Department of Education
Lindfield Learning Village
Green Travel Plan

Issue | 16 August 2018

Job number   251272

ARUP

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1 Introduction

The NSW Department of Education and Communities is seeking approval for the proposed Lindfield Learning Village. The proposed site is located at the former UTS Ku-ring-gai Campus, which has since been vacated in 2015. This Green Travel Plan has been prepared to support the State Significant Development application for Lindfield Learning Village.

This Green Travel Plan provides the framework for the school to implement Green Travel Plan initiatives.

1.1 Site Description

The proposed site is located about 2km from Lindfield and Roseville Station and approximately 17km north of the Sydney CBD.

The area is located at the end of Eton Road, surrounded by nature reserves in the south. Towards the north, the area mainly consists of low density houses.

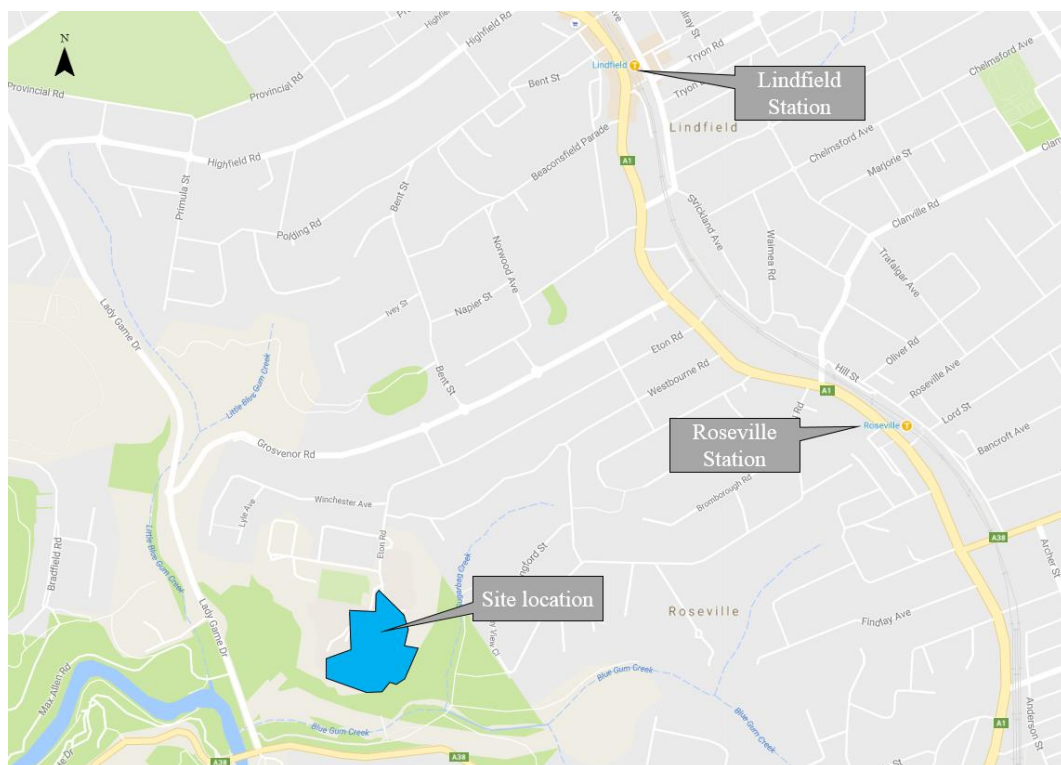Figure 1: Proposed site location of the Lindfield learning village

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1.2 School population

The proposal utilises the ex- Lindfield UTS site to convert it into the Lindfield Learning Village, with a new K - 12 School and other facilities. A staged opening of the proposed school is essential to reasonably allow for traffic impact monitoring and review of final operating scale.

At the final stage of operation the site is likely to provide 6 homebases for Kinder to year 12:

- 2,100 students from Kinder to year 12. The students would be grouped into 6 homebases which would commence at staggered times
  - 2 homebases commence at 7:30am
  - 2 homebases commence at 8:30am
  - 2 homebases commence at 9:00am
- A proportion of the students would attend extracurricular activities after finishing school, which would also be staggered.
- Approximately 160 teachers and administration staff

This report assesses the traffic and transport impacts and requirements of Phase 1, where 350 students would occupy the Phase 1 school. Phase 1 will comprise:

- One home-base accommodating 350 students from Kindergarten to Year 12;
- All requisite technical spaces to support a full primary and secondary curriculum;
- Administration space for approximately 30-50 staff;
- Construction of a 4m wide access trail for bushfire trucks to the south of the building;
- Fencing of the green space around the perimeter of the site.
- Remediation of targeted roof areas to create additional outdoor play areas; and
- Traffic and transport infrastructure associated with the parking and drop-off/pick-up area.

1.3 What is a Green Travel Plan?

A Green Travel Plan is a package of measures put in place to try and encourage more sustainable travel whilst commuting and also during the course of activities, including business and delivery travel or other visitors to the site. For a school environment it applies to both staff travel and to student travel. It is a means for an organisation to demonstrate a commitment and take a pro-active step towards improving the environmental sustainability of its activities.

More generally, the principles of a Green Travel Plan are applied to all people travelling to and from a site. Government authorities are placing increasing emphasis on the need to reduce the number and lengths of motorised journeys and in doing so encourage greater use of alternative means of travel which have less environmental impact than the car.

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1.4   Objectives

The objectives of a Green Travel Plan are:

1. **Travel Demand Management** which reduces the need for energy intensive car, taxi or air travel by combining journeys for different purposes, travelling to alternative closer locations, or using other means of communications e.g. audio conferencing, video conferencing and working at home or other off-site locations using email or wireless telecommunications.

2. The use of **more sustainable transport modes** i.e. walk, cycle, bus, motorcycle, car sharing, tram, bus and rail in place of the higher energy consumption travel modes such as single occupant car travel, taxi and air travel. This generally requires improving people's travel choices by making more travel modes available (i.e. to improve mobility for non-car-drivers). The alternative measures of reducing mobility for car drivers by increased road usage and parking charges or restricting road and parking capacity are also an option, particularly in congested locations.

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2 Transport and Access Service Strategy

2.1 Bus

2.1.1 Existing route bus

The site is directly serviced by a bus route, number 565. There is an opportunity to improve bus frequencies to create a multi modal service of trains and buses to the site.

A bus stop is located just north of the site, providing convenient access to future patrons. Bus route 565, which operates hourly, services Chatswood and Macquarie University. It predominantly travels along the Pacific Highway and services the residential area around the site. Typical bus travel times during the morning 8am peak is shown in Table 1. The bus route currently serves Beumont Road Public School.

