grades – basement carparks

Prior to the issue of the Construction Certificate, longitudinal driveway sections are to be prepared by a qualified civil/traffic engineer and be submitted for to and approved by the Certifying Authority. These profiles are to be at 1:100 scale along both edges of the proposed driveway, starting from the centreline of the frontage street carriageway to the proposed basement floor level. The traffic engineer shall provide specific written certification on the plans that:

- vehicular access can be obtained using grades of 20% (1 in 5) maximum and
- all changes in grade (transitions) comply with Australian Standard 2890.1 –"Off-street car parking" (refer clause 2.5.3) to prevent the scraping of the underside of vehicles. **However the length of the 5% grade section just inside the boundary may be reduced to less than 6 metres as outlined in the letter report from Varga Traffic Planning dated 8 May 2012.**

If a new driveway crossing is proposed, the longitudinal sections must incorporate the driveway crossing levels as issued by Council upon prior application.

Reason: To provide suitable vehicular access without disruption to pedestrian and vehicular traffic.

46. Basement car parking details

Prior to issue of the Construction Certificate, certified parking layout plan(s) to scale showing all aspects of the vehicle access and accommodation arrangements must be submitted to and approved by the Certifying Authority. A qualified civil/traffic engineer must review the proposed vehicle access and accommodation layout and provide written certification on the plans that:

- all parking space dimensions, driveway and aisle widths, driveway grades, transitions, circulation ramps, blind aisle situations and other trafficked areas comply with Australian Standard 2890.1 – 2004 "Off-street car parking" **with the exception of the 5% section of the entry driveway just inside the property boundary, which may have a shorter length than 6 metres, as outlined in Varga Traffic Planning letter dated 8 May 2012.**
- **The total number of visitor spaces is to be 15. This is to be clearly shown on the Construction Certificate plans.**
- a clear height clearance of **2.6 metres** (required under DCP40 for waste collection trucks) is provided over the designated garbage collection truck manoeuvring areas within the basement
- no doors or gates are provided in the access driveways to the basement carpark which would prevent unrestricted access for internal garbage collection at any time from the basement garbage storage and collection area
- the vehicle access and accommodation arrangements are to be constructed and marked in accordance with the certified plans

Reason: To ensure that parking spaces are in accordance with the approved development.

47. Car parking allocation

Car parking within the development shall be allocated in the following way:

Resident car spaces	57
Visitor spaces	15
Total spaces	71

Each adaptable dwelling must be provided with car parking complying with the dimensional and location requirements of AS2890.1 – parking spaces for people with disabilities.

At least one visitor space shall also comply with the dimensional and location requirements of AS2890.1 – parking spaces for people with disabilities.

Consideration must be given to the means of access from disabled car parking spaces to other areas within the building and to footpath and roads and shall be clearly shown on the plans submitted with the Construction Certificate.

Carparking allocation to individual apartment shall be in accordance with what is show on drawings Carpark 02 SK-02 Revision B and Carpark 01 SK-01 Revision C prepared by Mackenzie Architects and dated 2011.11.14. The allocation shall not be altered by future strata subdivision of the building.

Reason: To ensure equity of access and appropriate facilities are available for people with disabilities in accordance with federal legislation.

48. Number of bicycle spaces

The basement car park shall be adapted to provide 12 bicycle spaces in accordance with DCP 55. The bicycle parking spaces shall be designed in accordance with AS2890.3. Details shall be submitted to the satisfaction of the Certifying Authority prior to the issue of a Construction Certificate.

Reason: To provide alternative modes of transport to and from the site.

49. Design of works in public road (Roads Act approval)

Prior to issue of the Construction Certificate, the Certifying Authority shall be satisfied that engineering plans and specifications prepared by a qualified consulting engineer have been approved by Council's Development Engineer. The plans to be assessed must be to a detail suitable for construction issue purposes and must detail the following infrastructure works required in Culworth Avenue:

- Installation of a section of 375mm diameter pipe from the site to connect to Council's

kerb inlet pit.

Development consent does not give approval to these works in the road reserve. The applicant must obtain a separate approval under sections 138 and 139 of The Roads Act 1993 for the works in the road reserve required as part of the development. The Construction Certificate must not be issued, and these works must not proceed until Council has issued a formal written approval under the Roads Act 1993.

The required plans and specifications are to be designed in accordance with the General Specification for the Construction of Road and Drainage Works in Ku-ring-gai Council, dated November 2004. The drawings must detail existing utility services and trees affected by the works, erosion control requirements and traffic management requirements during the course of works. Survey must be undertaken as required. Traffic management is to be certified on the drawings as being in accordance with the documents SAA HB81.1 – 1996 – Field Guide for Traffic Control at Works on Roads – Part 1 and RTA Traffic Control at Work Sites (1998). Construction of the works must proceed only in accordance with any conditions attached to the Roads Act approval issued by Council.

A minimum of three (3) weeks will be required for Council to assess the Roads Act application. Early submission of the Roads Act application is recommended to avoid delays in obtaining a Construction Certificate. An engineering assessment and inspection fee (set out in Council's adopted fees and charges) is payable and Council will withhold any consent and approved plans until full payment of the correct fees. Plans and specifications must be marked to the attention of Council's Development Engineers. In addition, a copy of this condition must be provided, together with a covering letter stating the full address of the property and the accompanying DA number.

Reason: To ensure that the plans are suitable for construction purposes.

50. Energy Australia requirements

Prior to issue of the Construction Certificate, the applicant must contact Energy Australia regarding power supply for the subject development. A written response detailing the full requirements of Energy Australia (including any need for underground cabling, substations or similar within or in the vicinity the development) shall be submitted to the Principal Certifying Authority for approval prior to issue of the Construction Certificate.

Any structures or other requirements of Energy Australia shall be indicated on the plans issued with the Construction Certificate, to the satisfaction of the Principal Certifying Authority and Energy Australia. The requirements of Energy Australia must be met in full prior to issue of the Occupation Certificate.

Reason: To ensure compliance with the requirements of Energy Australia.

51. Utility provider requirements

Prior to issue of the Construction Certificate, the applicant must make contact with all relevant utility providers whose services will be impacted upon by the development. A written copy of the requirements of each provider, as determined necessary by the

Certifying Authority, must be obtained. All utility services or appropriate conduits for the same must be provided by the developer in accordance with the specifications of the utility providers.

Reason: To ensure compliance with the requirements of relevant utility providers.

52. Underground services

All electrical services (existing and proposed) shall be undergrounded from the proposed building on the site to the appropriate power pole(s) or other connection point. Undergrounding of services must not disturb the root system of existing trees and shall be undertaken in accordance with the requirements of the relevant service provided. Documentary evidence that the relevant service provider has been consulted and that their requirements have been met are to be provided to the Certifying Authority prior to the issue of the Construction Certificate. All electrical and telephone services to the subject property must be placed underground and any redundant poles are to be removed at the expense of the applicant.

