

CRANBROOK SCHOOL
PROPOSED DANGAR DEVELOPMENT
OPERATIONAL TRAFFIC MANAGEMENT PLAN

JANUARY 2007

CONTENTS

1. General Site Management
 - 1.1 Set down and pick up procedures
 - 1.2 Access arrangements and internal circulation
 - 1.3 Car parking
 - 1.4 Other traffic management strategies
 - 1.5 Goods delivery
 - 1.6 Visitor parking
 - 1.7 Allocated staff parking
 - 1.8 Bollards
 - 1.9 Pedestrians

- 2 Set down and Pick up
 - 2.1 Set down
 - 2.2 Pick up

- 3 Bus Turning

- 4 Saturday Sport Management Plan

- 5 Effect of proposed changes to Kent Road and New South Head Road

- 6 Emergency Access

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1. General Site Management

Cranbrook operates as an independent school, providing education to almost 1400 students, 850 of whom live in the Woollahra Local Government Area. The school operates for 37 weeks per year with 15 weeks non-term time or school holiday periods. Compulsory sport is played for about half the year on Saturday mornings.

Cranbrook School's proposed redevelopment of the Dangar land and the old Rose Bay Bowling Club is intended to provide state of the art Junior School facilities. The proposed school redevelopment will accommodate a student enrolment of 460 students and a total of 45 teaching and ancillary staff. The site currently accommodates 150 boys in Kindergarten to Year 2. They will be joined by 310 boys in Years 3 to Year 6 who will relocate from the Bellevue Hill campus.

Key planning principles of the proposed redevelopment include:

- Low rise facilities complementing local architecture
- Using the new buildings as acoustic barriers
- Ensuring energy and resource efficiency and
- Taking all the traffic off the streets.

The public benefits of this development are:

- Retention of 78% of the site as open space
- Traffic management on site and off the streets
- Queuing of 50 cars on site
- Staggered class dismissal times
- Parking for 70 cars weekdays and 105 on Saturdays
- Staff parking removed from Kent Road
- Alleviating traffic congestion at Bellevue Hill

The traffic plan is presented at Attachment 1.

1.1 Set-Down and Pick-Up Procedures

The redevelopment of the school provides for on-site student set-down and pick-up facilities off the internal access road. This allows for vehicles to be on School property and not public roads for these important functions. The internal roadway allows 50 cars to queue on site and this is sufficient capacity for the staggered class finish times that extend from 2.30pm to 3.30pm on school days.

An internal access road will allow cars to enter the site at Kent Road during the set down and pick up operation, forming a slow moving lane in each direction. As the set down

and pick up area is reached, boys will enter or alight from the left hand side of the vehicle, with the car then continuing in the slow moving queue and travelling to the exit at Kent Road, via the roundabouts. Similar traffic management measures are used at other schools in Sydney including Moriah College, Abbotsleigh Junior School, Pymble Ladies College and Shore Preparatory School Northbridge. The surveyed peak accumulation of vehicles during the afternoon peak period, associated with the pick-up of students, of some 30 to 40 vehicles at the preparatory school and some 40 to 50 vehicles at the junior school, will be able to be catered for within the proposed internal circulation road. A marked plan at Attachment 2 shows layout and operation of the two internal roundabouts including line marking and how queuing is arranged, with proposed signage at Attachment 2a.

The School has a duty of care to the students and takes seriously the safety aspects of traffic movements on site. Staff supervision, traffic wardens, speed limits, on-going training and review of procedures are key elements of an effective operational traffic management plan.

1.2 Access Arrangement and Internal Circulation

The proposed redevelopment of the school will incorporate its main access to/from Kent Road. This will provide access to the main internal circulation road passing through the site and requires all parents setting down and picking up students to do so to/from Kent Road. A roundabout will be provided at the western end of the circulation road to provide a vehicle turn around area during the set down and pick-up operation. The student marshalling area during the afternoon pick-up operation will be located towards the eastern end of the site, maximising the on site vehicular queuing capacity of 50 cars along the internal circulation road.

A secondary access driveway onto Iluka Street will provide access to/from the on site staff parking area, located at the western end of the site. Access between the staff car park and Kent Road, other than for emergency vehicles and during the morning and afternoon set down and pick-up periods will not be permitted.

