

# Proposed Clearways on Forest Way, Belrose to Frenchs Forest

Submissions Report

Roads and Maritime Services | April 2018

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**Roads and Maritime Services**

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**Proposed Clearways on Forest  
Way, Belrose to Frenchs Forest  
Submissions report  
April 2018**

Prepared by Aurecon for Roads and Maritime Services

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## Document controls

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### Approval and authorisation

<b>Title</b>	Proposed Clearways on Forest Way, Belrose to Frenchs Forest Submissions Report
<b>Accepted on behalf of Roads and Maritime NSW by</b>	Robert Rosadi Acting Director – Clearways Easing Sydney's Congestion
<b>Signed</b>	
<b>Dated</b>	27 April 2018

# Executive summary

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## The proposal

Roads and Maritime Services (Roads and Maritime) proposes to install new clearways (the proposal) along Forest Way from Wyatt Avenue/ Morgan Road, Belrose to Warringah Road, Frenchs Forest (the proposal corridor). The proposal corridor is 3.7 kilometres (in both directions) and is a connecting corridor between Mona Vale Road and Warringah Road.

Existing parking conditions along the proposal corridor include weekday timed 'No Parking' restrictions during northbound afternoon periods (from 3:30pm to 6:30pm) and southbound morning periods (from 6:30am to 9:30am), 'No Parking' in two lane sections along the corridor and parking restrictions associated with the bike lane north of Ralston Avenue, Belrose. There are no timed parking restrictions on weekends.

The proposal would introduce the following clearway conditions for the length of the proposal corridor:

- standard weekday peak clearway hours of 6:00am to 10:00am and 3:00pm to 7:00pm in both directions on Forest Way between Warringah Road and Wyatt Avenue/ Morgan Road (3.7 km)
- standard short day weekend and public holiday clearway hours of 9:00am to 6:00pm in both directions on Forest Way between Warringah Road and Adams Street (0.8 km).

Community engagement was carried out in February/March 2017. Following feedback from the community and review traffic data the hours of operation for the clearway were revised to the current proposal.

A review of environmental factors (REF) for *Proposed Clearways on Forest Way, Belrose to Frenchs Forest* (Roads and Maritime 2018a) was prepared for the proposal to assess the potential impacts on the environment and identify mitigation measures and safeguards. The REF was placed on public display between Monday 26 February 2018 and Monday 19 March 2018. During this time the community and stakeholders were invited to review the REF and provide feedback. A physical copy of the REF was displayed at four locations and was also made available on the Roads and Maritime website.

In total 34 submissions were received from individuals in the community during the public display period raising 193 separate issues. No submissions were received from government agencies.

Each submission has been examined individually to understand the issues being raised. The issues raised in each submission have been extracted, summarised and collated, and corresponding responses to the issues have been provided.

## Issues raised by the community and stakeholders

Submissions received from the community raised a variety of issues and sentiments. These included (but were not limited to) the following:

- need for the proposal – 41 issues
- alternatives and options – 13 issues
- air quality – five issues
- noise and vibration – three issues
- stakeholder and community consultation – four issues
- parking and access – 62 issues
- socio-economic assessment and impacts – nine issues
- traffic and transport assessment and impacts – 31 issues
- environmental assessment process – four issues.

There were also a number of suggestions / issues raised that were outside the scope of the proposal.

A summary of the key issues raised by the public in relation to the proposal, and Roads and Maritime's responses, are provided in the table below.