Reason: To provide infrastructure that facilitates the future improvement of the streetscape by relocation of overhead lines below ground.

CONDITIONS TO BE SATISFIED PRIOR TO THE ISSUE OF THE CONSTRUCTION CERTIFICATE OR PRIOR TO DEMOLITION, EXCAVATION OR CONSTRUCTION (WHICHEVER COMES FIRST):

53. Infrastructure restorations fee

To ensure that damage to Council Property as a result of construction activity is rectified in a timely matter:

a) All work or activity taken in furtherance of the development the subject of this approval must be undertaken in a manner to avoid damage to Council Property and must not jeopardise the safety of any person using or occupying the adjacent public areas.

b) The applicant, builder, developer or any person acting in reliance on this approval shall be responsible for making good any damage to Council Property, and for the removal from Council Property of any waste bin, building materials, sediment, silt, or any other material or article.

c) The Infrastructure Restoration Fee must be paid to the Council by the applicant prior to both the issue of the Construction Certificate and the commencement of any earthworks or construction.

d) In consideration of payment of the Infrastructure Restorations Fee, Council will undertake such inspections of Council Property as Council considers necessary and also undertake, on behalf of the applicant, such restoration work to Council Property, if any, that Council considers necessary as a consequence of the development. The provision of such restoration work by the Council does not absolve any person of the

responsibilities contained in (a) to (b) above. Restoration work to be undertaken by the Council referred to in this condition is limited to work that can be undertaken by Council at a cost of not more than the Infrastructure Restorations Fee payable pursuant to this condition.

e) In this condition:

"Council Property" includes any road, footway, footpath paving, kerbing, guttering, crossings, street furniture, seats, letter bins, trees, shrubs, lawns, mounds, bushland, and similar structures or features on any road or public road within the meaning of the Local Government Act 1993 (NSW) or any public place; and

"Infrastructure Restoration Fee" means the Infrastructure Restorations Fee calculated in accordance with the Schedule of Fees & Charges adopted by Council as at the date of payment and the cost of any inspections required by the Council of Council Property associated with this condition.

Reason: To maintain public infrastructure.

54. Section 94 Contributions - Centres. (For DAs determined on or after 19 December 2010)

This development is subject to a development contribution calculated in accordance with Ku-ring-gai Contributions Plan 2010, being a s94 Contributions Plan in effect under the Environmental Planning and Assessment Act, as follows:

Key Community Infrastructure	**Amount**
Local parks and local sporting facilities	$535,545.45
Local recreation and cultural facilities; Local social facilities	$89,901.04
Local roads, local bus facilities & local drainage facilities (new roads and road modifications)	$207,978.21
Local roads, local bus facilities & local drainage facilities (townscape, transport & pedestrian facilities)	$321,291.45
Total:	**$1,154,716.15**

The contribution shall be paid to Council prior to the issue of any Construction Certificate, Linen Plan, Certificate of Subdivision or Occupation Certificate whichever comes first in accordance with Ku-ring-gai Contributions Plan 2010.

The contributions specified above are subject to indexation and will continue to be indexed to reflect changes in the consumer price index and housing price index until they are paid in accordance with Ku-ring-gai Contributions Plan 2010 to reflect changes in the consumer price index and housing price index. Prior to payment, please contact Council directly to verify the current payable contributions.

Ku-ring-gai Contributions Plan 2010 may be viewed at www.kmc.nsw.gov.au and at the Council Chambers.

Reason: To ensure the provision, extension or augmentation of the Key Community Infrastructure identified in Ku-ring-gai Contributions Plan 2010 that will, or is likely to be, required as a consequence of the development.

CONDITIONS TO BE SATISFIED DURING THE DEMOLITION, EXCAVATION AND CONSTRUCTION PHASES:

55. Prescribed conditions

The applicant shall comply with any relevant prescribed conditions of development consent under clause 98 of the Environmental Planning and Assessment Regulation. For the purposes of section 80A (11) of the Environmental Planning and Assessment Act, the following conditions are prescribed in relation to a development consent for development that involves any building work:

- The work must be carried out in accordance with the requirements of the Building Code of Australia
- In the case of residential building work for which the Home Building Act 1989 requires there to be a contract of insurance in force in accordance with Part 6 of that Act, that such a contract of insurance is in force before any works commence.

Reason: Statutory requirement.

56. Hours of work

Demolition, excavation, construction work and deliveries of building material and equipment must not take place outside the hours of 7.00am to 5.00pm Monday to Friday and 8.00am to 12 noon Saturday. No work and no deliveries are to take place on Sundays and public holidays.

Excavation or removal of any materials using machinery of any kind, including compressors and jack hammers, must be limited to between 7.30am and 5.00pm Monday to Friday, with a respite break of 45 minutes between 12 noon 1.00pm.

Where it is necessary for works to occur outside of these hours (ie) placement of concrete for large floor areas on large residential/commercial developments or where building processes require the use of oversized trucks and/or cranes that are restricted by the RTA from travelling during daylight hours to deliver, erect or remove machinery, tower cranes, pre-cast panels, beams, tanks or service equipment to or from the site, approval for such activities will be subject to the issue of an "outside of hours works permit" from Council as well as notification of the surrounding properties likely to be affected by the proposed works.

Note: Failure to obtain a permit to work outside of the approved hours will result in on the spot fines being issued.

Reason: To ensure reasonable standards of amenity for occupants of neighbouring

properties.

57. Approved plans to be on site

A copy of all approved and certified plans, specifications and documents incorporating conditions of consent and certification (including the Construction Certificate if required for the work) shall be kept on site at all times during the demolition, excavation and construction phases and must be readily available to any officer of Council or the Principal Certifying Authority.

Reason: To ensure that the development is in accordance with the determination.

58. Engineering fees

For the purpose of any development related inspections by Ku-ring-gai Council engineers, the corresponding fees set out in Councils adopted Schedule of Fees and Charges are payable to Council. A re-inspection fee per visit may be charged where work is unprepared at the requested time of inspection, or where remedial work is unsatisfactory and a further inspection is required. Engineering fees must be paid in full prior to any final consent from Council.

Reason: To protect public infrastructure.

59. Statement of compliance with Australian Standards

The demolition work shall comply with the provisions of Australian Standard AS2601: 2001 The Demolition of Structures. The work plans required by AS2601: 2001 shall be accompanied by a written statement from a suitably qualified person that the proposal contained in the work plan comply with the safety requirements of the Standard. The work plan and the statement of compliance shall be submitted to the satisfaction of the Principal Certifying Authority prior to the commencement of any works.

Reason: To ensure compliance with the Australian Standards.

60. Construction noise

During excavation, demolition and construction phases, noise generated from the site shall be controlled in accordance with the recommendations of the approved noise and vibration management plan.

Reason: To ensure reasonable standards of amenity to neighbouring properties.

61. Site notice

A site notice shall be erected on the site prior to any work commencing and shall be displayed throughout the works period.

