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L)	N/A	154 m <sup>2</sup>	116 m <sup>2</sup>

DRAWING: AREA DIAGRAMS



## Appendix C

Traffic Management Plan



# Traffic Management Plan

Proposed Expansion to the Dover Heights Shule Cnr Napier Street and Blake Street, Dover Heights.

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Reference: Date: 16.086r02v04 TRAFFIX TMP Report; November 2016



## **Document Verification**

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## Contents

1. Introd	duction	1
2. Traffi	c Management Objectives	2
3. Over	view of Site Operations	3
3.1 3.2 3.3	Site Location Existing Site Car Parking Provision Existing Site Operation Details	3 6 8
4. Sumr	mary of Proposed Development	9
4.1 4.2 4.3 4.4	Development Proposal Proposed Operation of the Dover Heights Shule Proposed Changes to Parking Provision Servicing	9 9 10 12
5. Trave	el Strategies	13
5.1 5.2 5.3	Objectives Management of Off-Street Parking Facilities Walking and Cycling Routes	13 13 14
6. Moni	toring and Measurement	17
6.1 6.2 <b>7. Mana</b>	Roles and Responsibilities Promotional Information agement Review	17 19 <b>20</b>
8. Conc	•	21



## 1. Introduction

TRAFFIX has been commissioned by the Dover Heights Shule to undertake a Traffic Management Plan (TMP) in support of a Planning Proposal relating to the expansion of the existing Shule located on the corner of Napier Street and Blake Street, Dover Heights to accommodate an additional 164 seats with in the Shule and an Ancillary Hall which accommodates a total of 220 seats.

The TMP is a key workplace document that has legal standing. As such, potential hazards will be identified, risks are assessed and the proposed treatments can be found within this TMP. The TMP should be referred to for all management of traffic for the Dover Heights Shule.

- Section 2: Objectives of the TMP
- Section 3: Existing Site Operation Information
- Section 4: Proposed Site Operation Information
- Section 5: Proposed Travel Strategies
- Section 6: Monitoring and Measurement
- Section 7: Management Review
- Section 8: Conclusion



## 2. Traffic Management Objectives

The target audience of this plan are the staff and visitors to the Dover Heights Shule. The aim of the upon private TMP is to reduce dependency vehicle use and kerb side parking through a plan which provides information regarding off-street parking facilities, public transport, bicycle facilities, car share schemes and private services for staff and visitors of the Shule. It is noted that visitors of the Shule have a doctrinal belief that worshippers should walk to and from services at the Shule. Therefore, the target audience is a small proportion of the staff and visitors of the Shule only.

The primary objectives of the Dover Heights Shule TMP are as follows:

- Ensure the safety of staff, the public and those who will be impacted by traffic during site operations;
- Ensure that road users are aware of any proposed changed traffic conditions at that risks are identified and mitigated; and
- Ensure that the local road network will not be impacted by traffic generated due to the Shule's operation.



## 3. Overview of Site Operations

### 3.1 Site Location

The site is situated approximately 3.6 kilometres north-east of Bondi Junction and approximately 7.1 kilometres north-east of the Sydney CBD. More specifically, the site is situated adjacent to the Kesser Torah College and Rodney Reserve in Dover Heights and on the corner of Blake Street and Napier Street.

The site is irregular in configuration and has a total area of approximately 1,295m<sup>2</sup>. It currently accommodates the Dover Heights Shule. It has a western frontage of approximately 60 metres to Napier Street with a northern boundary of approximately 18 metres to the Kesser Torah College and residential properties, an eastern boundary of approximately 60 metres to the Kesser Torah College and a southern boundary of approximately 17 metres to The Kesser Torah College carpark.

Vehicular access is currently provided via a 6.9 metre wide driveway onto Blake Street, which serves the Kesser Torah College car park and Shule car park which currently accommodates eight (8) off-street parking spaces.

A Location Plan is presented in Figure 1, with a Site Plan presented in Figure 2.





Figure 1: Location Plan





Figure 2: Site Plan



### 3.2 Existing Site Car Parking Provision

The Shule's current vehicular access and car parking is within Car Park 1. **Figure 3** shows the arrangement of the existing Car Park 1 which lies within one of the three (3) car parks for the Kesser Torah School. The existing car park provision is provided in **Table 1** below.