Table 1:   Weekday bus 565 timetable and travel times

Departing from	Travel time to site	Service period
Macquarie University	29 mins	AM – First service 6:56am
		PM – Last service 5:42pm
Chatswood	19 mins	AM – First service 7:37am
		PM – Last service 6:08pm
Roseville Station Pacific Highway	9 mins	AM – First service 7:48am
		PM – Last service 6:13pm
Lindfield Station Pacific Highway	9 mins	AM – First service 6:32am
		PM – Last service 6:15pm

Figure 2: Bus route 565

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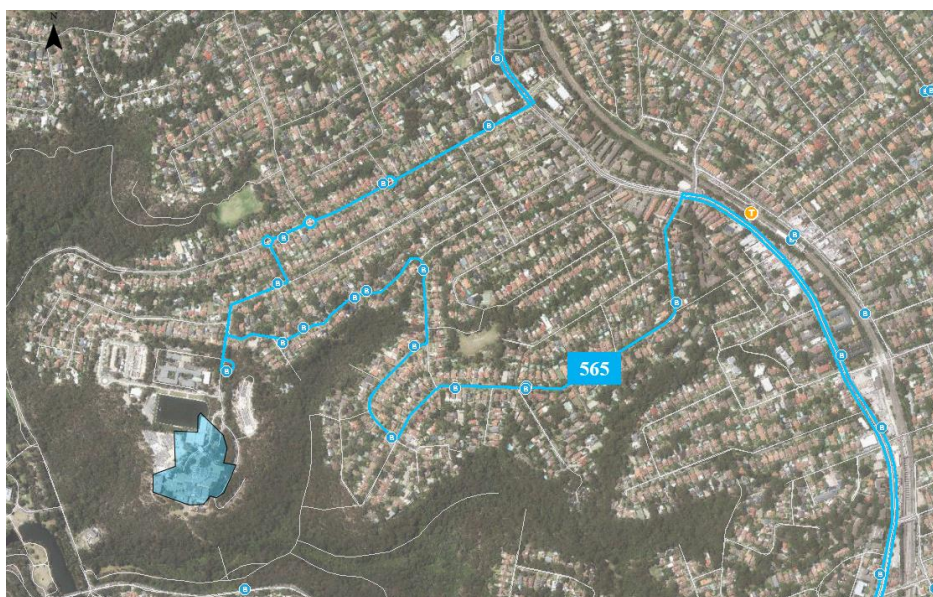## 2.1.2   Proposed arrangements for the Phase 1 school

The closest bus stop to the site is located along Eton Road, shown in Figure 3. Eton Road bus bay forms a loop, allowing buses to enter, exit and drop off passengers efficiently.

Figure 3: Eton Road Bus Bay

School buses are proposed to use the existing bus bay loop at Eton Road. Students and staff would then walk 200 metres, approximately 2 minutes, to the school.

The bus bay currently serves only one bus route 565. The current timetable for this stop for buses in both directions is identified in Table 2.

Adopting school hours of 9.00am to 3.30pm requires school buses to drop-off between 8.30am – 8.45am and pick-up between 3.15pm – 3.45pm. As shown in Table 2, no route buses are scheduled during the drop-off time, however the 3.26pm routes service to Macquarie University coincides with the pick-up period.

Table 2: Bus interaction

Morning period		Afternoon period	
Route 565	School buses drop-off	Route 565	School buses pick-up
7.36am **7.48am** **8.05am** **8.19am** **8.29am** **8.48am** **9.03am** **9.26am**	5 buses arrive between 8.30am and 8.45am. No route buses scheduled at this time.	2.21pm 2.33pm 3.01pm 3.13pm 3.26pm 3.53pm 4.01pm	5 buses arrive between 3.15 and 3.30pm and depart by 3.45pm. 1 route bus is scheduled during this period.
Legend: Towards Macquaire Uni / Towards Chatswood			

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School start and finish times are flexible for the Phase 1 school and could be adjusted to suit a bus servicing strategy. The transport strategy described in Section 3 identifies a potential for 88 students to utilise buses for school travel. This number of students can be managed by a number of potential bus options. Bus strategies for the school will change over time as the school expands in later phases. Potential bus services include:

- Regular route bus – utilise the existing 565 route bus.

- School bus – dedicated or shared with other nearby schools.

- Shuttle bus – Department of Education funded shuttle service to take students to an interchange point or via a dedicated route within the catchment.

2.2 Train

The site is located about a 2km (approximately 20 minute walk) from both Lindfield and Roseville Station. Trains to Lindfield Station run frequently during peak hours along the T1 North Shore Line.

Patrons to the site would likely catch the train followed by the bus. However given that bus 565 only operates on an hourly basis, scheduling would be difficult. There is an opportunity to improve existing bus frequencies to better service the site.

The general facilities at each train station is shown in Table 3.

Table 3: General facilities at train stations

Facilities	Lindfield Station	Roseville Station
Kiss and Ride	✓	✓
Ramp (1:20 gradient)	✓	✗
Lift	✓	✗
Portable boarding ramp	✓	✓

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2.3   Walking

2.3.1   Existing footpath conditions

The site has poor pedestrian accessibility, with several footpaths and key crossing facilities missing. Missing footpath and pedestrian crossing links should be addressed to encourage walking and improve safety of pedestrians.

Footpaths are provided on both sides of Grosvenor Road, shown in Photo 1.

Photo 1: Grosvenor Road, at Lindfield Public School

On Eton Road, footpaths are only provided on the northern side of the road, shown in Photo 2.

Photo 2: Eton Road facing west (Google Street view 2016)

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An example of an improper crossing is shown in Photo 3, where kerb ramps do not align to the splitter island along Eton Road.

Photo 3: Improper splitter island at Eton Road / Ortona Road intersection (Google Street view 2016)

The missing pedestrian footpaths and crossing facilities are shown in Figure 4.

Figure 4: Missing footpaths and crossing facilities

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2.3.2   Footpath upgrades at the school