The site notice must:

- be prominently displayed at the boundaries of the site for the purposes of informing the public that unauthorised entry to the site is not permitted
- display project details including, but not limited to the details of the builder, Principal Certifying Authority and structural engineer
- be durable and weatherproof
- display the approved hours of work, the name of the site/project manager, the responsible managing company (if any), its address and 24 hour contact phone number for any inquiries, including construction/noise complaint are to be displayed on the site notice
- be mounted at eye level on the perimeter hoardings/fencing and is to state that unauthorised entry to the site is not permitted

Reason: To ensure public safety and public information.

62. Dust control

During excavation, demolition and construction, adequate measures shall be taken to prevent dust from affecting the amenity of the neighbourhood. The following measures must be adopted:

- physical barriers shall be erected at right angles to the prevailing wind direction or shall be placed around or over dust sources to prevent wind or activity from generating dust
- earthworks and scheduling activities shall be managed to coincide with the next stage of development to minimise the amount of time the site is left cut or exposed
- all materials shall be stored or stockpiled at the best locations
- the ground surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs
- all vehicles carrying spoil or rubble to or from the site shall at all times be covered to prevent the escape of dust
- all equipment wheels shall be washed before exiting the site using manual or automated sprayers and drive-through washing bays
- gates shall be closed between vehicle movements and shall be fitted with shade cloth
- cleaning of footpaths and roadways shall be carried out daily

Reason: To protect the environment and amenity of surrounding properties.

63. Post-construction dilapidation report

The applicant shall engage a suitably qualified person to prepare a post construction dilapidation report at the completion of the construction works. This report is to ascertain whether the construction works created any structural damage to adjoining buildings, infrastructure and roads. The report is to be submitted to the Principal Certifying Authority. In ascertaining whether adverse structural damage has occurred to adjoining buildings, infrastructure and roads, the Principal Certifying Authority must:

- compare the post-construction dilapidation report with the pre-construction dilapidation report

- have written confirmation from the relevant authority that there is no adverse structural damage to their infrastructure and roads.

A copy of this report is to be forwarded to Council at the completion of the construction works.

Reason: Management of records.

64. Further geotechnical input

The geotechnical and hydro-geological works implementation, inspection, testing and monitoring program for the excavation and construction works must be in accordance with the report by Jeffery and Katauskas dated 3 April 2008 and the report submitted prior to commencement of works as required by another condition of this consent. Over the course of the works, a qualified geotechnical/hydro-geological engineer must complete the following:

- further geotechnical investigations and testing recommended in the above report(s) and as determined necessary
- further monitoring and inspection at the hold points recommended in the above report(s) and as determined necessary
- written report(s) including certification(s) of the geotechnical inspection, testing and monitoring programs

Reason: To ensure the safety and protection of property.

65. Compliance with submitted geotechnical report

A contractor with specialist excavation experience must undertake the excavations for the development and a suitably qualified and consulting geotechnical engineer must oversee excavation.

Geotechnical aspects of the development work, namely:

- appropriate excavation method and vibration control
- support and retention of excavated faces
- hydro-geological considerations

must be undertaken in accordance with the recommendations of the geotechnical report prepared by Jeffery and Katauskas dated 3 April 2008 and the report submitted prior to commencement of works as required by another condition of this consent. Approval must be obtained from all affected property owners, including Ku-ring-gai Council, where rock anchors (both temporary and permanent) are proposed below adjoining property(ies).

Reason: To ensure the safety and protection of property.

66. Use of road or footpath

During excavation, demolition and construction phases, no building materials, plant or the like are to be stored on the road or footpath without written approval being obtained from Council beforehand. The pathway shall be kept in a clean, tidy and safe condition during building operations. Council reserves the right, without notice, to rectify any such breach and to charge the cost against the applicant/owner/builder, as the case may be.

Reason: To ensure safety and amenity of the area.

67. Guarding excavations

All excavation, demolition and construction works shall be properly guarded and protected with hoardings or fencing to prevent them from being dangerous to life and property.

Reason: To ensure public safety.

68. Toilet facilities

During excavation, demolition and construction phases, toilet facilities are to be provided, on the work site, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.

Reason: Statutory requirement.

69. Protection of public places

If the work involved in the erection, demolition or construction of the development is likely to cause pedestrian or vehicular traffic in a public place to be obstructed or rendered inconvenient, or building involves the enclosure of a public place, a hoarding or fence must be erected between the work site and the public place.

If necessary, a hoarding is to be erected, sufficient to prevent any substance from, or in connection with, the work falling into the public place.

The work site must be kept lit between sunset and sunrise if it is likely to be hazardous to persons in the public place.

Any hoarding, fence or awning is to be removed when the work has been completed.

Reason: To protect public places.

70. Certification of footings & excavation adjacent to easements

During demolition and construction, the Principal Certifying Authority shall be satisfied that:

- footings, and any required permanent excavation or drainage easement support, are constructed in accordance with the conditions of this consent relating to footings and excavation adjacent to drainage easements and/or drainage pipes
- footings allow for complete future excavation over the full width of the easement to a

depth of the invert of the pipe, without the need to support or underpin the subject structure

Reason: Safety.

71. Recycling of building material (general)

During demolition and construction, the Principal Certifying Authority shall be satisfied that building materials suitable for recycling have been forwarded to an appropriate registered business dealing in recycling of materials. Materials to be recycled must be kept in good order.

Reason: To facilitate recycling of materials.

72. Construction signage

All construction signs must comply with the following requirements:

- are not to cover any mechanical ventilation inlet or outlet vent
- are not illuminated, self-illuminated or flashing at any time
- are located wholly within a property where construction is being undertaken
- refer only to the business(es) undertaking the construction and/or the site at which the construction is being undertaken
- are restricted to one such sign per property
- do not exceed 2.5m^2
- are removed within 14 days of the completion of all construction works

Reason: To ensure compliance with Council's controls regarding signage.

73. Approval for rock anchors

Approval is to be obtained from the property owner for any anchors proposed beneath adjoining private property. If such approval cannot be obtained, then the excavated faces are to be shored or propped in accordance with the recommendations of the geotechnical and structural engineers.

Reason: To ensure the ongoing safety and protection of property.

74. Maintenance period for works in public road

A maintenance period of six (6) months applies to all work in the public road reserve carried out by the applicant - after the works have been completed to the satisfaction of Ku-ring-gai Council. In that maintenance period, the applicant shall be liable for any section of the public infrastructure work which fails to perform in the designed manner, or as would reasonably be expected under the operating conditions. The maintenance period shall commence once the applicant receives a formal letter from Council stating that the works involving public infrastructure have been completed satisfactorily.

Reason: To protect public infrastructure.