The proposed access arrangements result in the following:-

- Majority of traffic accessing the site to/from Kent Road, via the existing traffic signals at the intersection of New South Head Road and Kent Road;
- Only minor traffic generation to/from Iluka Street associated with the proposed staff car park;
- Maximises the on site vehicle queuing capacity along the internal access road

The proposed development incorporates an internal access road circulating through the site. The internal access road will provide an 11 metre wide two-way four lane carriageway. The internal access road will be designed to accommodate the queuing of vehicles for student set-down and pick-up, as well as an emergency access lane. The proposed access arrangements and internal circulation is considered appropriate and will be provided in accordance with the Australian Standard for Off-Street Car Parking Facilities.

1.3 On-site Car Parking

Car parking will primarily be located within a staff car park at the north-western corner of the site, within parking spaces located adjacent to the internal circulation road and at the eastern end of the site adjacent to the Kent Road access. On-site car parking will be provided in convenient and accessible parking areas and will be designed in accordance with Council's requirements and the Australian Standard For Off-Street Car Parking Facilities.

Access into the on-site parking in the 21 spaces along the internal roadway will only be permitted before 7.30 am and after 4.00 pm. Cars will not be allowed to move into or out of these spaces during setdown and pickup operation, or throughout the school day. These spaces will be allocated to fulltime staff who do not leave the site between 7.30 am and 4.00 pm. The roadway adjacent to these 90 degree spaces will operate as a slow moving pick up or set down lane.

On-site car parking areas within the school will be available during weekday afternoon sport and Saturday sport periods on the Dangar playing fields. The plan allows the use of kerbside parking on either side of the internal circulation road. This will make available convenient on-site parking facilities adjacent to the fields.

In association with the proposed redevelopment of the school, the main pedestrian access will be provided via the Kent Road entrance, on the northern side of the entry driveway. Proposed new buildings including student facilities and administration areas, will generally be located at the eastern end of the site with access to/from Kent Road.

A secondary pedestrian thoroughfare will be provided to/from Iluka Street. This pedestrian footpath will benefit students walking between the existing Bellevue Hill campus and the Dangar playing fields after school, as well as providing pedestrian access during Saturday sport. The secondary access onto Iluka Street will be managed to discourage parents from setting down and picking up students from this location at the start and end of the school day. This will occur by staff supervision at the Iluka Street entry and communication via school newsletters and the website will reinforce use of the Kent Road access to the internal roadway.

1.4 Other Traffic Management Strategies

In order to minimise the effects of parents setting down and picking up students during the morning and afternoon and also to minimise the number of cars present at any given time in the vicinity of the school, the following strategies will be implemented:-

- Encourage parents in school newsletters and by publishing on the website and in newsletters public transport timetables to allow older children (year 5 and 6 only) to travel by public transport, if appropriate;
- Encourage car pooling to increase the number of students per car and to reduce the total number of cars by advertising in school newsletters and having the school receptionist organise car pooling lists to link families able to participate in the scheme
- Inform parents of the traffic management plan for the set-down and collection of students, stating that compliance with the procedures is mandatory.

All these strategies will be communicated to parents through school newsletters and on the website, in student orientation packages, and reinforced at parent/teacher meetings, assemblies and letters sent home.

1.5 Goods Delivery

All deliveries to the School will be via the Kent Road entrance. One parking space will be designated a 'loading zone' to permit truck and delivery vehicle parking at the Kent Road entry. This provides close access to the Administration area for receipt of the delivery. There will be no access by any vehicle, except emergency vehicles to the internal roadway during the school day to ensure safety of the boys.

1.6 Visitor Parking

Visitors must park in the spaces at the Kent Road entry. No access beyond the bollards located west of the eastern roundabout will be permitted to ensure student safety. Ten spaces are provided at the Kent Road entry including one disabled parking space for visitors. One space is reserved as a 'loading zone'. Additional overflow for visiting teachers will be available in the staff car park; access will be via intercom to the Administration staff, who control the access remotely.

Twenty one spaces located along the internal roadway will be used for fulltime staff parking only on weekdays, with no vehicle movements to or from these spaces permitted between 7.30 am and 4.00 pm on school days to ensure the safety of students and the smooth running of the set down and pick up process.

It is expected that parents who provide classroom assistance will park in the Kent Road visitor spaces – a maximum of 10 is required (about 1 per class K-3 with some spare).