Car Park Location	Existing Capacity	Use
Car Park 1	18 spaces	Used by the Shule, Kesser Torah College and Pre-School pick up / drop off
Car Park 2	27 spaces	Used by Kesser Torah College, exclusively
Car Park 3	30 spaces	Car Park is available for Shule Patrons outside of Kesser Torah College operating hours.
TOTAL:	75 spaces	

#### Table 1: Dover Heights Shule and Kesser Torah College Car Park Provision and Use

The Car Park 1 accommodates eighteen (18) car spaces. Seven (7) of these car spaces fall within the Shule's car parking area and are utilised by the Shule's staff and visitors. However, only three (3) of these spaces are exclusively used by the Shule's staff and visitors. Eleven (11) car spaces are utilised by the Kesser Torah Colleges Day Car pick up / drop off and the remainder three (3) spaces are not signposted which are used by both the College and the Shule.

The existing car park area includes a security booth which is monitored security personnel. The car park also has additional security measures including an electric fence, rising bollard and a boom gate. These security devices ensure the occupants of the car park utilise the correct parking spaces.





### Figure 3: Car Park Layout



## 3.3 Existing Site Operation Details

The Shule operates a range of regular religious and educational services as well as hosting several larger events throughout the year. The existing operations of the Dover Heights Shule are provided in **Table 2** below.

Operation	Existing Arrangement
Religious	Religious Services are conducted from Monday to Sunday.
Services	Main Congregational services occur on Friday nights from 5:30pm to 7:00pm and Saturday mornings. These services are typically attended by 100-200 people. Attendees do not drive to these services.
	Regular Small Services occur Monday - Sunday between 6:30am to 7:00am and Saturday between 9:30am to 12:15 pm. These services are typically attended by 10 - 15 people of which approximately 5 - 10 people drive.
Small Events	Small events are held in conjunction with services such as Kiddushim, Shabbat & Mevorachim. These events occur directly before or after services and are currently held within the Foyer or Kesser Torah College (KTC) courtyard and sit down lunches on Saturdays in KTC hall or Zal "small hall". The Kitchen accommodates for catering of these events.
Youth Group Programs	The Shule provides Educational, Religious & Social programs during the Friday night and Saturday morning services. Youth programs are provided for boys and girls across various age groups. These activities are typically convened within the KTC classrooms and courtyard.
Office Admin & Appointments	The Shule currently employs one full time staff member (Rabbi) and three part-time staff (Admin & youth Directors). There are typically two staff members on site, Monday - Friday, during operation hours. Staff typically drive to work and park in Car Park 1.
Kesser Torah	KTC has free access to the Level 1 Classrooms for educational purposes.
College Use	KTC also has access to the Shule for a variety of purposes other than religious services and instruction, including: school assemblies, trial examinations, lectures and special events. These are arranged by appointment with the Shule.
Additional Services	Additional services are held on High Holidays, Festivals and Fast Days. These occur approximately 8-10 times a year and can fall on weekdays and weekends. Typical service times are mornings (9:30am-12:30pm) and evenings (5:30pm-7:15pm). These events can attract higher than usual patron numbers of up to 150-400 people, plus up to 60-100 children. Note that the school is always closed on these days.
Events	Weekly lessons "Shiurim" held by the Rabbi.
	Currently, these occur on a Wednesday night from 8:00pm – 9:30pm, in blocks of six (6) approximately 3- 4 times a year and are attended by 20-30 people.

#### Table 2: Dover Heights Shule and Kesser Torah College Car Park Provision and Use



## 4. Summary of Proposed Development

### 4.1 Development Proposal

A detailed description of the proposed development is provided in the Statement of Environmental Effects prepared separately. In summary, the development for which approval is now sought comprises the following components:

- Extension of existing Shule on Ground level to accommodate an additional 164 seats (a total of 466 seats) with the following distribution:
  - 89 additional seats for women; and
  - 75 additional seats for men
- A net loss of one (1) off-street parking spaces within the Shule car park.
- Distance of the state of the second state of the state of
- The provision of a new ancillary hall space to Level 1 of the Shule building with a total capacity of 220 seats (not used in conjunction with the Shule)
- O The relocation of classrooms to Level 2 of the Shule building.
- Retention of the vehicular access on Blake Street.