Issue category	Issue summary	Roads and Maritime's response
Need for the proposal	<p>A number of submissions stated that the implementation of clearways is not needed as clearways would not improve traffic northbound and southbound on Forest Way. They stated that the traffic and transport data used in the assessment does not align with the <i>Sydney Clearways Strategy</i> conditions and criteria, thus does not justify the implementation of a clearway.</p> <p>Current traffic congestion is due to the Northern Beaches Hospital upgrade roadworks and the clearways proposal should be abandoned until the Northern Beaches Hospital is complete.</p>	<p>Forest Way has been identified as a road corridor for consideration of clearways in the <i>Sydney Clearways Strategy</i> (TfNSW 2013a) as outlined in Section 1.4 of the REF. An independent Volume and Travel Time Analysis (refer to Section 6.1 of the REF) identified that the traffic volumes and travel speeds along Forest Way met the guidelines and warrant consideration of new clearways.</p> <p>Clearway restrictions help to improve traffic flow and reduce delays by restricting parking and stopping, and allowing the towing of vehicles that illegally stop or break down. Supplementary traffic data shows that under existing conditions, traffic volumes are sufficient to justify implementation of a new clearway. The proposal is considered justified due to the benefit to the local and regional community and its impacts can be managed with few residual adverse outcomes.</p> <p>Delaying the proposal until the Northern Beaches Hospital upgrade roadworks are complete would be similar to the 'do nothing' approach (Section 2.4.3 of the REF) and would lead to longer travel times and delays for motorists. It is expected that the clearways proposed for Forest Way and the nearby road network would result in beneficial cumulative impacts of traffic flow and efficiency.</p>
Alternatives and options	<p>A number of submissions stated that alternative clearway hours to those proposed in the proposal and changes to traffic signals should be considered.</p>	<p>A number of alternatives and options were considered in Section 2.4 of the REF including different clearway operating hours. For consistency across the road network and to make it easier for road users, clearway operating hours are standard across the road network.</p> <p>All options were assessed against the proposal objectives, identified in Section 2.3 of the REF and the <i>Sydney Clearways Strategy</i>. The proposal (preferred option) was selected as the best option to meet the <i>Sydney Clearways Strategy</i> requirements for establishment of a clearway and the proposal objectives, and is discussed in Sections 2.3 to 2.6 of the REF.</p> <p>Changes to traffic signals are out of the scope of</p>

Issue category	Issue summary	Roads and Maritime's response
		<p>this proposal. However, removal of parking at the entry and exit of the intersection at Adams Street and Forest Way would improve traffic movements by allowing more availability of traffic lanes.</p>
<p>Parking and access</p>	<p>A number of issues were raised by the community in relation to parking and access, including impacts to access and mobility, business parking, tradesmen and deliveries parking and residential parking and side streets.</p>	<p>Roads and Maritime understands that the new clearway operating hours would change parking conditions in front of residential properties, which may cause some inconvenience for residents and visitors. Following community consultation and the re-evaluation of the traffic data, Roads and Maritime reduced the proposed clearway operating hours to operate only at times where warranted by existing Forest Way traffic volumes. This would minimise the impact on parking to nearby residents.</p> <p>Most properties can provide off-street access for people with limited physical capacity and taxis are permitted to stop in clearways for pickup and set down passengers. Public buses, taxis, and emergency vehicles would continue to be permitted to stop on Forest Way when dropping off or picking up passengers during clearway hours.</p> <p>The independent parking investigations identified parking demand on Forest Way was relatively low. No demand for business parking was observed and there are adequate availabilities off-street (refer to Section 2.8 of this report).</p> <p>If residents expect any private deliveries they would need to consider where the delivery vehicle could stop to unload. Forward planning for deliveries to ensure driveways and carports are available would provide on-site space for delivery drivers during clearway operating hours or deliveries would have to be scheduled outside clearway operating hours.</p> <p>As detailed in Section 6.2 of the REF, the objectives of Parking Study that was carried out for the proposal (refer to Appendix E of the REF) were to determine parking demand and utilisation on Forest Way, as well as to identify parking impacts on Forest Way.</p>
<p>Socio-economic impacts</p>	<p>A number of submissions stated that the REF has not adequately considered the socio-economic impacts of the proposal including impacts to property value</p>	<p>The socio-economic impacts were outlined in Section 6.3 of the REF. As noted above, the introduction of new and extended clearways may cause some inconvenience for residents and businesses, however, does not change the land use, land size or development capacity of any</p>

Issue category	Issue summary	Roads and Maritime's response
	and amenity.	<p>private property.</p> <p>Congestion often contributes to a reduction in community amenity. The provision of clearways would aim to provide road users with efficient, safer, and more reliable journey times.</p>
Traffic and Transport	A number of issues were raised by the community for traffic and transport, including the traffic data used and the scope and methodology of the traffic study.	<p>Traffic volume data presented in Section 6.1.2 of the REF shows that traffic volumes and travel speeds met the guidelines outlined in the <i>Sydney Clearways Strategy</i> and warrant consideration of new clearways.</p> <p>Clearways are not determined solely based on one particular guideline within the <i>Sydney Clearways Strategy</i>, rather a balance between the needs of the local community for parking and demand for road users is required.</p> <p>The proposal corridor was refined following initial travel time investigations in 2015. Travel time data was used from this initial study, and additional data from 2014 and 2016. All data used was published in Section 6.1 of the REF.</p>

Each submission has been assessed individually to understand the issues being raised. Every issue raised has been collated and summarised and corresponding responses have been provided in Chapter 2 of this report.