75. Road reserve safety

All public footways and roadways fronting and adjacent to the site must be maintained in a safe condition at all times during the course of the development works. Construction materials must not be stored in the road reserve. A safe pedestrian circulation route and a pavement/route free of trip hazards must be maintained at all times on or adjacent to any public access ways fronting the construction site. Where public infrastructure is damaged, repair works must be carried out when and as directed by Council officers. Where pedestrian circulation is diverted on to the roadway or verge areas, clear directional signage and protective barricades must be installed in accordance with AS1742-3 (1996) "Traffic Control Devices for Work on Roads". If pedestrian circulation is not satisfactorily maintained across the site frontage, and action is not taken promptly to rectify the defects, Council may undertake proceedings to stop work.

Reason: To ensure safe public footways and roadways during construction.

76. Road repairs necessitated by excavation and construction works

It is highly likely that damage will be caused to the roadway at or near the subject site as a result of the construction (or demolition or excavation) works. The applicant, owner and builder (and demolition or excavation contractor as appropriate) will be held responsible for repair of such damage, regardless of the Infrastructure Restorations Fee paid (this fee is to cover wear and tear on Council's wider road network due to heavy vehicle traffic, not actual major damage).

Section 102(1) of the Roads Act states "A person who causes damage to a public road is liable to pay to the appropriate roads authority the cost incurred by that authority in making good the damage."

Council will notify when road repairs are needed, and if they are not carried out within 48 hours, then Council will proceed with the repairs, and will invoice the applicant, owner and relevant contractor for the balance.

Reason: To protect public infrastructure.

77. Services

Where required, the adjustment or inclusion of any new utility service facilities must be carried out by the applicant and in accordance with the requirements of the relevant utility authority. These works shall be at no cost to Council. It is the applicants' full responsibility to make contact with the relevant utility authorities to ascertain the impacts of the proposal upon utility services (including water, phone, gas and the like). Council accepts no responsibility for any matter arising from its approval to this application involving any influence upon utility services provided by another authority.

Reason: Provision of utility services.

78. T**emporary rock anchors**

If the use of temporary rock anchors extending into the road reserve is proposed, then approval must be obtained from Council and/or the Roads and Traffic Authority in accordance with Section 138 of the Roads Act 1993. The Applicant is to submit details of all the work that is to be considered, and the works are not to commence until approval has been granted. The designs are to include details of the following:

- How the temporary rock anchors will be left in a way that they will not harm or interfere with any future excavation in the public road
- That the locations of the rock anchors are registered with Dial Before You Dig
- That approval of all utility authorities likely to use the public road has been obtained. All temporary rock anchors are located outside the allocations for the various utilities as adopted by the Streets Opening Conference.
- That any remaining de-stressed rock anchors are sufficiently isolated from the structure that they cannot damage the structure if pulled during future excavations or work in the public road.
- That signs will be placed and maintained on the building stating that de-stressed rock anchors remain in the public road and include a contact number for the building manager. The signs are to be at least 600mm x 450mm with lettering on the signs is to be no less than 75mm high. The signs are to be at not more than 60m spacing. At least one sign must be visible from all locations on the footpath outside the property. The wording on the signs is to be submitted to Council's Director Technical Services for approval before any signs are installed.

Permanent rock anchors are not to be used where any part of the anchor extends outside the development site into public areas or road reserves.

All works in the public road are to be carried out in accordance with the Conditions of Construction issued with any approval of works granted under Section 138 of the Roads Act 1993.

Reason: To ensure the ongoing safety and protection of property.

79. Footings and excavation near easements

Footings to be located adjacent to easements and/or Council drainage pipes shall be sited and constructed so that all footings are located outside of easement boundaries.

The applicant shall refer to Council Plan 80-011 concerning such works. Footings must extend to at least the depth of the invert of the adjacent pipe within the easement unless the footings are to be placed on competent bedrock. If there is no pipe within the easement, a future depth of pipe of 1.6 metres is to be assumed for future pipe placement. If there is a Council pipe without an easement a future easement width of 1.8 metres centred on the pipeline is to be adopted.

If permanent excavation is proposed beneath the obvert of the pipe within the easement, suitable means to protect the excavation from seepage or other water flow from the pipe and trench and means to retain the easement and associated pipe cover are to be provided at no cost to Council. Council accepts no liability for such seepage or water flows

now or at any time in the future resulting from such excavation.

Reason: To ensure structural stability.

80. Structures to be clear of drainage easements

During all phases of demolition, excavation and construction, it is the full responsibility of the applicant and their contractors to:

- ascertain the exact location of the Council drainage pipe traversing the site in the vicinity of the works
- take full measures to protect the in-ground Council drainage system
- ensure dedicated overland flow paths are satisfactorily maintained through the site

Drainage pipes can be damaged through applying excessive loading (such as construction machinery, material storage and the like). All proposed structures and construction activities are to be sited fully clear of Council drainage pipes, drainage easements, watercourses and trunk overland flow paths on the site. Trunk or dedicated overland flow paths must not be impeded or diverted by fill or structures unless otherwise approved.

If a Council drainage pipeline is uncovered during construction, all work is to cease and the Principal Certifying Authority and Council must be contacted immediately for advice. Any damage caused to a Council drainage system must be immediately repaired in full as directed and at no cost to Council.

Reason: To protect existing Council infrastructure and maintain over land flow paths.

81. Sydney Water Section 73 Compliance Certificate

The applicant must obtain a **Section 73 Compliance Certificate** under the *Sydney Water Act 1994*. An application must be made through an authorised Water Servicing CoOrdinator. The applicant is to refer to "Your Business" section of Sydney Water's web site at www.sydneywater.com.au then the "e-develop" icon or telephone 13 20 92. Following application a "Notice of Requirements" will detail water and sewer extensions to be built and charges to be paid. Please make early contact with the CoOrdinator, since building of water/sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design.

Reason: Statutory requirement.

82. Arborist's report

The tree/s to be retained shall be inspected, monitored and treated by a qualified Arborist during and after completion of development works to ensure their long term survival. Regular inspections and documentation from the Arborist to the Principal Certifying Authority is required at the following times or phases of work:

Schedule	
Tree/Location	**Time of inspection**

#7 *Camellia sasanqua* (Chinese Camellia) Adjacent to western site boundary #14 *Liquidambar styraciflua* (Sweet Gum) Centrally located within site frontage #16 *Jacaranda mimosifolia* (Jacaranda) Centrally located within site frontage #25 *Brachychiton acerifolius* (Illawarra Flame Tree) Centrally located within site frontage #26 *Magnolia spp* (Magnolia) Centrally located adjacent to site frontage #40 *Franklinia axillaris* (Gordonia) Centrally located adjacent to site frontage #49 *Ceratopetalum gummiferum* (NSW Christmas Bush) Centrally located adjacent to site frontage #50 *Pittosporum undulatum* (Native Daphne) Adjacent to northeast site corner	*Immediately prior to any works commencing on site. *Direct supervision of excavation works within the TPZ (TPZ = 12 x trunk diameter) of Tree 14. *At the completion of basement excavation works. *At four monthly intervals during development works. * At the completion of all development works prior to the issue of the Occupation Certificate.

Reason: To ensure protection of existing trees.