Pedestrian infrastructure upgrades will be carried out for Phase 1 within the vicinity of the school boundary as shown in Figure 5.
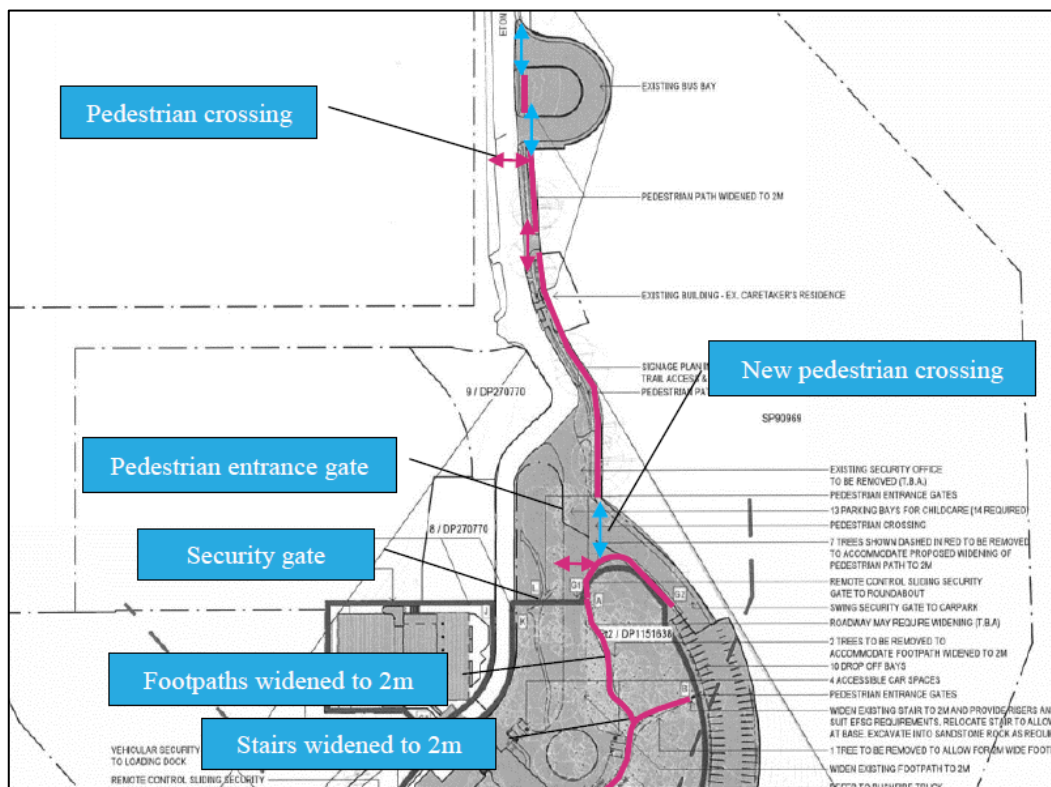

Figure 5: Pedestrian upgrades for Phase 1

2.3.3   Footpath upgrades on the local road network

Further upgrades to the wider local road network should also be considered to improve walkability to the school. A continuous footpath route from Lindfield Learning Village to Lindfield Public School and the Pacific Highway has been identified as a good spine route. The potential works are itemised in Table 4 and include footpath widening in narrow sections, pedestrian crossing points and new footpaths where missing. The Department of Education are keen to work with Council to identify ways of funding and including these works on the forward works program.

Table 4: Potential footpath upgrade works

Location	Potential footpath works
1, 2, 4 and 8	Footpath upgrade – widening or new surface
3 and 5	Pedestrian crossing locations – zebra or refuge
6 and 7	New footpath

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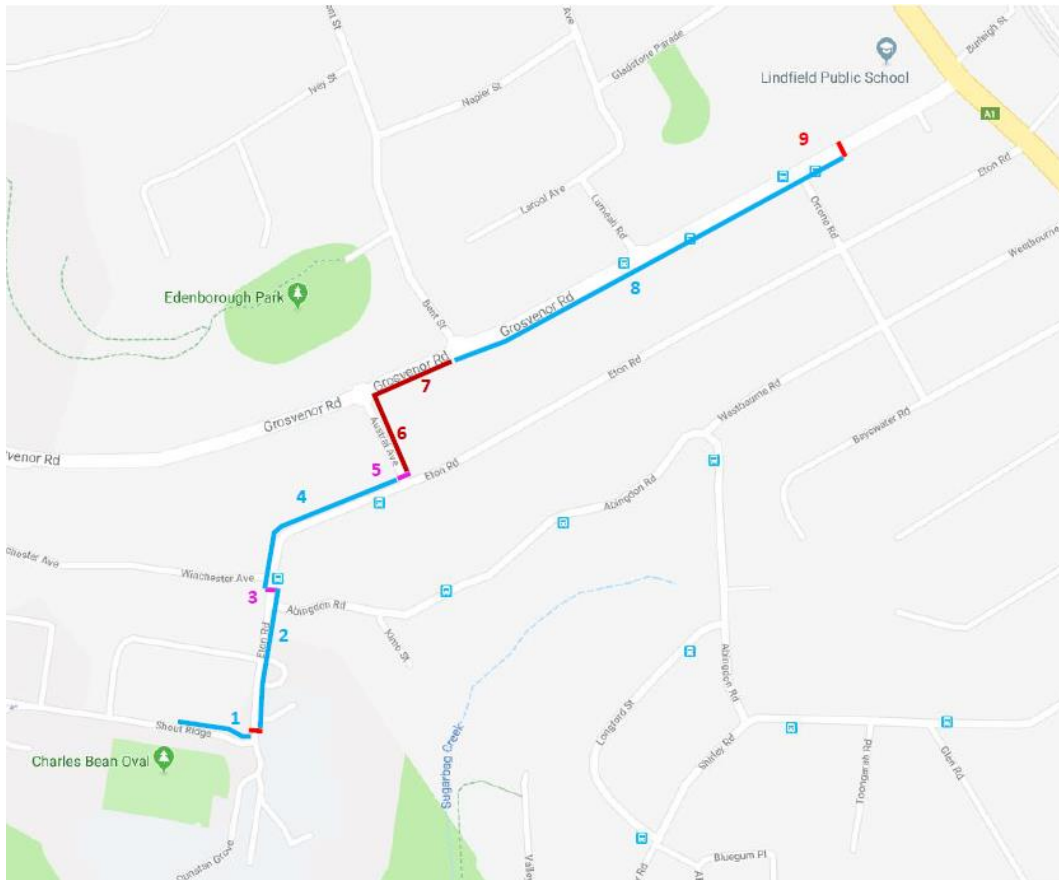
Figure 6: Potential spine pedestrian route

2.3.4 Safety

Eton Road, south of Winchester Road should have reduced speeds to 40km/h which is most appropriately enforced by implementing a school zone. It is noted that the school start times are different from typical schools with the following start and finish times:

- 2 homebases commence at 7:30am, finish at 2:00pm

- 2 homebases commence at 8:30am, finish at 3:00pm

- 2 homebases commence at 9:00am, finish at 3:30pm

Whilst there is precedence for changing the standard school zone timings this may not be appropriate at the learning village. Roads and Maritime is unsupportive of school zones given it is a policy change issue which will take time to implement. It was agreed in the meeting that temporary measures will be investigated and implemented, such as appropriate signage and to calm traffic in the area. This is until a change in school zone policy is made in the future.

DPE has highlighted the need for this policy revision given staggered start times will be more prevalent with schools in the future. It was agreed that staggered start and finish times help ease traffic conditions. Roads and Maritime is willing to review this policy at a later stage when more schools require this policy change.

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For the Phase 1 school, standard school time can be used. The need to implement school zones will be reviewed during initial operations.