### **Additional assessment and environmental management**

The REF identified the framework for environmental management, including safeguards and management measures that would be adopted to avoid or reduce environmental impacts. After considering the matters raised in the submissions, no changes to the safeguards and management measures identified in the REF are proposed. These measures are in Table 3-1 of this report.

### **Conclusion of this report**

This report provides a summary of the submissions received in response to the display of the REF for the proposal. The submissions have been categorised according to the issues raised, and responses have been provided for each issue.

Considering all submissions together with the REF, the impacts of the proposal are not considered significant. The identified impacts in the REF and the submissions would be appropriately managed by implementing the safeguards and mitigation measures identified in this report. The proposal meets the proposal objectives as detailed in Section 2.3 of the REF, while effectively minimising environmental impacts and considering community and stakeholder comments. Although, the proposal would still result in environmental impacts, on balance the proposal best meets the proposal objectives and is justified.

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# 1 Introduction and background

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## 1.1 The proposal

Roads and Maritime Services (Roads and Maritime) propose to install clearways (the proposal) on Forest Way between Wyatt Avenue/ Morgan Road, Belrose to Warringah Road, Frenchs Forest (the proposal corridor), for a length of 3.7 kilometres (in both directions).

Forest Way is an important urban arterial road carrying over 40,000 motorists daily (weekdays), connecting major key roads such as the A3 Mona Vale Road in the north to the A38 Warringah Road in the south. Forest Way connects Belrose, Terrey Hills, and Ingleside with Frenchs Forest, Killarney Heights and Chatswood. It would also be an important link for access to the new Northern Beaches Hospital.

The proposal would introduce the following clearway conditions for the length of the proposal corridor:

- standard weekday peak clearway hours of 6:00am to 10:00am and 3:00pm to 7:00pm in both directions between Warringah Road to Wyatt Avenue/ Morgan Road (3.7 km)
- standard short day weekend and public holiday clearway hours of 9:00am to 6:00pm in both directions between Warringah Road and Adams Street (0.8 km).

Existing 'No Parking' and 'No Stopping' restrictions would continue to operate outside clearway times.

Community engagement was carried out in February/March 2017. Following feedback from the community and review traffic data the hours of operation for the clearway were revised to the current proposal.

The proposal corridor also includes a section of major road construction works associated with the Northern Beaches Hospital (NBH) upgrade. Standard clearway operating hours (as outlined above) are proposed along this section and would be implemented in conjunction with this major project.

Subject to a final determination to proceed, construction of the proposal is expected to start in the first half of 2018 and would take about three weeks to complete. A more detailed description of the proposal is found in the *Proposed Clearways on Forest Way, Belrose to Frenchs Forest Review of Environmental Factors* prepared by Roads and Maritime in February 2018 (Roads and Maritime 2018a).

The location and layout of the proposal is shown in Figure 1-1 and Figure 1-2, respectively.

## Need for the proposal

The *Sydney Clearways Strategy* (TfNSW 2013a) identifies Forest Way between Mona Vale Road, Terrey Hills and Warringah Road, Frenchs Forest, as a route for further investigation of new clearways to better manage congestion on Sydney's road network.

The current road clearways network in Sydney provides benefits for major roads across the morning and evening peak periods. Benefits include:

- supporting the efficient movement of people and goods on Sydney's State Roads
- facilitating more reliable journey times for motorists
- managing growth in traffic volumes
- increasing road capacity where warranted without expensive investment in widening roads
- balancing the use of kerbside space outside of clearway times for parking.

The proposal is needed to manage congestion within the proposal corridor, and would provide a number of benefits. In addition to the overarching benefits identified above, this proposal would

contribute to potential cumulative travel time benefits for the greater Sydney road network. Forest Way provides a key north-south arterial road connection between Mona Vale Road and Warringah Road.

The proposal would also address objectives for Sydney's important urban roads as outlined in:

- NSW 2021: A plan to make NSW Number One (NSW Department of Premier and Cabinet 2011)
- NSW State Infrastructure Strategy (NSW Government 2014)
- NSW Long-term Transport Master Plan (Transport for NSW 2012)
- Sydney Clearways Strategy (Transport for NSW 2013a)
- Sydney's Bus Future (Transport for NSW 2013b).