### 4.2 Proposed Operation of the Dover Heights Shule

The Kesser Torah College and the Dover Heights Shule have different hours of operation however, at times running concurrently. This allows for the shared use of facilities within the Dover Heights Shule. The proposed operation arrangement of the Dover Heights Shule is provided in **Table 3** below. Religious services are conducted seven days a week and the Shule is also utilised for events, social meetings and educational purposes.



Table 3: Proposed	Shule Operations
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Operation	Proposed Arrangement
Religious Services	No proposed changes to existing services
Small Events	Small events are to be held within the Foyer, or is a larger space is required, with the Shule hall.
Youth Group Programs	Existing Youth Programs to remain ongoing, however these will be convened within the Shule hall.
Office Admin & Appointments	Existing staffing arrangements are to be maintained, the proposal will not require additional staff.
	Existing frequency of meetings and appointments is not expected to change.
Kesser Torah College Use	The existing arrangement with KTC is to be maintained.
Additional Services	Special services will remain ongoing as per the existing arrangement; however increased Shule seating will reduce the need for provision of an overflow Shule.
Events	Lessons will continue in Shule.

## 4.3 Proposed Changes to Parking Provision

As mentioned in Section 3.3, Car Park 1 is utilised by both the College and the Shule. In addition to the aforementioned car park, the Kesser Torah College accommodates two (2) car parks on its site. The capacity and use of all car parks are provided in **Table 4** below.

Car Park Location	Existing Capacity	Proposed Capacity	Use
Car Park 1	18 spaces	17 spaces	Used by the Shule, Kesser Torah College and Pre-School pick up / drop off
Car Park 2	27 spaces	27 spaces (No change)	Used by Kesser Torah College, exclusively
Car Park 3	30 spaces	30 spaces (No change)	Car Park is available for Shule Patrons outside of Kesser Torah College operating hours.
TOTAL:	75 spaces	74 spaces	

#### Table 4: Dover Heights Shule and Kesser Torah College Car Park Provision and Use



Waverley Council DCP 2012 does not provide specific parking rates for Places of Public Worship, therefore it is considered appropriate to adopt a first principles approach to calculate the number of parking spaces required by the Dover Heights Shule. Reference should be made to the *Traffic and Parking Management Plan* by GSA Planning (2007) for the Dover Heights Shule which provides an assessment for the number of visitors to the Synagogue each day. TRAFFIX has been provided this report and informed by the client that the numbers are relevant to today's operation. Therefore, the number of visitors and car occupancies have been adopted as provided in **Table 5** below. To maintain a conservative assessment, TRAFFIX has adopted the higher number of visitors and lower car occupancy rate, from the ranges provided. It is noteworthy, that visitors of the Shule have a doctrinal belief that worshippers should walk to and from services at the Shule.

Day	Number of Visitors (per day)	Number of Visitors by Car (per day)	Car Occupancy	Number of vehicles (per day)
Monday – Friday	37	30	3	10
Saturday- Sunday	80	30	3	10
Small Events*	60	60	3	20
Special Events*	300	75	3	28

#### **Table 5: Existing and Proposed Shule Operations**

\* Social Events are generally held during weekday evenings or weekends and do not coincide with the Kesser Toarah College operating hours.

It can be seen from Table 5 that the maximum parking requirement for the Dover Heights Shule is twenty eight (28) during special event services which occur seven (7) times throughout the year and do not coincide with the Kesser Torah College operating hours. Table 5 also indicates that the parking requirement on social events (weekday evenings and weekends) is a maximum requirement of twenty (20) parking spaces. Therefore, it is considered that the social events and festivals parking requirement can be readily accommodated within Car Park 1 and Car Park 3 which provides a total of 48 parking spaces.