2.4   Cycling

The recommended RMS cycle routes are shown in Figure 7. While the Pacific Highway does not provide a dedicated cycle route, the site can be accessed from a network of smaller, more accessible local streets.
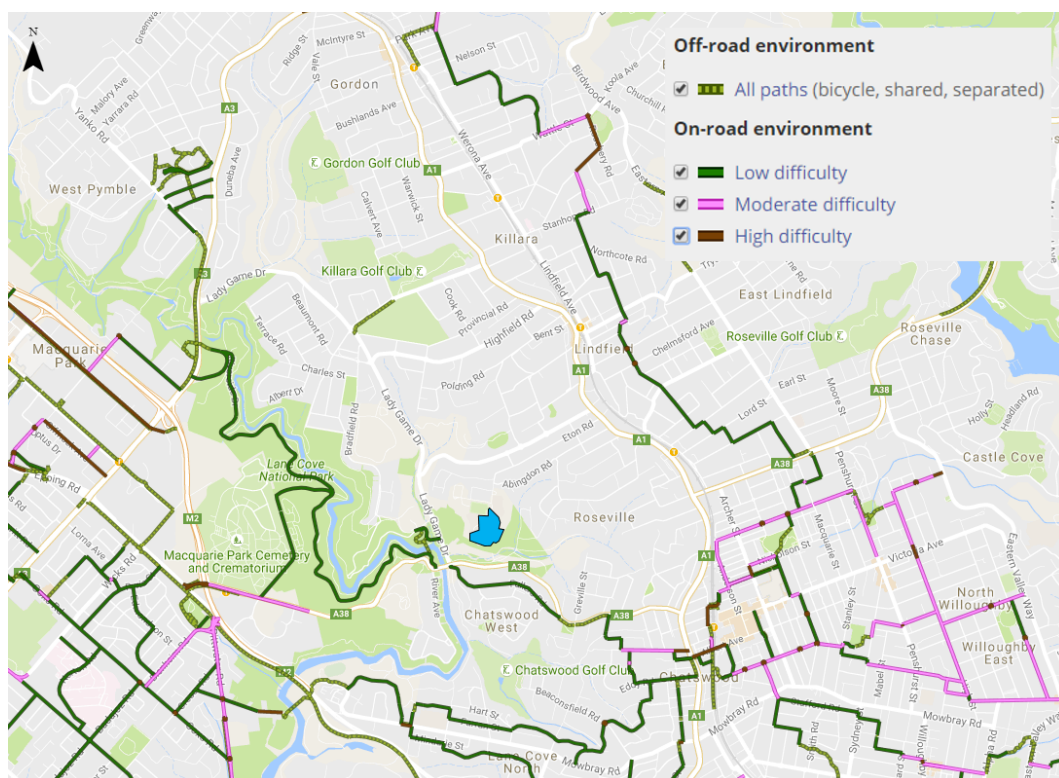
Figure 7: RMS recommended cycle routes

2.5   School catchment

The school catchment is not determined at this stage and will develop as the school matures. Enrolments will be focused on developing a local catchment which will reduced travel distance and permit active transport strategies to be adopted.

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3 Travel mode targets

3.1 Student travel

The school has started taking enquiries for enrolments which provides an indication of the home locations. Given that the school will be setting up a new catchment with adjustments to the existing school catchments needed, initial enrolments are unlikely to be constrained although preference may be given to students living closer to the school.

The other aspect of enrolments that would affect travel habits is the age of the students. Based on the enquiries so far, a potential school student profile has been developed assuming class sizes of 25 students/class in the primary school and 30 students/class in the secondary school. It is anticipated that more secondary enrolments may be in Year 7 which makes sense to start a new secondary school with limited interest above Year 10.

Potential bus and walk/cycle mode of travel have been assigned resulting in 88 bus passengers and 35 walk/cycle from the local catchment as shown in Table 5. This means that 228 students could rely on private car drop-off and pick-up.

Table 5: Potential school student profile and travel mode

	Year	Classes	Students		Bus		Walk/cycle		Car	
					%	No	%	No	%	No
Primary	K	1	25	225	0%	0	10%	3	90%	23
	1	1	25		0%	0	10%	3	90%	23
	2	1	25		0%	0	10%	3	90%	23
	3	1	25		0%	0	10%	3	90%	23
	4	1	25		20%	5	10%	3	70%	18
	5	2	50		20%	10	10%	5	70%	35
	6	2	50		20%	10	10%	5	70%	35
Secondary	7	2	65	125	50%	33	10%	7	40%	26
	8	1	30		50%	15	10%	3	40%	12
	9	1	30		50%	15	10%	3	40%	12
	10	0	0		50%	0	10%	0	40%	0
	11	0	0		50%	0	10%	0	40%	0
	12	0	0		50%	0	10%	0	40%	0
Total		**13**	**350**			**88**		**35**		**228**

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3.1.1   School buses

An appropriate school bus route will be developed with consultation of TfNSW, bus companies, and surrounding schools.

Each school bus can accommodate approximately 70 students. The number of school buses serving the school is subject to sharing the school buses with other schools.

3.1.2   School bus routes

School bus routes can be tailored to suit the needs of the learning village. This can be done by altering existing bus routes or introducing a new bus route. Schools near the learning village, which include

- Chatswood High School (Forest Coaches, Transdev)
- Chatswood Public School (Forest Coaches, Transdev)
- Roseville Public School (Transdev)
- Beaumont Road Public School (Shorelink Bus 565)

Figure 8: School bus 683 which stops at Chatswood Station

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3.1.3   Public bus

A bus stop and bus loop is located just north of the site, providing convenient access to future patrons from Bus Route 565. The bus route services key train stations which high train frequencies such as Macquarie University, Chatswood, Lindfield and Roseville. Improving the public bus system would not only provide convenient access to the school, but also to existing and future residents living in the vicinity.

Improving bus frequencies

The existing bus route 565 only runs once every hour, which would make it difficult for students and staff to access and may prove to be a capacity issue. Increasing the frequencies during School peak periods would allow students and staff to more easily access the buses from the train stations and would be viewed as a more convenient mode of transport.

The bus route currently serves Beumont Road Public School. This improved bus frequency would also provide amenity to the Beumont Road Public School and residential dwelling located around the site.

According to Sydney Buses, rigid buses (standard) carry a maximum of 58 people (43 seated and 15 standing) or some 70 students. For the purpose of this analysis, each bus would be able to accommodate 60 students.

It is recommended that bus frequencies are increased up to three buses per hour in each direction for Phase one. This would increase bus reliability and encourage usage early on.