## Objectives of the proposal

The proposal is consistent with the *Sydney Clearways Strategy* as it would help to manage congestion on key roads in Sydney.

The key objectives of the proposal are to:

- contribute to the key objective of the *Sydney Clearways Strategy*; assist in facilitating the use of the entire road corridor for longer periods of the day
- manage traffic congestion and improve travel time reliability on Forest Way from Wyatt Avenue/ Morgan Road, Belrose to Warringah Road, Frenchs Forest
- maintain consistent vehicle throughput on Forest Way
- protection of a key State Road corridor.

## 1.2 REF display

Roads and Maritime prepared a REF to assess the environmental impacts of the proposed works for the proposal. The REF was publicly displayed between Monday 26 February 2018 and Monday 19 March 2018 at four physical locations, as detailed in Table 1-1. The REF was placed on the Roads and Maritime project website and made available for download.

The display locations and website link were advertised in the *Manly Daily* (28 February 2018) and the *North Shore Times* (1 March 2018).

In addition to the above public display, a community update, detailing an invitation to comment (and information for how to access the review of environmental factors) was sent directly to 162 stakeholders by email including all those who responded by email to the initial round of consultation in February/ March 2017.

A community update was delivered to 4,000 residents near to the proposal including all directly impacted properties on Forest Way. Direct mail was sent to emergency services, schools, large businesses, religious centres and community groups in the area.

Table 1-1: Display locations

Location	Address
Glen Street Library	Corner of Glen Street and Blackbutts Road, Belrose
Forestville Library	6 Darley St, Forestville
Northern Beaches Council Civic Centre	725 Pittwater Road, Dee Why
Dee Why Library	725 Pittwater Road, Dee Why

## 1.3 Purpose of the report

This submissions report relates to the REF prepared for the *Proposed Clearways on Forest Way, Belrose to Frenchs Forest* (Roads and Maritime 2018a), and should be read in conjunction with that document.

The REF was placed on public display and submissions relating to the proposal and the REF were received by Roads and Maritime. Chapter 2 (Response to issues) of this submissions report summarises the issues raised and provides responses to each issue. Chapter 3 (Environmental management) provides a summary of the environmental safeguards for the proposal as outlined in the REF and reconsidered in this report.

No revisions have been made to the assessment or environmental management measures as described in the REF.

## 1.4 Comprehensive review of key issues

Several submissions raised similar issues, particularly issues relating to project need, parking and access and traffic and transport. A comprehensive response to these common issues is provided below.

### 1.4.1 Need for the proposal

The NSW Government's Long Term Transport Master Plan (TfNSW 2012a) considers all forms of transport relevant to the State of NSW. The Plan identifies that 'getting Sydney moving again' is a major transport challenge faced by the State. The Plan provides a detailed strategic analysis of alternatives and options that can be implemented to address this challenge and a range of actions to reduce traffic congestion in Sydney, such as broad strategies for reducing reliance on car travel, supporting public transport, unblocking Sydney's constrained road corridors and improving arterial roads.

Reducing congestion and better management of traffic is identified in the Plan as a priority action required to improve the flow and capacity of arterial roads such as Forest Way. A number of short, medium and long-term actions are specified in the Plan to achieve this. These include implementation of clearways, on-street parking measures, transit lane systems, long-turn bays, additional traffic lights, bus bypass lanes and B-phasing at intersections.

In response to the Long Term Transport Master Plan, the *Sydney Clearways Strategy* provides a framework for the consideration of new and extended clearway operations to improve traffic flows and capacity on arterial roads and recommends that these are investigated for a number of key arterial roads in Sydney which frequently experience high traffic volumes and low travel speeds.

Forest Way was identified in the *Sydney Clearways Strategy* for further investigation of possible clearways extensions based on an assessment of traffic volume and travel time data at the time.

Roads and Maritime also receive requests from the community through the 'Nominate a clearway' website and direct customer requests that can help prioritise clearway investigations and help to identify issues on the network.

Guidelines contained within the *Sydney Clearways Strategy* provide a framework for Roads and Maritime to assess where State Roads are experiencing congestion, and where changes to clearways hours should be investigated. Clearways are not determined solely based on one particular guideline within the strategy, but rather a balance between the needs of the local community for parking and demand for road users. The primary purpose of a State Road such as Forest Way is to move people and goods across Sydney.