1.7 Allocated Staff Parking

A total staff of 42 can be accommodated on the site in the 70 available spaces. Specific staff parking allocations are:

- 1 The three executive staff: Head of Junior School, Deputy Head of Junior School and Director of Early Learning will be allocated one space each at Kent Road entry. These will be the three spaces closest to the eastern pedestrian crossing to ensure proper use of the spaces and to prevent any reversing out over the pedestrian crossing on exit.
- 2 20 of the 34 spaces at Iluka Street entry for staff leaves 14 vacant for visiting staff from other campuses and maintenance staff and contractors.
- 3 21 spaces on the internal roadway will be allocated to fulltime staff who arrive before 7.30 am and leave after 4.00 pm.

1.8 Bollards

Access to the roadway from the roundabouts at either end of the driveway will be managed by retractable bollards. These bollards will be controlled by the new building management system which will be set up to automatically allow for pick-up and drop-off each day during term or sports time or manually by reception for emergencies.

During drop-off and pick-up times the bollards at the western end of the driveway will remain upright to stop staff entering beyond the carpark and parents/carers exiting via Iluka St.

1.9 Pedestrians

Pedestrians will enter and exit the site through the Kent Rd entrance, with the exception being Senior School boys arriving for sports training after school who enter via Iluka St.

A designated footpath on the northern side of the driveway allows for a safe entrance to the school. The pedestrian crossings will be well signposted beyond the first roundabout and also provide a safe area to cross the driveway. The speed limit of 10 kph on site will be enforced for student safety.

A detailed design of the internal access road and pedestrian crossings will be prepared prior to the issue of the Construction Certificate.

2. Set down and Pick-up

2.1 Set down

The set down period for the junior school classes K-6 will be of a random pattern spread over a period from 7:00 am to 8:40 am with the peak expected between 7.30 am – 8.30 am as parents arrive at various times depending on their own or their boy's schedule. On the days sports training takes place, some boys are dropped off early. A Before School Care program will be operating each day of the School term to cater for parents that need to drop-off their boys prior to playground supervision starting at 8.15 am.

All vehicles entering the site for the purpose of picking up and setting down during term time will enter via Kent Road, proceed along the length of the driveway dropping off or picking up at the designated area, turn around at the Iluka Street roundabout and exit back onto Kent Road. The speed limit along the driveway will be 10kph.

Set down for years 3-6 will take place in a designated zone on the southern side of the road. K-2 will be set down on the northern side in the zone closest to their classrooms that will also be the afternoon pick-up zone for all students. These zones will be supervised by staff during the periods of peak traffic flow to assist with the movement of vehicles and the safety of the boys.

2.2 Pick-up

During the afternoon peak periods, students will be picked up from the on-site student loading area located on the northern side of the internal access road towards the eastern end of the site. This will allow on-site queuing for 50 vehicles along the internal circulation road for the volume of traffic per year group. The existing demonstrated management at Kent Road and Rose Bay Avenue works well and similar techniques will be applied at the new site. The internal road provides adequately to prevent vehicle queuing out onto Kent Road. The surveyed peak accumulation of vehicles during the afternoon peak period, associated with the pick-up of students, of some 30 to 40 vehicles at the preparatory school and some 40 to 50 vehicles at the junior school, will be able to be catered for within the proposed internal circulation road.

Boys will wait in areas designated on Attachment 3 on the northern side of the internal roadway. There are adequate covered areas in the 'student marshalling area' for boys to wait at the pick up zone. Boys will be marshalled in the prep school area quadrangle and under the covered verandahs. Vehicles will circulate along the internal access road and proceed through to the supervised student pick-up area. The pick-up operation will be managed and controlled by staff who will co-ordinate the operation and instruct parents when to stop and when to proceed. K – 2 boys will be assisted into the vehicle and staff will observe the buckling of seat belts prior to the vehicle being allowed to exit. Current arrangements at Dickins House and Rose Bay Avenue at Bellevue Hill operate well, with the peak over in 10 to 15 minutes.

It is noted that, should a vehicle arrive at the head of the pick-up queue and the student is not yet ready, then the vehicle will be instructed to rejoin the vehicle pick-up queue and recirculate around the internal roadway using the roundabouts to the pick-up zone.

During the pick-up period cars will circulate within the kerbside lane of the internal access road and proceed to the designated student marshalling and pick-up zone located on the northern side of the access road.