83. Trees on nature strip

Removal/pruning of the following tree/s from Council's nature strip shall be undertaken at no cost to Council by an experienced tree removal contractor/arborist holding public liability insurance amounting to a minimum cover of $20,000,000:

Tree/Species	**Location**
#15 *Jacaranda mimosifolia* (Jacaranda) #39 *Brachychiton acerifolius* (Flame Tree)	Culworth Ave nature strip

Reason: To ensure protection of existing trees.

84. Canopy/root pruning

Canopy and/or root pruning of the following tree/s which is necessary to accommodate the approved building works shall be undertaken by an experienced Arborist/Horticulturist, with a minimum qualification of an AQF 3 Arborist or the Horticulture Certificate. All pruning works shall be undertaken as specified in Australian Standard 4373-2007 – Pruning of Amenity Trees.

Schedule

Tree/Location	Tree works
#14 *Liquidambar styraciflua* (Sweet Gum) Centrally located within site frontage	Root and canopy pruning as required to accommodate the approved development works.

Reason: To protect the environment.

85. Treatment of tree roots

If tree roots are required to be severed for the purposes of constructing the approved works, they shall be cut cleanly by hand, by an experienced Arborist/Horticulturist with a minimum qualification of Horticulture Certificate or Tree Surgery Certificate. All pruning works shall be undertaken as specified in Australian Standard 4373-2007 – Pruning of Amenity Trees.

Reason: To protect existing trees.

86. Cutting of tree roots

No tree roots of 30mm or greater in diameter located within the specified radius of the trunk/s of the following tree/s shall be severed or injured in the process of any works during the construction period. All pruning works shall be undertaken as specified in Australian Standard 4373-2007 – Pruning of Amenity Trees:

Schedule	
Tree/Location	**Radius from trunk**
#7 *Camellia sasanqua* (Chinese Camellia) Adjacent to western site boundary	2.5m
#14 *Liquidambar styraciflua* (Sweet Gum) Centrally located within site frontage	7.0m on southern side 9.0m on western side 14.4m elsewhere
#16 *Jacaranda mimosifolia* (Jacaranda) Centrally located within site frontage	5.0m
#25 *Brachychiton acerifolius* (Illawarra Flame Tree) Centrally located within site frontage	2.5m
#26 *Magnolia spp* (Magnolia) Centrally located adjacent to site frontage	2.5m
#40 *Franklinia axillaris* (Gordonia) Centrally located adjacent to site frontage	3.5m
#49 *Ceratopetalum gummiferum* (NSW Christmas Bush) Centrally located adjacent to site frontage	2.0m
#50 *Pittosporum undulatum* (Native Daphne) Adjacent to northeast site corner	4.0m

Reason: To protect existing trees.

87. Approved tree works

Approval is given for the following works to be undertaken to trees on the site. All trees are to be clearly tagged and identified consistent with the arborist report and landscape plan/s prior to the removal or pruning of ANY tree.

Schedule	
Tree/Location	**Approved tree works**
#1 *Cupressus spp* (Cypress Pine) Adjacent to eastern site boundary	Removal
#2 *Cupressus spp* (Cypress Pine) Adjacent to eastern site boundary	Removal
#3 *Cupressus spp* (Cypress Pine) Adjacent to eastern site boundary	Removal
#4 *Cupressus spp* (Cypress Pine) Adjacent to eastern site boundary	Removal
#5 *Cupressus spp* (Cypress Pine) Adjacent to eastern site boundary	Removal
#6 *Brachychiton acerifolius* (Illawarra Flame Tree) Within building footprint	Removal
#8 *Olea longifolia* (Native Olive) Adjacent to western site boundary	Removal
#9 *Cedrus deodar* (Himalayan Cedar) Adjacent to eastern site boundary	Removal
#10 *Lophostemon confertus* (Brushbox) Adjacent to eastern site boundary	Removal
#11 *Lophostemon confertus* (Brushbox) Within building footprint	Removal
#12 *Lophostemon confertus* (Brushbox) Within building footprint	Removal
#15 *Jacaranda mimosifolia* (Jacaranda) Culworth Ave nature strip	Removal
#17 *Livistona australis* (Cabbage Tree Palm) Within the site frontage	Removal
#18 *Lophostemon confertus* (Brushbox) Within building footprint	Removal
#19 *Liquidambar styraciflua* (Sweet Gum) Centrally located on site	Removal
#20 *Prunus spp* (Ornamental Plum) Centrally located on site	Removal
#21 *Ligustrum spp* (Privet) Adjacent to northern site boundary	Removal
#23 *Magnolia grandiflora* (Bull Bay Magnolia)Adjacent to northern site boundary	Removal

#24 *Cupressus spp* (Cypress Pine) Adjacent to eastern site boundary	Removal
#33 *Citrus sinensis* (Orange Tree) Adjacent to southwest site corner	Removal
#34 *Livistona chinensis* (Chinese Fan Palm) Centrally located on site	Removal
#35 *Cotoneaster spp* (Cotoneaster) Adjacent to western site boundary	Removal
#36 *Lagerstroemia indica* (Crepe Myrtle) Adjacent to eastern site boundary	Removal
#37 *Cupressus spp* (Cypress Pine) Adjacent to eastern site boundary	Removal
#39 *Brachychiton acerifolius* (Illawarra Flame Tree) Culworth Ave nature strip	Removal
#41 *Franklinia axillaris* (Gordonia) Adjacent to eastern site boundary	Removal
#42 *Livistona australis* (Cabbage Tree Palm) Within building footprint	Removal
#43 *Ligustrum lucidum* (Privet) Within building footprint	Removal
#44 *Cotoneaster spp* (Cotoneaster) Within building footprint	Removal
#45 *Camellia japonica* (Japanese Camellia) Within building footprint	Removal
#46 *Cupressus sempervirens* (Italian Cypress) Within building footprint	Removal
#47 *Camellia japonica* (Japanese Camellia) Within building footprint	Removal
#48 *Camellia japonica* (Japanese Camellia) Within building footprint	Removal
#51 *Magnolia grandiflora* (Bull Bay Magnolia) Adjacent to northeast site corner	Removal
#52 *Michelia figo* (Port Wine Magnolia) Adjacent to northeast site corner	Removal
#53 *Camellia japonica* (Japanese Camellia) Within building footprint	Removal
#54 *Rondelitia amoena* (Rondeletia) Adjacent to northern site boundary	Removal
#58 *Nerium oleander* (Oleander) Adjacent to northern site boundary	Removal
#59 *Camellia japonica* (Japanese Camellia) Adjacent to northern site boundary	Removal
#60 *Camellia japonica* (Japanese Camellia) Adjacent to northern site boundary	Removal
#61 *Camellia japonica* (Japanese Camellia) Adjacent to northern site boundary	Removal
#62 *Camellia japonica* (Japanese Camellia) Adjacent to northern site boundary	Removal