To help develop clearways proposals, in addition to quantitative assessments based on traffic investigations, a community consultation process is undertaken and onsite assessments are undertaken to determine where parking is impacting on road users.

The Australian Standard (Standards Australia 1993) recommends that clearways should be continuous, embracing short intermediate sections which might not otherwise be justified on the basis of warrant considerations alone. To this end, the clearway hours were determined to provide consistency throughout the corridor and to help manage congestion after considering factors such as traffic volumes and travel speeds. The strategic importance of the road and an assessment of business parking are also considered when developing proposed hours of operation.

Forest Way is an important public transport, commuter and freight route. During weekday morning periods (from 6:30am to 9:30am) southbound and weekday afternoon periods (from 3:30pm to 6:30pm) northbound, existing parking restrictions are in place along Forest Way. North of Ralston Avenue, parking restrictions associated with the bike lane prevent parking. These restrictions are effective in managing the performance of the road corridor.

While Forest Way consists of sections of two or three lanes (in each direction), vehicles can park or stop in the kerbside lane in the absence of parking restrictions. This leads to reduced road capacity for road users.

One of the key considerations for whether a new or extended clearway should be investigated to ease congestion on a major State road is if directional traffic flow exceeds 800 vehicles per hour (vph) (for corridors with two lanes in each direction) and 1600 vph for three lane corridors in each direction as per Australian Standards guidelines *Parking facilities Part 5: On-street parking* (Standards Australia 1993). This guideline is also relevant when 'No Parking' or 'No Stopping' restrictions are in place as illegally parked vehicles are unable to be towed promptly under these restrictions.

Section 6.1.2 of the REF provides the results of traffic volume surveys that were carried out to determine the amount of traffic travelling on Forest Way. These surveys identified that 800 vph was exceeded during all proposed clearway operating hours that would occur under the proposal. 1600 vph was experienced regularly during peak periods at the north and south end of the corridor on weekdays and weekends. More discussion of traffic data can be found in the Section 1.4.3.

The road corridor currently also experiences travel speeds of less than 30 km/h during peak periods. The *Sydney Clearways Strategy* outlines that clearways should be considered for a major State road if travel speeds of 30 km/h or below during peak periods are regularly experienced by road users. Historical travel time survey data for the proposed clearways corridor identified that regularly during weekday peak periods, and on weekends, travel speeds were below 30 km/h. Figures 6-7, 6-8 and 6-9 of the REF identifies the days when the average vehicle speeds were slower than 30 km/h. During traffic investigations in 2015, surveys along the entire corridor were undertaken which also found travel speeds lower than 30 km/h during weekday peaks in both directions.

Forest Way is identified as a strategically important suburban bus route, and investigations showed that alternative public parking close to local businesses can be found.

The corridor is currently experiencing roadwork associated with the Northern Beaches Hospital (NBH) improvement works. Traffic and parking surveys were undertaken prior to the commencement of these works. The investigation work carried out separately for the Northern Beaches Hospital upgrade roadworks found that traffic volumes in the three-hour AM and PM peak periods are forecast to increase from the 2012 base case by 12 per cent and 11 per cent respectively in 2018 when the hospital opens. By 2028, traffic volumes are forecast to increase by a further five per cent in the AM peak period and four per cent in the PM peak period. Should traffic conditions substantially change in the future, the proposed clearway operating hours would be

reviewed, as part of a future clearways assessment. More specific information about the NBH upgrade roadworks can be found at [rms.nsw.gov.au/nbh](https://rms.nsw.gov.au/nbh).

### 1.4.2 Parking and access

Roads and Maritime seek to balance the needs of the community as well as road users. Forest Way is a key arterial road, and its role in connecting people and moving goods across Sydney's north would continue as Sydney continues to grow.

Roads and Maritime understands that the new clearway operating hours would change parking conditions in front of residential properties, which may cause some inconvenience for residents and visitors. However, the primary purpose of a State Road such as Forest Way is to move people and goods efficiently across Sydney. Any parking currently permitted on the State Road is not specifically allocated to residents or properties. Kerbside parking impacts the primary function of the road and Roads and Maritime change parking restrictions across the State Road network to ensure they are meeting their primary purpose.