Table 6: Recommended bus route 565 improved frequencies

School peak period	Proposed frequency for Phase 1	Proposed frequency for final phase	Primary user type
7:30am to 9:00am	3 per hour	5 per hour	Students, staff, residents
2:30pm to 4:00pm	3 per hour	5 per hour	Students, staff,
4:00pm to 7:00pm	3 per hour	3 per hour	Staff, extracurricular students, residents

3.1.4   Private vehicle drop-of and pick-up

Allowance has been made on the site in Car Park 2 for private vehicle drop-off and pick-up of students as shown in Figure 9. There is flexibility on site to vary the way this operation occurs however the extent of private vehicle access needs to be managed with use of school buses being a key focus of more sustainable travel choices for students.
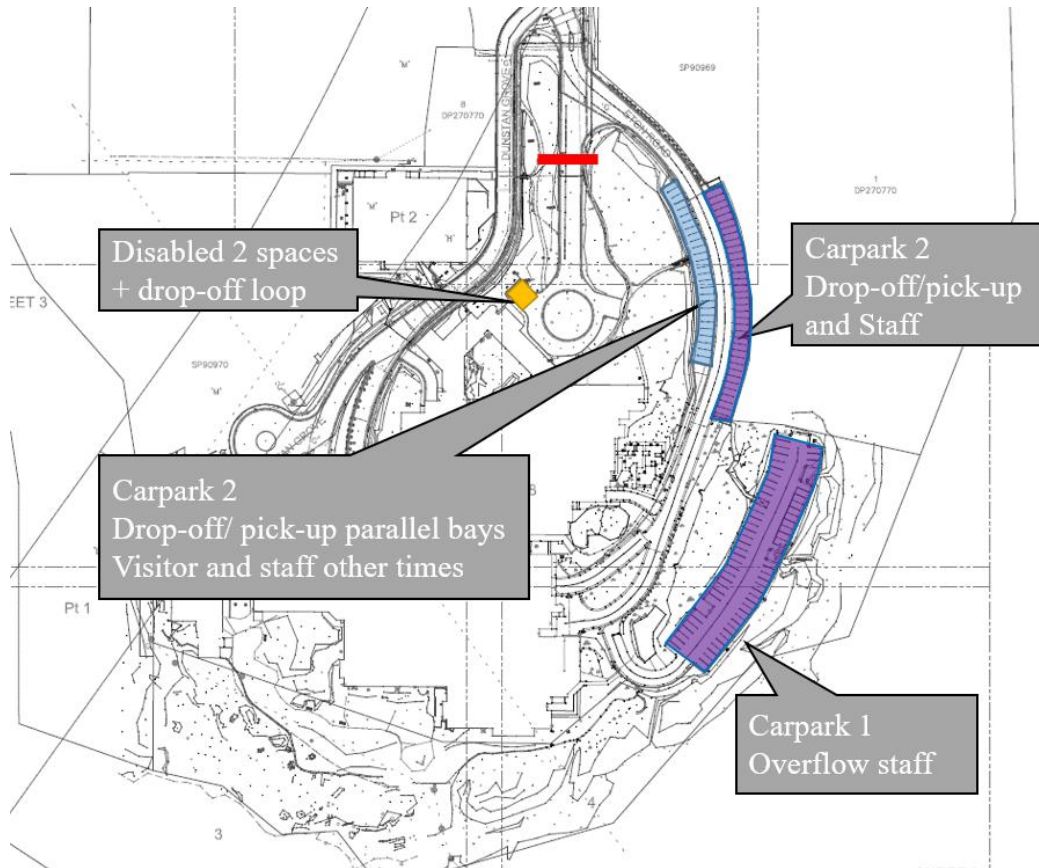
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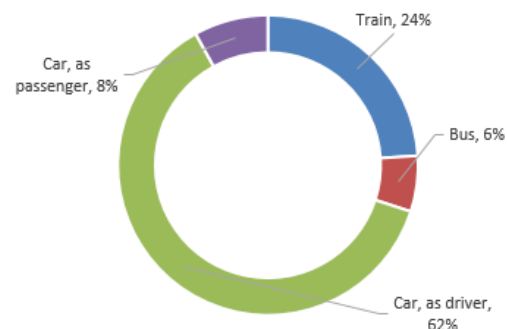
Figure 9: Drop-off / pick-up areas

3.2   Future student travel target

For student travel a 10% reduction target should be set for private vehicle drop-off as the school access strategy develops. This may be further reduced if carpooling strategies are adopted.

3.3   Staff travel

Based on the journey to work travel data, some 70% of employees in this area are a car driver or passenger to work. Given that there will be car parking available for staff on site, it could be expected that the majority of staff will drive.

The target for staff travel by private car should be set at 70% to encourage public transport, carpooling or active travel modes.

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4　　Transport Strategies

This section discusses the various transport strategies which the Learning Village may implement, before and during the implementation of Phase 1 of the school.
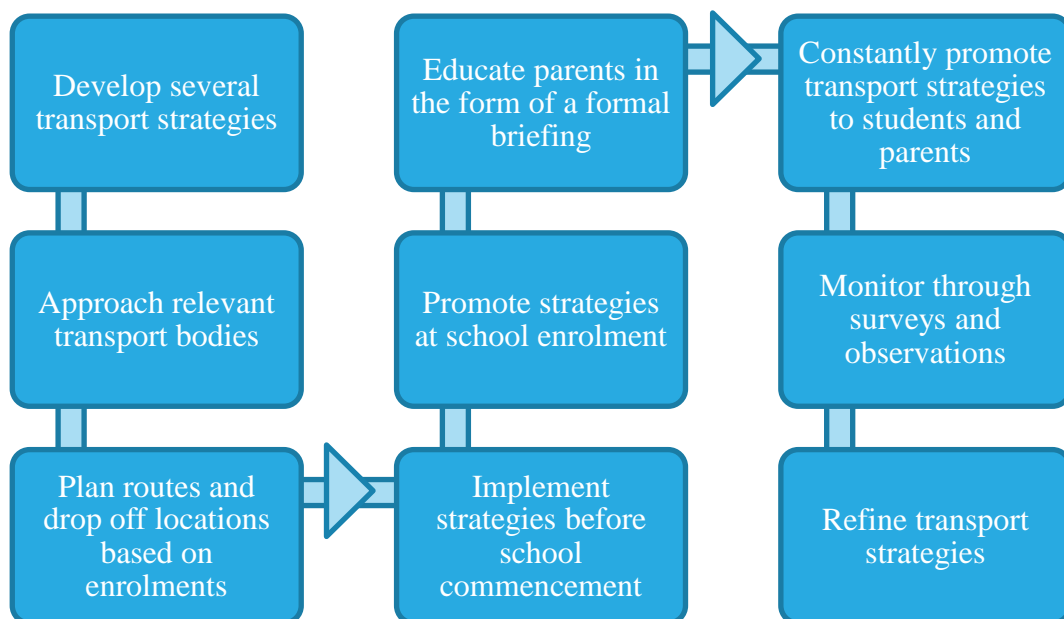
4.1　　Early implementation

Convenient and legible means of public transport and active transport, to and from the school should be provided before opening of Phase 1.

Establishing sustainable transport habits to and from the school, at early inception stages, will be crucial to the success of the school both in early and later stages. Providing highly efficient public transport for students from opening day, would attract cultivate sustainable public transport based commuting habits.