#63 *Ulmus parvifolia* (Chinese Elm) Adjacent to northern site boundary	Removal
#64 *Livistona chinensis* (Chinese Fan Palm) Adjacent to northern site boundary	Removal
#65 *Livistona chinensis* (Chinese Fan Palm) Adjacent to northern site boundary	Removal
#66 *Ligustrum lucidum* (Privet) Centrally located on site	Removal
#67 *Ligustrum lucidum* (Privet) Centrally located on site	Removal
#68 *Cyathea cooperi* (Tree fern) Centrally located on site	Removal
#69 *Citrus sinensis* (Orange) Centrally located on site	Removal
#70 *Cyathea cooperi* (Tree Fern) Within building footprint	Removal
#72 *Camellia sasanqua* (Chinese Camellia) Adjacent to southern site boundary	Removal
#73 *Camellia reticulata* (Camellia) Adjacent to southern site boundary	Removal
#74 *Chamaecyparis obtusa* (Hinoki Cypress) Within building footprint	Removal
#75 *Chamaecyparis obtusa (*Hinoki Cypress) Within building footprint	Removal

Removal or pruning of any other tree on the site is not approved, excluding species exempt under Council's Tree Preservation Order.

Reason: To ensure that the development is in accordance with the determination.

88. Excavation near trees

No mechanical excavation shall be undertaken within the specified radius of the trunk/s of the following tree/s until root pruning by hand along the perimeter line of such works is completed:

Schedule	
Tree/Location	**Radius from trunk**
#14 *Liquidambar styraciflua* (Sweet Gum) Centrally located within site frontage	14.4m

Reason: To protect existing trees.

89. Hand excavation

All excavation within the specified radius of the trunk/s of the following tree/s shall be hand dug:

Schedule	
Tree/Location	**Radius from trunk**
#7 *Camellia sasanqua* (Chinese Camellia) Adjacent to western site boundary	2.5m
#14 *Liquidambar styraciflua* (Sweet Gum) Centrally located within site frontage	7.0m on southern side 9.0m on western side 14.4m elsewhere
#16 *Jacaranda mimosifolia* (Jacaranda) Centrally located within site frontage	5.0m
#25 *Brachychiton acerifolius* (Illawarra Flame Tree) Centrally located within site frontage	2.5m
#26 *Magnolia spp* (Magnolia) Centrally located adjacent to site frontage	2.5m
#40 *Franklinia axillaris* (Gordonia) Centrally located adjacent to site frontage	3.5m
#49 *Ceratopetalum gummiferum* (NSW Christmas Bush) Centrally located adjacent to site frontage	2.0m
#50 *Pittosporum undulatum* (Native Daphne) Adjacent to northeast site corner	4.0m

Reason: To protect existing trees.

90. No storage of materials beneath trees

No activities, storage or disposal of materials shall take place beneath the canopy of any tree protected under Council's Tree Preservation Order at any time.

Reason: To protect existing trees.

91. Tree planting on nature strip

The following tree species shall be planted, at no cost to Council, in the nature strip fronting the property along (enter street). The tree/s used shall be a minimum 75 litres container size specimen/s:

Schedule		
Tree/Species	**Quantity**	**Location**
J*acaranda mimosifolia* (Jacaranda)	8	Evenly spaced as avenue planting within the Culworth Ave nature strip

Reason: To provide appropriate landscaping within the streetscape.

92. Tree removal on nature strip

Following removal of the specified trees from Council's nature strip, the nature strip shall be rehabilitated to the satisfaction of Council's Landscape Assessment Officer at no cost

to Council.

Tree/Species	Location
#15 *Jacaranda mimosifolia* (Jacaranda) #39 *Brachychiton acerifolius* (Flame Tree)	Culworth Ave nature strip

Reason: To protect the streetscape.

93. Removal of refuse

All builders' refuse, spoil and/or material unsuitable for use in landscape areas shall be removed from the site on completion of the building works.

Reason: To protect the environment.

94. Canopy replenishment trees to be planted

The canopy replenishment trees to be planted shall be maintained in a healthy and vigorous condition until they attain a height of 5.0 metres whereby they will be protected by Council's Tree Preservation Order. Any of the trees found faulty, damaged, dying or dead shall be replaced with the same species.

Reason: To maintain the treed character of the area.

95. Survey and inspection of waste collection clearance and path of travel

At the stage when formwork for the ground floor slab is in place and prior to concrete being poured, a registered surveyor is to:

- ascertain the reduced level of the underside of the slab at the driveway entry,
- certify that the level is not lower than the level shown on the approved DA plans; and
- certify that the minimum headroom of 2.6 metres will be available for the full path of travel of the small waste collection vehicle from the street to the collection area.
- This certification is to be provided to Council's Development Engineer prior to any concrete being poured for the ground floor slab.
- No work is to proceed until Council has undertaken an inspection to determine clearance and path of travel.

At the stage when formwork for the ground floor slab is in place and prior to concrete being poured, Council's Development Engineer and Manager Waste Services are to carry out an inspection of the site to confirm the clearance available for the full path of travel of the small waste collection vehicle from the street to the collection area. This inspection may not be carried out by a private certifier because waste management is not a matter listed in Clause 161 of the Environmental Planning and Assessment Regulation 2000.

Reason: To ensure access will be available for Council's contractors to collect waste from the collection point.

96. On site retention of waste dockets

All demolition, excavation and construction waste dockets are to be retained on site, or at suitable location, in order to confirm which facility received materials generated from the site for recycling or disposal.

- Each docket is to be an official receipt from a facility authorised to accept the material type, for disposal or processing.
- This information is to be made available at the request of an Authorised Officer of Council.

Reason: To protect the environment.

CONDITIONS TO BE SATISFIED PRIOR TO THE ISSUE OF AN OCCUPATION CERTIFICATE:

97. Easement for waste collection

Prior to issue of the Occupation Certificate, an easement for waste collection is to be created under Section 88B or 88E of the Conveyancing Act 1919. This is to permit legal access for Council, Council's contractors and their vehicles over the subject property for the purpose of collecting waste from the property. The terms of the easement are to be generally in accordance with Council's draft terms for an easement for waste collection and shall be to the satisfaction of Council's Development Engineer.

Reason: To permit legal access for Council, Council's contractors and their vehicles over the subject site for waste collection.

98. Compliance with BASIX Certificate

Prior to the issue of an Occupation Certificate, the Principal Certifying Authority shall be satisfied that all commitments listed in BASIX Certificate No. 333613M_09 dated 21/03/2012 have been complied with.

Reason: Statutory requirement.

99. Clotheslines and clothes dryers

Prior to the issue of the Occupation Certificate, the Principal Certifying Authority shall be satisfied that the units either have access to an external clothes line located in common open space or have a mechanical clothes dryer installed.

Reason: To provide access to clothes drying facilities.