Staggering of the pick-up for year groups is proposed for the period 2:30 pm to 3:30 pm on weekdays during school term. Pick-up times are anticipated to be staggered as follows:

Cars queue	2:30 pm
Kindergarten	2:40 pm
Years 1-2	2:55 pm
Years 3-4	3:05 pm
Years 5-6	3:15 pm
Pick-up complete	3:30 pm

After School Care currently operates with a total of up to 40 boys from K-6 attending daily. Pick-up for boys attending After School Care is spread from 4.00pm through to 6.00pm. The internal roadway has sufficient capacity to permit these vehicles to queue on site.

Sports training on the ovals immediately after school will reduce the number of cars picking up at the peak demand period. Various other after school activities including art, drama, Mandarin, table tennis, cartooning, effective communications and chess are offered to Junior School boys further reducing the number of pickups and drop-offs during the peak period and effectively staggering the system. There is sufficient capacity onsite to permit these cars to queue on the internal roadway and off the streets.

Siblings will wait to be collected with the older brother and make for one pick-up. The school will arrange this process at student orientation and communicate this facility in the school newsletter and on the website.

The pick-up operation will be carefully managed so as to provide a safe and convenient operation. This will occur through:

- Staff supervision
- Staff wearing identifying jackets for high visibility
- Senior staff overseeing the process and troubleshooting
- Supervision of the pedestrian crossing, similar to an RTA crossing supervisor as used at the Victoria Road crossing at Bellevue Hill for the current Junior and Senior School
- Training on traffic procedures targeting RTA certification for all staff
- Speed limiting the internal roadway at 10kph
- Clear signage on the internal road way for speed limits, the pedestrian crossing and general caution as children are about.(See Attachment 2)
- Parents will be issued with a name card to attach to the car passenger side sun visor and be visible to the teachers putting boys in cars
- As cars pull up, the teacher will read the name on the card, call out the boy's name and then assist him into the back seat of the car. For safety, the boy must enter the vehicle from the kerbside. Bags will not be put in the car boot as it disrupts the flow of the carline, they will be put in the backseat with the boy. Boys will fasten their own seat belts.
- Parents will be instructed to keep any 'chat' with class teachers to a minimum, as they are currently advised, to keep the carline moving.
- If parents need to come into the school to collect their son or visit for any other reason, they will be instructed to park in the visitor car parking spaces at the Kent Road entry.

In order to minimise the effects of parents setting down and picking up students during the morning and afternoon and also to minimise the

number of cars present at any given time in the vicinity of the school, the following measures are proposed. They will be communicated and encouraged at parent/teacher meetings, on the school website, at student orientation meetings, in newsletters regularly, and supported by systems in school administration areas to link families for car pooling. The measures are:-

- Encourage parents to allow older children to travel by public transport, if appropriate;
- Encourage car pooling to increase the number of students per car and to reduce the total number of cars;
- Stagger finishing times of classes within the preparatory and junior schools, to minimise the number of cars in the area at any given time;
- Manage the pick-up operation of students during the afternoon period;
- Siblings will wait to be collected with the older brother and make for one pick-up. The school will arrange this process at student orientation and communicate this facility in the school newsletter and on the website;
- Give consideration to allowing older students to be collected from New South Head Road by liaising with parents on its suitability and safety;
- Inform parents of the proposed traffic management system for the set-down and collection of students and regularly communicate it in newsletters and on the website;
- Publish ferry and bus times in newsletters and on the website and issue car pooling notices to enable families to be linked to facilitate participation in the scheme;
- Public transport:
 - Public transport in the vicinity of the school is generally provided by State Transit. These services comprise bus services along New South Head Road and ferry services from Rose Bay Wharf. Bus routes along New South Head Road include a mixture of line haul services and feeder distributor services accessing the eastern suburbs. Bus stops are located along New South Head Road in the vicinity of Kent Road. The current timetable is attached.
 - Line haul bus services link Rose Bay to the City and Bondi Junction. Feeder distributor bus services operate in the area linking to the surrounding local residential areas of Rose Bay, Bellevue Hill, Dover Heights, North Bondi, Vaucluse and Watsons Bay.
 - Bus routes along New South head Road in the vicinity of the school are shown in the Table below. These services combine to provide convenient bus services in and out of the area. Buses operating along New South Head Road to and from the City combine to provide bus frequencies of some 20 to 30 minutes during the day, with higher

frequencies during the weekday morning and afternoon peak periods.