The weekday maximum car parking requirement for the Dover Heights Shule is considered to be ten (10) parking spaces. It is noted that the proposed Shule site car park provides six (6) car parking spaces and is located within Car Park 1 however, the parking spaces are shared with the Day Care centre. The availability of car parking spaces in Car Park 1 are provided in **Table 6** below. It is considered that five (5) car spaces in Car Park 1 are unrestricted and can accommodate the Shule



staff and a portion of visitors to the Shule. In addition, the Shule will have access to an additional twelve (12) car parking spaces outside of Day Care pick up and drop off times.

In the event that the daily maximum number of ten (10) vehicles were to arrive during Day Care pick up and drop off times that three (3) of these vehicles could be accommodated within car park (noting that the other 2 spaces are for Shule staff) and the remainder seven (7) would utilise on-street parking along the frontages of the school. The likelihood of this scenario is extremely low as visitors to the Shule during weekdays are usually throughout the day and during business hours (i.e. after drop off and before pick up times).

#### Table 6: Proposed Car Park 1 Capacity

Car Space	Use
5 restricted	Available for Shule Staff and visitors 24 hours, 7 days
12 Childcare pick up and drop off space	Available for student pick up and drop off; Monday- Friday 8:00am- 9:30am, 3:00pm – 5:00pm; available for Shule use all other times.

Therefore, it is considered that adequate parking will be maintained for the proposed development with the net loss of one (1) parking spaces that are currently designated to the Dover Heights Shule. The security provisions surrounding car park 1 enables the parking to be managed appropriately.

### 4.4 Servicing

Servicing for the development includes deliveries for the Shule kitchen which vary day to day. Currently, delivery vehicles complete loading on-street. The servicing requirements of the proposed Shule will remain the same and therefore loading can continue to be accommodated on-street. This is considered acceptable as there will no additional deliveries needed as a result of this proposal.



## 5. Travel Strategies

### 5.1 Objectives

A number of travel strategies have been put into place to encourage active travel for staff and visitors to the Dover Heights Shule. It is emphasized that there is a strong religious requirement for Shule patrons to walk to religious services. The purpose of this Traffic Management Plan is to provide management procedures for car parking in instances that visitors to the Shule utilise private vehicles.

### 5.2 Management of Off-Street Parking Facilities

#### 5.2.1 Objectives and Targets

Dover Heights Shule and the Kesser Torah School currently provides 75 off-street parking spaces. The development application proposes the reduction of one (1) space totalling 74 off-street parking spaces. The objective of increasing the Shule's capacity is to accommodate the number of patrons already visiting the Shule. It is considered that the current parking demand will be unchanged. As discussed in Section 4.2, it is evident that all peak parking demands can be readily accommodated within the provision of parking with the proposed reduction of one (1) parking spaces. In addition, the objective of managing the off-street parking facilities is to ensure their utilisation and remove any reliance on on-street parking for staff and patrons of the Dover Heights Shule.

#### 5.2.2 Timing

It is proposed that the components of the Traffic Management Plan that can be implemented before the opening of the expansion of the Shule begin, with all other components being implemented when the expanded Shule opens.

#### 5.2.3 Responsibility

The Shule has identified an officer to set up and maintain management of the off-street parking facilities as well as manage all enquiries relating to parking for the Dover Heights Shule. The officer will be responsible for liaising with staff and visitors to the Shule to ensure that off-street parking is utilised so that there is minimal impact to on-street parking.



#### 5.2.4 Funding

The cost of any upgrade or alterations to the Dover Heights Shule and Kesser Torah College will be the financial responsibility of the Dover Heights Shule.

#### 5.2.5 Implementation

The management of off-street parking facilities for the Dover Heights Shule will be implemented by the following methods:

- A minimum of 74 car parking spaces be available at all times on site when any of the permitted uses (Shule or School) are operating, with car park 3 to be available for Shule patrons.
- The Shule is to nominate a permanent officer to be referred to as the Travel Plan Officer (nominated existing Shule employee) to patrol nearby areas of Napier and Blake Street at time when the Shule is used to ensure that no attendees park vehicles in the adjoining streets.
- Congregants attending the Shule are to be reminded on a regular basis that motor vehicles should not be parked in the nearby areas of Napier and Blake Streets.
- Avenues set up for neighbours to contact the Shule to report of parking contrary to the above, the Shule's Traffic Officer can then address any issues accordingly.