Evidence from new residential developments studied in Sydney, suggests that enabling such habits from an early stage will be more successful to implement than trying to change private vehicle reliant travel habits in the future. This poses several advantages to the school, as well as the wider network:

- **Healthier students** – Students who use active and public transport will be encouraged to walk or cycle more than children who take private vehicles

- **Easing congestion** – The school can reduce forecast congestion of the surrounding road network due to development trips, through the provision of a multi-modal and efficient public transport system.

- **Feasibility testing** – Early implementation of sustainable transport means allows the measure of the effectiveness in moving students away from private vehicles

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4.2   Subsidised public transport travel

The School Student Transport Scheme (SSTS)[1]. The SSTS provides eligible school students with free or subsidised travel on public transport between home and school, on trains, buses, ferries and long distance coach services.

This initiative can be implemented before the opening of the school. An information package can be sent to parents to inform them of this scheme. The Learning Village can also assist parents in applying for this scheme for the students.
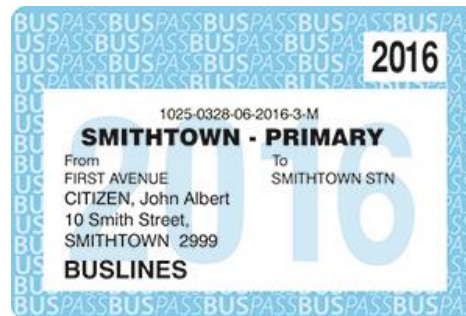

Figure 10: Student Opal Card

Figure 11: Travel pass for students in rural/regional areas

To be eligible for this scheme, students need to be a resident of NSW, or an overseas student eligible for free government education. Other criteria are stated below.

Students from Kindergarten-Year 2 are eligible if:

- Aged 4 years 6 months, or older.
- No minimum distance criteria applies to these students.

Primary school students from years 3-6 are eligible if:

- The straight line distance from their home address to school is 1.6 km or further.
- The walking distance from home to school is 2.3 km or further.

Secondary school students from years 7-12 are eligible if:

- The straight line distance from their home address to school is 2 kilometres, or further, or
- The walking distance from home to school is 2.9 kilometres or further.

School students who live too close to the school to be eligible for free travel may qualify for a School Term Bus Pass which provides bus travel at a discounted price for the whole school term.

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[1] (http://www.131500.com.au/planyourtrip/ upload/links/schoolstudenttransportscheme)

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4.3 Carpooling

4.3.1 Overview

The Learning Village may set up a system where real-time carpool information from participants can be displayed or changed. Schedules can be managed through a cloud, google maps or various smartphone applications. Carpooling should be a long term initiative. With consistent promotion of this travel mode and incentives, students and parents will become aware of the benefits and convenience.

An implementation strategy would need to be considered so that student privacy is protected. It is assumed that such an initiative would likely operate through parents on a carpooling forum. This initiative would operate under management of the Learning Village by encouraging parents to be proactive in offering carpooling services.

4.3.2 Awareness

The easiest way of setting up a carpool programme would be to organise booths and provide handouts during school enrolments and registrations. This would educate the parents that the initiative exists. A formal briefing can also be organised, educating parents of the chosen carpool platform. This would also allow parents to meet face to face.

This can be further promoted in Learning Village newsletters, parent teacher meetings and by educating students on the benefits of this initiative. As an incentive for parents, car pool stickers can be given out, giving these shared cars prioritised and designated drop off locations.

Carpooling initiatives provide an opportunity to significantly reduce cars on the road network.

4.3.3 Car pool Apps

A range of free apps are currently available online to assist with the implementation of this initiative; two examples are provided below for information. The School will investigate the most appropriate app that aligns with its Child Protection Policies before promoting this initiative.

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4.4 Promoting transport strategies

Before and after the implementation of the preferred travel alternatives, the Learning Village should develop ways to promote and support the travel methods continuously. This section details several initiatives which can be carried out.

4.4.1 Promoting green travel

Marketing and encouraging the different travel strategies will be an important aspect in promoting and implementing the plan. Getting students and staff involved will create a more relaxed and fun environment to encourage students and staff to walk or cycle to Learning Village.

4.4.2 Technology

In previous studies carried out by Arup, the issue of students carrying heavy bags was identified as a reason why students are less likely to walk to school.

A culture shift to electronic based teaching and learning is required to aid the initiatives identified. Text books could be provided electronically to limit the need to carry heavy books to and from Learning Village. Therefore, students will then have to carry less material to school.

4.4.3 Student involvement

Student involvement is a fun way of educating them about active travel. For example, Cottesloe Primary holds a drawing contest for the healthy travel to School plan logo. Student leaders are also appointed who will encourage and teach peers on the benefits of active transport. These leaders should be properly trained in road safety rules which will help educate peers. This will boost the Learning Village spirit and foster leadership skills to achieve change. Some possible incentives include:

- Food or snack vouchers can be given to students who walk or cycle to Learning Village. This can be given out to by teachers at entrances.

- Pedometers for walking competitions

- Awards such as different pins for cyclists or children who walk to Learning Village

- Most number of steps walked for each year competition

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4.4.4   Active travel

A mode shift from motorised transportation (principally being driven by car) to active transport improves children's health by[2]:

- Increasing levels of physical activity (and associated physical, psychological and social health benefits)

- Helping children maintain healthy weight

- Reducing injury due to motor vehicle crashes

- Reducing the environmental health damage caused by excessive car use (eg air and noise pollution, global warming)

- Reducing inequalities in children's health associated with physical activity, obesity, and motor vehicle crash injuries.

The Learning Village would support students walking to precinct either for the entire journey or for the last part of a journey from a drop-off point remote from the Learning Village.

There are a number of approaches the Learning Village could take to provide input to improving pedestrian facilities around the Learning Village.

- Local Councils are required to maintain footpaths and crossing points to meet public requirements.

- Safe Routes to school is a road safety program that aims to reduce children's involvement in road accidents. These require the agencies to work together where there is an identified need.

- Local Councils usually undertake PAMP studies across defined areas. This then enables funding to be allocated between local and state government to implement the recommendations of the study.

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[2] Active transport: Children and young people, Dr Jan Garrard, 2009

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4.5   Measuring effectiveness of transport strategies

4.5.1   Questionnaire

As discussed above, early planning and implementation of transport strategies before the opening of the school is crucial to the success of enabling long term sustainable transport modes. The school shall provide travel surveys to students and parents at 3, 6 and 12 months upon opening of the school.