100. Mechanical ventilation

Following completion, installation and testing of all the mechanical ventilation systems, the Principal Certifying Authority shall be satisfied of the following prior to the issue of any

Occupation Certificate:

1. The installation and performance of the mechanical systems complies with:

    - The Building Code of Australia
    - Australian Standard AS1668
    - Australian Standard AS3666 where applicable

2. The mechanical ventilation system in isolation and in association with other mechanical ventilation equipment, when in operation will not be audible within a habitable room in any other residential premises before 7am and after 10pm Monday to Friday and before 8am and after 10pm Saturday, Sunday and public holidays. The operation of the unit outside these restricted hours shall emit a noise level of not greater than 5dbA above the background when measured at the nearest adjoining boundary.

Note: Written confirmation from an acoustic engineer that the development achieves the above requirements is to be submitted to the Principal Certifying Authority prior to the issue of the Occupation Certificate.

Reason: To protect the amenity of surrounding properties.

101. Completion of landscape works

Prior to the release of the Occupation Certificate, the Principal Certifying Authority is to be satisfied that all landscape works, including the removal of all noxious and/or environmental weed species, have been undertaken in accordance with the approved plan(s) and conditions of consent.

Reason: To ensure that the landscape works are consistent with the development consent.

102. Accessibility

Prior to the issue of an Occupation Certificate, the Principal Certifying Authority shall be satisfied that:

- the lift design and associated functions are compliant with AS 1735.12 & AS 1428.2
- the level and direction of travel, both in lifts and lift lobbies, is audible and visible
- the controls for lifts are accessible to all persons and control buttons and lettering are raised
- international symbols have been used with specifications relating to signs, symbols and size of lettering complying with AS 1428.2
- the height of lettering on signage is in accordance with AS 1428.1 – 1993
- the signs and other information indicating access and services incorporate tactile communication methods in addition to the visual methods

Reason: Disabled access & services.

103. Retention and re-use positive covenant

Prior to issue of the Occupation Certificate, the applicant must create a positive covenant and restriction on the use of land under Section 88E of the Conveyancing Act 1919, burdening the property with the requirement to maintain the site stormwater retention and re-use facilities on the property.

The terms of the instruments are to be generally in accordance with the Council's "draft terms of Section 88B instruments for protection of retention and re-use facilities" and to the satisfaction of Council (refer to appendices of Ku-ring-gai Water Management Development Control Plan No. 47). For existing titles, the positive covenant and the restriction on the use of land is to be created through an application to the Land Titles Office in the form of a request using forms 13PC and 13RPA. The relative location of the reuse and retention facility, in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms.

Registered title documents showing the covenants and restrictions must be submitted to and approved by the Principal Certifying Authority prior to issue of an Occupation Certificate.

Reason: To protect the environment.

104. Provision of copy of OSD designs if Council is not the PCA

Prior to issue of the Occupation Certificate, the following must be provided to Council's Development Engineer:

- a copy of the approved Construction Certificate stormwater detention/retention design for the site
- A copy of any works-as-executed drawings required by this consent
- The Engineer's certification of the as-built system.

Reason: For Council to maintain its database of as-constructed on-site stormwater detention systems.

105. Certification of drainage works (dual occupancies and above)

Prior to issue of the Occupation Certificate, the Principal Certifying Authority is to be satisfied that:

- the stormwater drainage works have been satisfactorily completed in accordance with the approved Construction Certificate drainage plans
- the minimum retention and on-site detention storage volume requirements of BASIX and Ku-ring-gai Water Management Development Control Plan No. 47 respectively, have been achieved
- retained water is connected and available for use
- basement and subsoil areas are able to drain via a pump/sump system installed in accordance with AS3500.3 and Appendix 7.1.1 of Ku-ring-gai Water Management

Development Control Plan No. 47

- all grates potentially accessible by children are secured
- components of the new drainage system have been installed by a licensed plumbing contractor in accordance with the Plumbing and Drainage Code AS3500.3 2003 and the Building Code of Australia
- all enclosed floor areas, including habitable and garage floor levels, are safeguarded from outside stormwater runoff ingress by suitable differences in finished levels, gradings and provision of stormwater collection devices

The rainwater certification sheet contained in Appendix 13 of the Ku-ring-gai Water Management Development Control Plan No. 47, must be completed and attached to the certification. Where an on-site detention system has been constructed, the on-site detention certification sheet contained in Appendix 4 of DCP 47 must also be completed and attached to the certification.

Note: Evidence from a qualified and experienced consulting civil/hydraulic engineer documenting compliance with the above is to be provided to Council prior to the issue of an Occupation Certificate.

Reason: To protect the environment.

106. WAE plans for stormwater management and disposal (dual occupancy and above)

Prior to issue of the Occupation Certificate, a registered surveyor must provide a works as executed survey of the completed stormwater drainage and management systems. The survey must be submitted to and approved by the Principal Certifying Authority prior to issue of the Occupation Certificate. The survey must indicate:

- as built (reduced) surface and invert levels for all drainage pits
- gradients of drainage lines, materials and dimensions
- as built (reduced) level(s) at the approved point of discharge to the public drainage system
- as built location and internal dimensions of all detention and retention structures on the property (in plan view) and horizontal distances to nearest adjacent boundaries and structures on site
- the achieved storage volumes of the installed retention and detention storages and derivative calculations
- as built locations of all access pits and grates in the detention and retention system(s), including dimensions
- the size of the orifice or control fitted to any on-site detention system
- dimensions of the discharge control pit and access grates
- the maximum depth of storage possible over the outlet control
- top water levels of storage areas and indicative RL's through the overland flow path in the event of blockage of the on-site detention system

The works as executed plan(s) must show the as built details above in comparison to those shown on the drainage plans approved with the Construction Certificate prior to

commencement of works. All relevant levels and details indicated must be marked in red on a copy of the Principal Certifying Authority stamped construction certificate stormwater plans.

Reason: To protect the environment.

107. Basement pump-out maintenance

Prior to issue of the Occupation Certificate, the Principal Certifying Authority shall be satisfied that a maintenance regime has been prepared for the basement stormwater pump-out system.

Note: A maintenance regime specifying that the system is to be regularly inspected and checked by qualified practitioners is to be prepared by a suitable qualified professional and provided to the Principal Certifying Authority.

Reason: To protect the environment.

108. OSD positive covenant/restriction

Prior to issue of the Occupation Certificate, the applicant must create a positive covenant and restriction on the use of land under Section 88E of the Conveyancing Act 1919, burdening the owner with the requirement to maintain the on-site stormwater detention facilities on the lot.

The terms of the instruments are to be generally in accordance with the Council's "draft terms of Section 88B instrument for protection of on-site detention facilities" and to the satisfaction of Council (refer to appendices of Ku-ring-gai Council Water Management DCP 47). For existing titles, the positive covenant and the restriction on the use of land is to be created through an application to the Land Titles Office in the form of a request using forms 13PC and 13RPA. The relative location of the on-site detention facility, in relation to the building footprint, must be shown on a scale sketch, attached as an annexure to the request forms.

Registered title documents, showing the covenants and restrictions, must be submitted and approved by the Principal Certifying Authority prior to issue of an Occupation Certificate.