Table : State Transit Bus Services in Rose Bay	
Route	
321	Rose Bay-Bondi Junction Interchange
323	Circular Quay-Dover Heights via Rose Bay
323	Circular Quay-Watsons Bay via Vaucluse Heights
325	Circular Quay-Watsons Bay via Nielsen Park, Vaucluse
386	Bondi Junction-Vaucluse via Rose Bay
L24	Circular Quay-Watsons Bay via Vaucluse Heights (*limited stop service)

- Ferry services operate from Rose Bay Wharf and provide services to/from Circular Quay and Watsons Bay. Ferry services to/from Rose Bay generally operate on a 30 minute frequency during the morning and afternoon peak periods.

3. Bus Turning

Attachments 4 and 4a detail the swept paths for bus entry to the site, bus turning capacity and potential bus parking locations on the internal roadway. 12.5 metre long buses have been accommodated and can circulate along the access road. With some minor modification of the western roundabout, buses are able to circulate around the western internal roundabout in a single manoeuvre. The access driveway and on-street parking adjacent the driveway in Kent Road will be managed by a qualified traffic marshal when buses are required at the school. The parking space on the western side of Kent Road at the school entry will be marked out by “witches hats” to prevent vehicles parking there while buses exit the site. No other parking spaces on the school’s land or on the street will be affected.

The school has considered and discounted the option of bus pick-ups in Lyne Park, as Lyne Park is public space. There are considerable safety issues moving the boys from the school to cross New South Head Road, requiring significant supervision. School bus movements are infrequent and the school’s engineer and traffic consultants advise that the internal roadway will adequately accommodate all bus movements.

Buses are not used on a general daily basis to get boys to and from school. When buses are required to access the school for transporting boys during school excursions, buses will travel through the school site, entering and exiting via Kent Road. These buses will not be permitted to access the school during the morning student set-down and afternoon pick-up periods.

Existing bus services at the junior school include the following:

- Term 1: School Camp - 8 buses pick-up on one day and drop-off on another day in the same week (results in reduced student pick-ups that week);
- Term 2: Music Camp - 3 buses pick-up on one day and Drop-off on another day two to three days later (reduced pick-ups);
- Terms 1 and 4: Cricket - 3 buses pick-up and drop-off on Friday afternoons (no more than 12 weeks per year);
- Swimming Carnival - 7 buses pick-up and drop-off on one day per year;
- Excursions - Average of less than two buses per Month over 40 weeks of the year.

There is no existing government or private bus service to Dickins House (Preparatory School) nor is there any plan to instigate one.

4. Saturday Sport Management Plan

The traffic management plan for managing traffic during Saturday sports period is shown in Attachment 5. As can be seen from this figure, the redevelopment of the school will incorporate a new internal access road circulating through the site between Kent Road and Iluka Street.

Overall

Cranbrook's membership of the Combined Associated Schools (CAS) directs its sporting commitment. Some trial games are also played against local schools not in the CAS eg The Scots College, Sydney Boys High School and Sydney Grammar School. The CAS comprises six schools – Cranbrook, Waverley College, Barker, Knox Grammar, St Aloysius and Trinity Grammar. This effectively limits competition games to 10 per season against the 5 opposition teams in the CAS as in summer each team is played twice – once at 'home' and the other 'away' and in winter each CAS team plays each other once and five trial games are played with local schools not in the CAS.

Limited available fields around Sydney means that while Cranbrook may be 'away' it will host games on its fields.

The school term is restricted to 37 weeks per year. No games are played in the school holidays, usually 2 weeks in April, 3 weeks in July, 3 weeks in September and about 7 weeks in December and January. Home and away games vary the use and based on the 2006 calendar, the facilities at Bellevue Hill and Rose Bay were used for approximately half the year on Saturdays, or 28 Saturdays of an available 52 in any year. That leaves the fields without structured school games for about 24 Saturdays a year. Neighbours use the School's fields for passive recreation on those Saturdays, and on all 52 Sundays.

Additionally intra-school House competitions, some athletics and Old Boys matches are played. Some holiday camps or games against touring sides from interstate or overseas

may occur. The school will retain Hordern Oval at Bellevue Hill as the School's premier sporting oval.

Sports played vary between the seasons.

- Winter sports are: Rugby, Football (Soccer), Tennis
- Summer sports are: Rowing, Cricket, Basketball, Tennis.

Winter

Currently rugby and football (soccer) is played at Dangar regardless of home or away game status, due to the dearth of fields available for schools. The development of the site for the proposed junior school will only add tennis in winter.