The questionnaire surveys should be aimed at understanding how students are travelling to school. It should also assess the reason for not taking public transport. Based on the findings, the transport strategies should be improved and customised to suit the needs of these students.
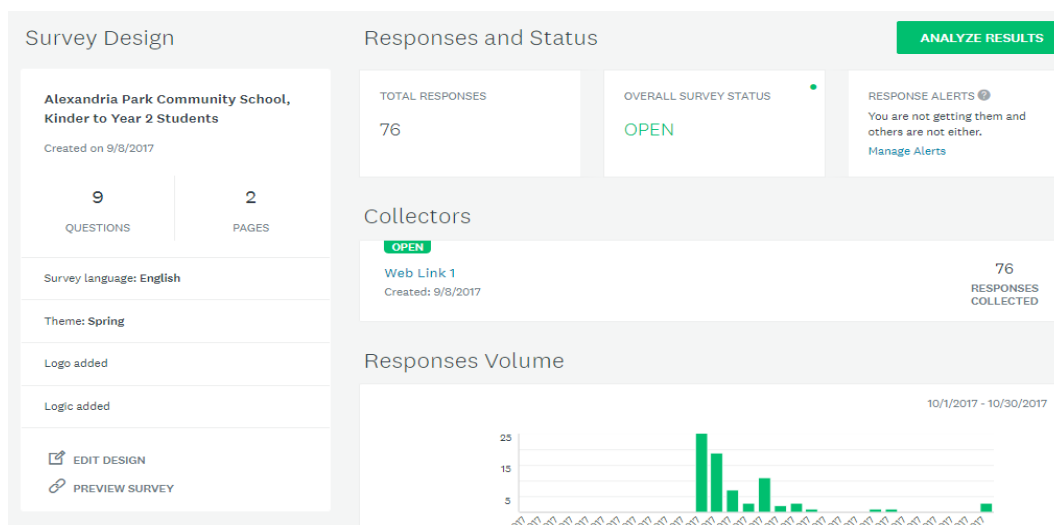

Figure 12: Survey monkey travel survey recently conducted for a school by Arup

4.5.2   Mode split

The school should strive to achieve a healthy mode split for Phase 1 students. The recommendations from the previous transport study is shown in Figure 13. Transport strategies should be constantly adjusted to achieve these splits.
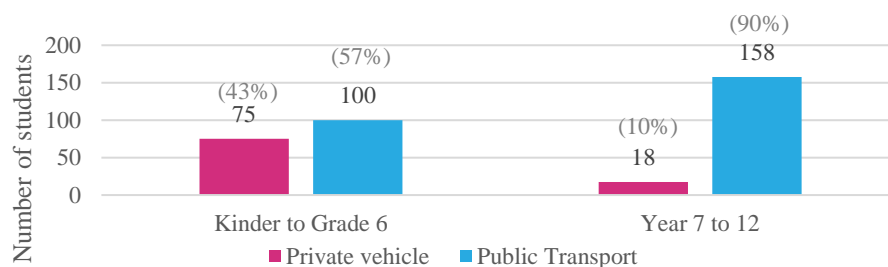

Figure 13: Recommended target mode split

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5   Green Travel Plan Framework

This Green Travel Plan specific for the school needs to address the following issues:

- What are the **objectives** for the school in terms of travel journeys to and from the school, during school hours and other travel to and from the school?

- How are the set objectives going to be met? What **measures** are going to be implemented and encouraged?

- Who is going to be responsible for the management, implementation and administration of the measures?

- How will students and staff be encouraged to reduce car dependent travel?

These matters are addressed in the following sections.

5.1   Green Travel Plan Objectives

The main objectives of the Green Travel Plan are to reduce the need to travel and promotion of sustainable means of transport.

The more specific objectives include:

- High modal share for public transport, cycling and walking to school journeys;

- To ensure adequate facilities are provided at the site to enable staff, visitors and students to commute by sustainable transport modes;

- To reduce the number of car journeys associated with business travel by staff and visitors;

- To facilitate the sustainable and safe travel of new staff;

- To reduce the need to travel for work-related activities; and

- To raise awareness of sustainable transport amongst staff, students and visitors.

5.2   Green Travel Plan Measures

A range of travel method alternatives have been recommended as well as incentives to change travel behaviour over the short and longer term period. The purpose is to encourage mode shifts away from private vehicle usage and create a positive outlook for active transport.

These initiatives aim to improve the existing and future conditions of the school population increase by:

- Reducing private vehicle usage from staff and therefore parking demand

- Reducing private vehicle usage (pick-ups and drop-offs) from students

- Reducing traffic congestion and improving intersection performance

The modal shift associated with these travel methods aim to reduce car trips to the development so there is reduced impact from School population and proposed development increases on existing traffic conditions.

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5.2.1 Existing School Measures

Currently students have to pay for public transport if they live within a certain distance of the School. This varies between the year groups and costs up to $52 per term if they live within the distances as follows:

- a primary student (Years 3-6) who lives more than 1.6km (radial distance) from school, or 2.3km or more by the most direct practical walking route

- a secondary student (Year 7-12) who lives more than 2km (radial distance) from school, or 2.9km or more by the most direct practical walking route

It should be noted that an infant student (K, Year 1 and Year 2) older than 4 years and 6 months who lives any distance between home and school does not need to pay for public transport passes.

The School will coordinate the process of having bus passes arranged for students. The School will raise awareness of this as an offering, to encourage greater use of public transport.

5.2.2 General Marketing and Promotion

The objectives of the Green Travel Plan will only be achieved with the support of staff and student's parents. Marketing the benefits and promoting the sustainable alternatives available are therefore crucial in encouraging staff and students to adopt the Green Travel Plan measures. It is important that at an early stage, everyone is made aware of the need for the Green Travel Plan, and that it is emphasised that the measures are being introduced to support and encourage people to use cars more wisely.

In addition to raising general awareness, any successes achieved will be fully publicised to staff and students in order to motivate them to use sustainable modes of transport.

- A dedicated webpage for employees could be created to include travel information section containing information on cycle parking and useful links to public transport websites specific to the school location; and

- Support and promote events such as National Bike Week, Bike2Work Days, walk to work day to staff through lunch time presentations or students during assembly, notice board posters, newsletters intranet and email.

5.2.3 Cycling

As described in Section 2.4, the school has reasonable access to the cycling network and will provide onsite facilities for cyclists (i.e. easily accessible bike room/shelter, changing rooms and showers, lockers etc.). There are no known planned upgrades to cycle facilities in the immediate area however the school will take an interest in future redevelopment of initiatives through Ku-ring-gai Council. In order to activate and promote cycling the following measures should be considered:

- Supply a Green toolkit-this can consist of puncture repair equipment, a bike pump, a spare lock and lights;

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- Come to an arrangement with a local cycle retailer for cheap servicing of student and staff bikes. If people buy enough bikes from the retailer, they may agree to service them for free;

- Consider providing interest-free loans for staff to buy a bicycle and accessories, which they then pay back from their wages;

- Provide cycle maps to staff and students;

- Participate in annual events such as 'Ride to Work Day';

- Notice boards should have news of events / generic posters promoting cycling;

- The schools should have a 'Cycling to school' webpage specific for their school containing details of storage areas, shower facilities and links on the intranet containing useful links to journey planning websites in Sydney;

- Make staff and students aware of public transport cycling carriage policies and cycle storage facilities at rail stations;

- Staff and students who cycle should be encouraged to form a Bicycle User Group in order to provide a body of regular cyclists who can discuss issues relating to the provision of on-site cycling facilities and the maintenance of off-site cycle routes; and

- Set up 'Bike Buddies' scheme for less confident people interested in cycling.