### 5.3 Walking and Cycling Routes

#### 5.3.1 Objectives and targets

Walking and cycling routes are a great way for staff and visitors to be more active and reduce reliance on private vehicles and congestion around the site. The objective of providing walking and cycling routes to staff and visitors is to promote active travel. Walking and cycling routes have been provided in **Figure 6** below. It is strongly recommended that the Travel Plan Officer promote utilises walking and cycling routes to aid promotion.





#### Figure 5: Walking and Cycling Routes to the Dover Heights Shule



#### 5.3.2 Timing

The routes shown above should be reviewed annually to ensure any changes or additions to routes in the local area are reflected. The Shule shall provide active travel education to all visitors and promote active travel through annual events.

#### 5.3.3 Responsibility

It is the responsibility of the Shule's Travel Plan Officer to work in conjunction with the Community Liason Officer to maintain route updates, organise active travel promotional documentation and ensure facilities are provided to enable staff and students to utilise walking and cycling routes.

#### 5.3.4 Funding

Funding for walking and cycling routes will be provided by the Dover Heights Shule and managed by the Shule's Travel Plan Officer and Community Liason Officer.

#### 5.3.5 Implementation

Walking and cycling routes are presented in this TMP. A comprehensive Travel Access Guide (TAG) is considered to be the most effective travel planning measure to encourage travel by alternative means other than private car. A TAG provides relevant transport and access information that would be relayed to Shule employees and visitors. In addition, it is encouraged that the Shule provides bicycle parking on the site in order to encourage additional cycle trips with employees and visitors safe in the knowledge that secure bike parking is available. This TAG information that would be provided to staff and visitors includes:

- Local public transport facilities and network maps;
- Local walking and cycling route maps; and
- Car pool information

The development of a TAG is encouraged to promote alternative modes of transport however it is highly noteworthy that such a document is generally more effective for new developments. Whilst Council's objective to reduce private vehicle usage is acknowledged, it is clear that if no parking was provided on site, then staff would continue to utilise the on-street parking in the area. Therefore, the travel targets in this case must be uniquely tailored to encourage alternative modes of transport.



## 6. Monitoring and Measurement

### 6.1 Roles and Responsibilities

A monitoring and review process for the TMP will be set out by the Dover Heights Shule to ensure that the TMP reflects any changes to the public transport network and end-of-trip facilities related to the subject site. A Travel Plan Officer will be designated with the responsibility of maintaining the TMP. This Officer will also assess the modal-split for staff and visitors accessing the site, once operational and revisit the proposed targets if necessary.

Regular review of the measures outlined in this plan should be undertaken intermittently to determine whether alternative or supplementary measures are necessary. It is recommended that a survey will be conducted by visitors and staff every 12 months to monitor the progress of targets as documented above, which will be undertaken by the Travel Plan Officer and Kesser Torah College Principal. The survey will include (and will not be limited to) transport modal splits for both visitors and staff. This evaluation will provide a reliable overview of the areas in which the TMP is operating effectively and which areas require more attention. However, it is noted that the above targets are primarily indicative and the travel plan and targets will require on-going evaluation and fine-tuning.

Table 7 below identifies the roles and responsibilities in the delivery of this TMP.



#### Table 7: Contact Details for Responsible Personnel

Role	Person Responsible	E-mail	Phone	Responsibilities
Travel Plan Officer	Shule Employee	Shule to Provide	Shule to Provide	Management of off-street parking spaces Monitoring of Napier and Blake Street Distribution, collection and analysis of annual surveys Distribution of Promotional information
School Traffic Representative	Shule to provide	Shule to provide	Shule to provide	Liaise between parents of School, Kesser Torah College and the Dover Heights Shule regarding Traffic Management issues.
Traffic Consultant	Shule Nominated Traffic Consultant	School to provide		Alterations and additions to Traffic Management Plan
Planning Consultant	Urbis	Urbis to provide		Consultation with adjoining properties Establishing communication lines between adjoining properties and Travel Plan Coordinator
Waverley Council Traffic Engineer	Wave	rley Council to provide		Receive annual traffic reports
Parents Traffic Representative	Shule	Shule to obtain from School		Liaise between parents of School, Kesser Torah College and the Dover Heights Shule regarding Traffic Management issues.