The winter season totals 11 Saturdays for junior and senior school sport from May through August each year. All games are played in school term time only. Some holiday camp activity may occur, as currently exists for rugby and soccer at Dangar – usually 9am to 12pm for 3 days in the holidays. To vary the camp experience other venues are used e.g. beaches and parks, as determined by the external provider. To accommodate the athletics season rugby and soccer finish after 11 weeks. Athletics is a relatively small team activity, attracting fewer boys and is run exclusively from the Hordern Oval precinct at Bellevue Hill. The Dangar fields are not used.

Building four tennis courts at Dangar is not expected to have a significant impact on traffic and parking in the area. Our traffic consultants cannot estimate traffic movements as tennis is not currently played there. Tennis teams are relatively small with a maximum of 10 boys per team – total 20 on site in competition games. As the games comprise doubles and singles on Saturdays from 8am to 12.30pm or 4.30pm spectators tend not to stay and watch – so traffic impacts are more a drop-off and pick-up style. To deter spectators, no seating or pavilion is planned around the courts for spectators.

There is no basketball played in winter.

We take a conservative view of wet weather use and will cancel games to protect the grounds. The winter 2006 season saw 2 of the 10 fixtures cancelled due to wet weather. They are not replayed or 'made up' on later dry weekends.

Summer

Summer sports are Basketball, Cricket and Tennis. Summer sport runs for up to 17 Saturdays per year in February, October and November. Only Junior School teams play in March, as the senior school undertakes compulsory Outdoor Education activities in NSW and Victorian National parks. Consequently, no Saturday training or Saturday competition games are played by Senior School (about 900) boys in March each year. The bulk of competition games in junior and senior school only run for 10 weeks per season.

Basketball consists of 10 boys per team and an opposing team of 10. Training is restricted to 5.30pm on weekdays at the latest. The School is concerned that well rounded boys attend Cranbrook and as a result training is designed to finished relatively early to ensure sufficient time for academic study, meals, music practice, drama rehearsals

and much needed downtime for the boys. The school is not singularly focused on one activity so no one activity is planned to dominate the boys' time. Additionally, the school engages paid coaches generating time constraints. The boys' safety is also paramount, so keeping them late is not an option. Some training on Dangar in any of the sports will remove the need for a concentrated pick-up time and stagger the exit of the boys over a longer period. This currently happens with rugby.

The school is concerned about the effect of any concentrated additional activity at Dangar on its fields or in purpose built facilities. Wear and tear on the grounds is an important issue and management of the venues is an essential part of managing the school. We currently manage games for all facilities now to ensure no overuse.

Cricket use at Dangar will not increase. There are currently 3 practice wickets at Dangar for training that will remain. Cricket training is focused on Hordern Oval where 10 practice wickets exist. This provides concentrated practice for the boys, building team spirit and skills by having the bulk of the teams practice at Bellevue Hill. This all assists in more effective coaching and is a better fit for staff and coaches.

Expected future impact of basketball and tennis at Dangar

Basketball

Basketball is a summer sport only. Cranbrook's membership of the Combined Associated Schools (CAS) directs its sporting commitment and as a result basketball is only played in summer, even though it is an indoor sport.

Basketball is currently played on the School's existing single indoor and single outdoor court at Bellevue Hill. The School will retain its sporting facilities at Bellevue Hill for Basketball – with the Dangar development doubling the facilities with no increase in school numbers. It effectively means more facilities for half the time.

Training times on Dangar will be 7.30 – 8am and 3.30 – 5.30pm weekdays. Competition games are played Saturdays from 8am to 3.30pm for 20 days per year, in term time.

Tennis

Tennis is played winter and summer. The school does not currently have any tennis facilities and needs the proposed 4 courts to effectively run interschool competition. The school currently leases courts at Lyne Park, Cooper Park and Latham Park, Maroubra. By providing its own facilities, the public facilities become more available to the community.

Tennis court usage times are planned to be:

- 7.30 – 7.00pm weekdays
- 8am – 5.00pm Saturdays
- 10.00am – 2.00pm Sundays

At the 2004 voluntary consultation the School suggested that the courts be made available to the local community when not in use by the School. However, opposition to that suggestion was expressed by some residents of dwellings close to the courts.

No lights are planned for installation on the courts, preventing prolonged evening use.

Rugby & Football (soccer)

The school uses its own fields plus hires Woollahra Ovals 2 and 3 from WMC. The school use always ceases at 12pm of Woollahra Ovals 2 & 3. On most Saturdays, Easts Rugby and Colleagues use the fields after 12pm.