5.2.4   Public Transport

To promote the use of public transport for travel to school and school-related journeys during the day.

- Provide a minimal number of parking spaces for staff within the school sites to encourage the use of public transport travel;

- Manage the student drop-off and pick-up areas surrounding the schools;

- Provide an intranet public transport page to contain useful links to journey planning websites in Sydney;

- Provide useful public transport maps and promotional items to potential and current public transport users in the existing induction pack for new employees; and

- Provide notice boards that should have news of events / generic posters promoting public transport.

5.2.5   Walking

Specific Travel Plan measures designed to encourage more walking trips to and from the schools by those staff and students living within a reasonable distance. The existing footpath network is well connected with safe crossing locations available at zebra crossings and traffic signal crossings. Safety of pedestrian routes will be monitored by the school and parents and where necessary the School will work with Council to address any identified issues.

Other initiatives that could be explored include:

- Produce a map showing the most direct route connecting the transport interchange and schools, along with the estimated walking time;

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- Produce walking related articles for inclusion in the school newsletters focussing on 'walking champions' to highlight best practise in walking;

- Create and maintain an intranet 'useful walking routes' containing useful routes to key areas;

- Make pedometers available to staff and students expressing an interest in walking to school;

- Participate in Walk to Work day and look into holding a 'healthy breakfast' as a reward to all those who participate; and

- Facilitate the walking school bus initiative.

5.2.6   Car pooling, taxi share and shuttle bus service

In order to reduce the number of car trips and especially trips made to common destinations the following measures should be considered:

- Set up a journey to/from school car share system for all staff who are willing to participate in the scheme. The system would inform participants of other staff who live in the same area or who pass through the area on their way to the schools. The participants either share the costs or alternate in driving to the schools;

- Utilise a range of free apps currently available online to assist with the implementation of this initiative. The schools will need to investigate the most appropriate app that aligns with its Child Protection Policies before promoting this initiative; and

- Introduce a taxi or pool car share system for trips during the day for staff.

5.2.7   Staff Induction

To ensure new members of staff are aware of car parking arrangements and the Green Travel Plan, all staff members should be made aware of the Plan as part of their induction process. The Green Travel Plan section of the induction should provide new starters with the following:

- A brief introduction to the Green Travel Plan and its purpose;

- Tour of the schools to include visit cycle parking areas and shower and changing facilities; and

- Provision of a Green Travel Plan information package which would include information on incentives to use sustainable means of transport e.g. pool bikes and car/taxi share system.

5.3   Scheme Administration

5.3.1   Administration

An essential part of an effective Green Travel Plan is to nominate a Travel Plan Co-ordinator for both the primary and secondary school. The role should be undertaken by enthusiastic and high quality communicators in order to promote measures that will encourage people to think about travel other than as a single occupancy car user. He/she will need to be an enthusiastic and respected member

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of staff who is keen to champion the cause of the Travel Plan. Other qualities that may be appropriate include the capability of dealing with all types of people within the schools and external organisations, the ability to lead by example, the ability to approach issues with a practical and balanced perspective and the capability for original and innovative thinking to raise awareness of the Travel Plan at a local level.

Senior management support is critical to ensuring the success of any travel plan for a number of reasons such as to:

• Lead by example;

• Allow budget allocations for the implementation of measures; and

• Give support to changes or development of policy documentation.

Administration of the Travel Plan involves the maintenance of necessary systems, data and paperwork, consultation and promotion.

5.3.2   Consultation

The success of the Green Travel Plan will rely on the support of the employees which will be overseen by the Green Travel Plan co-ordinator. The school should also support staff administrative needs such as providing lockers and storage spaces, reducing the need for staff to carry bulky items home.

The Green Travel Plan co-ordinator will be responsible for all liaisons with outside bodies, including local transport operators, planning and highway authorities.

Liaison with officers of the Council (e.g. those responsible for cycling and public transport will be undertaken as required). The co-ordinator will also seek to join and attend meetings with any local travel forums as appropriate in order to exchange ideas with other like-minded organisations.

5.3.3   Promotion

All students and staff will be made aware of the details of the Green Travel Plan, its objectives in enhancing the environment and the role of individuals in achieving its objectives at its launch.

Other promotional material will take a variety of forms and will be issued either to individual staff members and students, displayed in a prominent location in the school or provided in the form of 'one off' marketing initiatives. This would include outlining the benefits for the school in participating in government travel surveys to both improve public transport services and promote the use of public transport.

The promotional material will advise employees wishing to raise specific transport-related matters to discuss them with the appropriate nominated Travel Plan co-ordinator who in turn would liaise with the Green Travel Plan management team, transport operators and the local authority as required.

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5.3.4 Updating, reviewing and monitoring

The Green Travel Plan is a strategy that will evolve over time. Although the objectives of the Plan to 'educate' students and staff, and to facilitate travel by sustainable modes will not change, it may be possible over time to define or re-define specific targets. Target setting should reflect an ambition for continued progress year on year and there should be a mechanism to review targets in light of monitoring surveys. The monitoring measures could include collecting data on travel patterns for journeys to school and also during the school hours. The recorded data would inform modes of transport and distance travelled by each mode, from which energy consumption and emissions could be estimated.

Following the implementation to the Green Travel Plan, the Green Travel Plan management team should meet annually to undertake a review of the Travel Plan measures in place. The objective will be to measure their success and to identify the potential for refinements. The plan would be updated to consider firmer details of the initiatives of the Future Transport Strategy 2056, as they are forthcoming. The management team will further engage with Government to assist in designing and operating services which best support the needs to the students and staff, and therefore promote high levels of sustainable transport modes.

The Green Travel Plan management team will then compile a review report outlining the results of the review. The report will also incorporate the results of on-going monitoring processes throughout each of the preceding periods.

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6 Conclusion

Implementation of a Green Travel Plan and travel demand measures are essential for providing access to students, staff and visitors of Lindfield Learning Village in a sustainable way and meeting lower car mode share targets. The Green Travel Plan will contribute to a healthier and better quality of life for students and staff, and a reduction in air and noise pollution. The schools will benefit from more productive staff and students, cost savings and reduced demand for car parking.

Staff should be informed, inducted and educated of the travel mode targets. They should also be given ample notice and support in transitioning from driving to work, to taking public transport. The school should also support staff administrative needs such as providing lockers and storage spaces, reducing the need for staff to carry bulky items home.

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