### 6.2 Promotional Information

Promotional information should be provided to staff, visitors and neighbouring properties in the lead up to any major events being held at the auditorium or research centre. This information can be provided in a bulletin or a letter to advise the community of upcoming events at the Shule. The document should include the following information and be distributed to surrounding properties two (2) weeks in advance of any major event:

- Date and time of the event
- Description of the event
- Expected times of additional volumes of traffic in the area
- Outline of measures taken to mitigate the impact of additional traffic
- O Contact details of event organiser or link to website for further information
- O Contact details of Shule Transport Organiser.

All correspondence should include a Shule logo and signature of the event organiser or Rabi.



## 7. Management Review

Annual surveys should be conducted with both staff and visitors to monitor travel modes. This information should be reported annually with existing active travel incentives reviewed. An evaluation of the sites off-street parking provision should be conducted at this time.

Survey distribution and collating survey results is the responsibility of Dover Height Shule and it is envisaged that the annual reports will be provided to Waverley Council upon request. Quarterly reports should be completed by the Traffic Plan Officer and explore, detail and rank the effectiveness of the measures provided in this TMP and the effectiveness of their implementation during Special Events hosted by the Shule, which occur seven (7) times a year. The report should also include a redundancy strategy if the objective of no on-street parking of private vehicles is being achieved.



## 8. Conclusion

In summary:

- The development proposes an extension of the existing Shule on Ground level to accommodate an additional 164 seats (a total of 466 seats) and an Ancillary Hall which accommodates a total of 220 seats.
- The existing site is situated adjacent to the Kesser Torah College and Rodney Reserve in Dover Heights and on the corner of Blake Street and Napier Street. Between the proposed development and Kesser Torah College, there are three car parks which currently accommodates a total of 75 car parking spaces. The development proposes to reduce the overall car parking to 74 car parking spaces. Each car park serves a different purpose for staff, student and Shule parking.
- D The development proposes net loss of one (1) off-street parking spaces within Car Park 1.
- The maximum parking demand of the Dover Heights Shule occurs during religious festivals, approximately seven (7) times a year, where the parking demand is 25 vehicles. It is considered that the parking demand can be accommodated off-street within Car Park 1 and Car Park 3. Note that the school is always closed on these days.
- The Dover Heights Shule proposes to nominate a Travel Plan Officer (existing Shule employee)
   to be responsible for the management of all off-street parking during Shule operating hours.
- The Dover Heights Shule will provide promotional material to adjoin properties notifying them of upcoming events, the likely impacts and the proposed management strategies which will be employed.
- The Dover Heights Shule will complete quarterly reporting of traffic management issues and complete annual traffic reports which will be provided to Waverley Council upon request.

It is therefore concluded that the proposed development is supportable on traffic planning grounds and will operate satisfactorily.



## Appendix D

Swept Path Analysis



#### Notes

This drawing is prepared for information purposes only. It is not to be used for construction.

TRAFFIX is responsible for vehicle swept path diagrams and/or drawing mark-ups only. Base drawing prepared by others.

Vehicle swept path diagrams prepared using computer generated turning path software and associated CAD drawing platforms. Vehicle data based upon relevant Australian Standards (AS/NZS 2890.1-2004 Parking facilities - Off-street commercial vehicle facilities). These standards embody a degree of tolerance, however the vehicle characteristics in these standards represent a suitable design vehicle and do not account for all variations in vehicle dimensions / specifications and/or driver ability or behaviour.

	no. revision note by. date
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	Swept Path Legend:
	Vehicle Body Envelope
	Clearance Envelope (300mm)
	architect MHNDUNION MHN Design Union Pty Ltd
	29 Hutchinson Street, Surry Hills, Sydney NSW 2010
	client
	Dover Heights Shule C/- MHN Design Union Suite 1, 29 Hutchinson Street Surry Hills, Sydney NSW 2010
	scale
	1:200 @ A3 0m 2 4 6 8 I I I I I
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	drawing title B99 Swept Path Analysis
	drawn: AK checked: VD date: 28-Sep-16
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