The gym may be used at Dangar for wet weather training or indoor sports activity eg indoor cricket in summer or cross training for rugby fitness.

Summary

The internal roadway will provide access to the site for sport activities with 105 spaces on site, allowing parking in excess of Woollahra Council's requirements for a development of this size (32). Current rugby and soccer usage will not change on the site. Tennis and Basketball facilities will generate traffic that can be accommodated on site.

5. Loss of Parking

The car parking requirements for the proposed school redevelopment, based on Council's Car Parking Code, are as follows:

- Pre-schools, Kindergartens, Child Care Centres and Primary Schools:
 - 0.5 spaces per 100m² of gross floor area.

The proposed redevelopment will incorporate a gross floor area of some 6,300m². Based on the above the car parking requirement for the school is some 32 spaces.

Before the purchase of the former Rose Bay Bowling Club land there was no provision for parking on the School's land.

Currently all staff at the preparatory school and some 88% of the staff at the junior school drive a car to work. Based on these percentages, the redevelopment of the school will generate a parking demand for staff parking of 42 spaces.

The proposed redevelopment of the school will provide some 70 on-site parking spaces, comfortably satisfying Council's car parking requirements and the expected demand for staff parking. On-site parking will primarily be provided within a staff car park located at the north-western corner of the site, within angle parking spaces located adjacent to the internal circulation road passing through the site and in the vicinity of the Kent Road access.

The provision of on-site car parking will significantly improve the current situation where staff park on-street in Kent Road, adjacent to the preparatory school. It should also be noted that the relocation of the junior school to the proposed Dangar campus will reduce the staff parking demand at the existing Bellevue Hill campus.

Additional on-site parking will be available within the staff car park off Iluka Street, within on-site angled parking spaces and along the internal access road during Saturday sports days. The redevelopment of the school will not affect the Saturday sports activity on the Dangar playing fields, other than making available on-site parking facilities adjacent to the fields. It is considered that the internal circulation roads within the

school could also be made available for additional parking. During Saturday sports the circulation road could be managed to provide a two-way road through the school and kerbside parking provided on either side of the circulation road, accommodating some 30 to 35 vehicles.

To address concerns regarding insufficient parking in residential streets for intensification of use, a supplementary traffic statement was prepared in response to issues raised by Council's Traffic Engineer on 24 October 2005 (lodged with Council on 18 August 2006). Currently there are some 20 to 30 vacant spaces available on Kent Road between New South Head Road and the main access driveway to the Royal Sydney Golf Club outside of school hours. The loss of 7 on-street parking spaces (to provide for the road widening) will not materially affect parking conditions in the area.

As a result of the proposed development including the internal circulation road and provision of some 70 parking spaces, there will be significant improvements to the availability of parking on Kent Road.

To address concerns regarding insufficient parking on site/impacts on street parking/insufficient drop-off and pick-up area/no provision for bus or service vehicles, it is noted that the proposed redevelopment of the school will provide some 70 on-site parking spaces, comfortably satisfying Council's car parking requirement of 32 spaces. The provision of on-site car parking will significantly improve the current situation where up to some 20 staff and visitors at the preparatory school currently park on-street in Kent Road. Car parking for the current 20 staff will be relocated on-site, making available some 20 on-street spaces in the vicinity of the school during the school period. In addition, the provision of on-site student set-down and pick-up will further improve traffic and parking conditions in Kent Road at the start and end of the school day.

To further demonstrate the provision of adequate on-street parking for the local community outside of school hours, the School's traffic consultant undertook on-street parking surveys in Kent Road during a weekday and weekend period during the school term and during school holidays. The on-street parking surveys recorded that number of vehicles parked on-street in Kent Road between New South Head Road and the main access driveway to the Royal Sydney Golf Club car park. The surveys were undertaken on the following days:

- Tuesday, 4th July 2006 (school holiday);
- Saturday, 8th July 2006 (school holiday);
- Wednesday, 19th July 2006 (school term);
- Saturday, 22nd July 2006 (school term); and
- Saturday, 12th August 2006 (school term).

The surveys were generally carried out between 7.30 am and 8.00 pm with the number of parked cars recorded every 30 minutes. The results of the parking surveys are shown in the Table over and graphically represented in Attachment 6.