Reason: To protect the environment.

109. CCTV report of pipe after work

Prior to issue of the Occupation Certificate and upon completion of all works on site, a closed circuit television inspection and report on the Council drainage pipeline traversing the site is to be undertaken by appropriate contractors and provided to Council's Development Engineer. The report is to include a copy of the footage of the inside of the pipeline. Any damage that has occurred to the section of the pipeline since the commencement of construction on the site must be repaired in full to the satisfaction of Council's Development Engineer at no cost to Council.

Reason: To protect the environment.

110. Sydney Water Section 73 Compliance Certificate

Prior to issue of an Occupation Certificate the Section 73 Sydney water Compliance Certificate must be obtained and submitted to the Principal Certifying Authority

Reason: Statutory requirement.

111. Certification of as-constructed driveway/carpark – RFB

Prior to issue of an Occupation Certificate, the Principal Certifying Authority is to be satisfied that:

- the as-constructed car park complies with the approved Construction Certificate plans
- the completed vehicle access and accommodation arrangements comply with Australian Standard 2890.1 – 2004 "Off-Street car parking" in terms of minimum parking space dimensions
- finished driveway gradients and transitions will not result in the scraping of the underside of cars
- no doors, gates, grilles or other structures have been provided in the access driveways to the basement carpark, which would prevent unrestricted access for internal garbage collection from the basement garbage storage and collection area
- the vehicular headroom requirements of:
  - Australian Standard 2890.1 – "Off-street car parking",
  - **2.6 metres** height clearance for waste collection trucks are met from the public street into and within the applicable areas of the basement carpark.

Note: Evidence from a suitably qualified and experienced traffic/civil engineer indicating compliance with the above is to be provided to and approved by the Principal Certifying Authority prior to the issue of an Occupation Certificate.

Reason: To ensure that vehicular access and accommodation areas are compliant with the consent.

112. Reinstatement of redundant crossings and completion of infrastructure works

Prior to issue of the Occupation Certificate and upon completion of all works on site which may cause damage to Council's infrastructure, the Principal Certifying Authority must be satisfied that he or she has received a signed inspection form from Council which states that the following works in the road reserve have been completed:

- new concrete driveway crossing in accordance with levels and specifications issued by Council
- removal of all redundant driveway crossings and kerb laybacks (or sections thereof) and reinstatement of these areas to footpath, turfed verge and upright kerb and gutter (reinstatement works to match surrounding adjacent infrastructure with respect to

integration of levels and materials)
- full repair and resealing of any road surface damaged during construction
- full replacement of damaged sections of grass verge to match existing

This inspection may not be carried out by the Private Certifier because restoration of Council property outside the boundary of the site is not a matter listed in Clause 161 of the Environmental Planning and Assessment Regulation 2000.

All works must be completed in accordance with the General Specification for the Construction of Road and Drainage Works in Ku-ring-gai Council, dated November 2004. The Occupation Certificate must not be issued until all damaged public infrastructure caused as a result of construction works on the subject site (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub contractors, concrete vehicles) is fully repaired to the satisfaction of Council. Repair works shall be at no cost to Council.

Reason: To protect the streetscape.

113. Construction of works in public road – approved plans

Prior to issue of the Occupation Certificate, the Principal Certifying Authority must be satisfied that all approved road, footpath and/or drainage works have been completed in the road reserve in accordance with the Council Roads Act approval and accompanying drawings, conditions and specifications.

The works must be supervised by the applicant's designing engineer and completed and approved to the satisfaction of Ku-ring-gai Council.

The supervising consulting engineer is to provide certification upon completion that the works were constructed in accordance with the Council approved stamped drawings. The works must be subject to inspections by Council at the hold points noted on the Roads Act approval. All conditions attached to the approved drawings for these works must be met prior to the Occupation Certificate being issued.

Reason: To ensure that works undertaken in the road reserve are to the satisfaction of Council.

114. Mechanical ventilation

Prior to the issue of the Occupation Certificate, the Principal Certifying Authority shall be satisfied that all mechanical ventilation systems are installed in accordance with Part F4.5 of the Building Code of Australia and comply with Australian Standards AS1668.2 and AS3666 Microbial Control of Air Handling and Water Systems of Building.

Reason: To ensure adequate levels of health and amenity to the occupants of the building.

115. Fire safety certificate

Prior to the issue of the Occupation Certificate, the Principal Certifying Authority shall be satisfied that a Fire Safety Certificate for all the essential fire or other safety measures forming part of this consent has been completed and provided to Council.

Note: A copy of the Fire Safety Certificate must be submitted to Council.

Reason: To ensure suitable fire safety measures are in place.

CONDITIONS TO BE SATISFIED AT ALL TIMES:

116. Protection of access gates

No vehicles, material or equipment are to be located adjacent to RailCorp's corridor access gates at any time.

Reason: To ensure access is maintained to the rail corridor at all times.

117. Outdoor lighting

At all times for the life of the approved development, all outdoor lighting shall not detrimentally impact upon the amenity of other premises and adjacent dwellings and shall comply with, where relevant, AS/NZ1158.3: 1999 Pedestrian Area (Category P) Lighting and AS4282: 1997 Control of the Obtrusive Effects of Outdoor Lighting.

Reason: To protect the amenity of surrounding properties.

118. Noise control – plant and machinery

All noise generating equipment associated with any proposed mechanical ventilation system/s shall be located and/or soundproofed so the equipment is not audible within a habitable room in any other residential premises before 7am and after 10pm Monday to Friday and before 8am and after 10pm Saturday, Sunday and public holidays. The operation of the unit outside these restricted hours shall emit a noise level of not greater than 5dbA above the background when measured at the nearest boundary.

Reason: To protect the amenity of surrounding residents.

119. Car parking

At all times, the visitor car parking spaces are to be clearly identified and are to be for the exclusive use of visitors to the site. On site permanent car parking spaces are not to be used by those other than an occupant or tenant of the subject building. Any occupant, tenant, lessee or registered proprietor of the development site or part thereof shall not enter into an agreement to lease, license or transfer ownership of any car parking spaces to those other than an occupant, tenant or lessee of the building. These requirements are to be enforced through the following:

- restrictive covenant placed on title pursuant to Section 88B of the Conveyancing Act, 1919
- restriction on use under Section 68 of the Strata Schemes (Leasehold Development) Act, 1986 to all lots comprising in part or whole car parking spaces

Reason: To ensure adequate provision of visitor parking spaces.

K Munn
Executive Assessment Officer

S Garland
Team Leader

C Swanepoel
Manager
Development Assessment Services

M Miocic
Director
Development & Regulation

Attachments:

1. Architectural and landscape plans received 9 May 2012
2. Stormwater plans received 9 May 2012
3. Architectural plans received 23 March 2012
4. Landscape plans received 23 March 2012
5. Letter from applicant
6. Minutes from JRPP meeting on 23 February 2012
7. Previous report considered by the JRPP on 23 February 2012