Table 1	Kent Road Parking Demand				
Time	Parking Accumulation (Number of Vehicles)				
	Tuesday 4/7/06	Saturday 8/7/06	Wednesday 19/7/06	Saturday 22/7/06	Saturday 12/8/06
7.30am	26	27	35	18	-
8.00	30	28	39	17	-
8.30	37	27	55	17	-
9.00	42	26	49	19	-
9.30	40	31	51	19	25
10.00	40	32	46	20	26
10.30	40	29	48	19	22
11.00	41	31	50	21	22
11.30	46	25	48	20	29
12.00 pm	48	24	51	23	31
12.30	50	24	51	23	28
1.00	50	34	53	28	29
1.30	48	29	52	29	28
2.00	49	30	49	23	26
2.30	47	29	53	23	23
3.00	45	33	47	24	23
3.30	38	31	43	24	24
4.00	31	31	40	24	21
4.30	27	32	37	25	-
5.00	26	28	29	26	-
5.30	26	32	25	27	-
6.00	26	35	31	28	-
6.30	22	37	28	27	-
7.00	21	46	25	29	-
7.30	20	44	24	44*	-
8.00	20	43	22	58*	-
Supply	66	66	66	66	66

* Evening function at Royal Sydney Golf Club

It can be seen from the Table that there are 66 on-street parking spaces in this section of Kent Road. The surveys found that outside of school hours there are some 20 to 30 vacant spaces on this section of Kent Road, during these periods.

In association with the redevelopment of the school, it is proposed to modify on-street parking in Kent Road. The proposed modifications will result in the loss of seven on-street parking spaces. The loss of these spaces would readily be accommodated within the 20 to 30 vacant parking spaces currently available outside of school hours. Hence there should not be any material affect on the parking conditions in the area outside of school hours.

6. Effect of proposed changes to Kent Road and New South Head Road

The proposed redevelopment of the school will incorporate the proposed upgrading of the intersection of New South Head Road/Kent Road and the widening of Kent Road on approach to New South Head Road. On-street parking in Kent Road between New South Head Road and the entrance to the school will be modified. The proposed road works will result in significant improvements to traffic conditions in Kent Road.

In addition, the provision of on-site student set-down and pick-up (currently provided for on-street in Kent Road) and the provision of appropriate on-site staff parking, will further improve traffic and parking conditions in Kent Road at the start and end of the school day, alleviating congestion and potential grid lock and assuring vehicular and pedestrian safety.

The School's engineering consultant Hyder Consulting, provided the following advice on 25 August 2006, which was forwarded to the Woollahra Council officers.

New South Head Road is currently configured such that there are two eastbound lanes, two westbound lanes and a short right turn lane to access Kent Road. There is no provision on the northern kerb alignment for "On Street" parking however there is "On Street" parking along the southern kerb alignment. It is proposed to lengthen the existing right turn lane to provide a minimum storage length of 50m.

From the current information available the existing carriageway is of adequate width (approximately 17m) to allow the existing right turn lane to be extended without any impact on kerb alignments or services. Minor line marking adjustments are required to facilitate the extension of the right turn lane (Attachment 7).

The existing on-street parking to the southern side of New South Head Road should not be affected as there is sufficient width within the eastbound lanes to accommodate a reduction in the kerb side lane from 5.4m to 3.0m allowing of the increased length of the right turn lane (Attachment 8). Should detailed survey find that there is insufficient width to accommodate the extension of the right turn lane it is possible to relocate the northern kerb to provide the required lane widths. It is expected that should this be required the existing light poles will require relocation to ensure adequate clearances.

Additional "No Stopping" signage will be required along the northern kerb alignment to replace missing signage and to ensure that parking does not occur in this lane.

7. Emergency Access

Notwithstanding that the traffic assessment and traffic surveys have confirmed that the intersections surrounding the site operate at a satisfactory level currently, the proposed traffic management plans and upgrade to the Kent Road/New South Head Road intersection will improve traffic movement around the site, providing adequate emergency vehicle access.

In addition, the access points to the site will be increased from one to two providing greater opportunity for emergency vehicles to access the Dangar Playing fields from Kent Road or Iluka Street. Retractable bollards will be remotely controlled by the Administration staff to allow emergency vehicle access when the bollards are raised.

While this improves access to the school's buildings and facilities, it also provides improved access to the rear of properties in Manion Avenue and Kent Road, if the need arises. Emergency vehicles could access the site via the two entry points and move across the schools fields to affected properties if needed.

The proposal to relocate current on-street pick-up and drop-off vehicles to within the site will significantly improve traffic movement in Kent Road and therefore facilitate better access for emergency vehicles.