The *Sydney Clearways Strategy* proposes that for access to local business: *'when parking is removed from a major road to extend a clearway, a similar quantity of alternative parking, based on parking demand should first be identified'*. The *Sydney Clearways Strategy* includes a parking framework to guide this process. The framework consists of a process for business parking that requires:

- quantification of the number of parking spaces to be removed
- assessment of land uses and businesses in areas adjacent to the proposed clearway
- review of prevailing parking conditions, including existing parking restrictions
- consultation with the relevant local government authority about the need to change parking arrangements in adjacent streets through the introduction of timed parking restrictions, construction of new car parks or other means
- consideration of any funding methods for any parking mitigation measures.

This process was followed for the proposal. While the NBH upgrade roadworks are currently underway and having an impact on the local community, surveys were undertaken prior to the works and there has been no major change to land use where parking was observed during the parking surveys, and as such, it is considered that the parking survey remains representative of the area.

The objectives of this Parking Study were to determine parking demand and utilisation on Forest Way as well as identifying parking impacts and alternatives to parking on Forest Way, if required.

The Parking Study (refer to Appendix E of the REF) was based on an inventory of the parking supply along the proposal corridor, recorded by Peopletrans in June 2015. For this study, Peopletrans travelled the entire length of the route (two-way) and measured the available parking spaces and demand. The methodology to determine the existing parking supply is provided in Section 6.2 of the REF.

Section 6.2 of the REF summarises the results of a detailed Parking Study (Peopletrans 2018b) that was carried out for the proposal (refer to Appendix E of the REF). The Parking Study found that the proposal corridor was subject to a relatively low demand for parking most of the time during the proposed clearway operating hours (refer to Table 6-3 of the REF). The Parking Study also found that the establishment of new clearway operating hours would change parking conditions in front of properties along Forest Way, meaning residents would no longer be able to park directly in front of their properties, however, this is similar to all other State Roads where clearways and 'No Stopping' or 'No Parking' restrictions are currently in place.

Further analysis of parking surveys during the study found that while there are some businesses along the corridor, there was no demand for parking in front of these business properties during the study period.

Given the relatively low demand for parking on Forest Way, resident's parking behaviour during existing restrictions and proposed changes to hours of operation of parking restrictions, the independent parking investigations carried out site visits and examined aerial imagery and concluded that it is likely that there are appropriate vacancies either in nearby side-streets or contained within the residential properties to provide a replacement for the reduced supply on Forest Way.

As no areas of business parking demand were identified during the parking investigations, Roads and Maritime determined that parking compensation measures, such as introducing timed parking on side streets close to Forest Way, was not suitable for this proposal.

### 1.4.3 Traffic and transport

Guidelines contained within the *Sydney Clearways Strategy* provide a framework for Roads and Maritime to assess where State Roads are experiencing congestion, and where changes to clearways hours should be investigated. Clearways are not determined solely based on one particular guideline within the strategy, but rather a balance between the needs of the local community for parking and demand for road users. The primary purpose of a State Road such as Forest Way is to move people and goods across Sydney.

As mentioned above, the Australian Standard recommends that clearways should be continuous, embracing short intermediate sections which might not otherwise be justified on the basis of warrant considerations alone. Consequently, the clearway hours for Forest Way were determined to provide consistency throughout the corridor and to help manage congestion after considering factors such as traffic volumes and travel speeds.

This means that while volume criteria may not be exceeded at all locations for all times along the proposed clearways corridor, it is important for road users to have a consistent expectation of parking restrictions along a corridor, and between important state arterial corridors.

Respondents raised several questions about the traffic data and the scope and methodology of the traffic and transport assessment in the REF.

#### **Traffic data (traffic volumes and travel times)**

During the initial investigation of the entire 5.9 km length of Forest Way from Mona Vale Road, Terrey Hills to Warringah Road, Frenchs Forest, a tube survey was undertaken in 2015 as part of the Traffic Study south of Oates Place, Belrose to measure traffic volumes. Once the proposal corridor was refined (Wyatt Avenue/ Morgan Road to Warringah Road), additional supplementary traffic volume data from December 2016 was collected from locations along Forest Way, to verify that obtained from tube counts. This included traffic data from traffic signals at the southern end of the proposal corridor from the Roads and Maritime Sydney Coordinated Adaptive Traffic System (SCATS) data.

Even though there can be variation along a State Road corridor as road users enter and exit to their destinations, or regional and local roads, volume of traffic along the State Road is usually relatively consistent. Two traffic volume sample locations around 3 km apart is considered to be generally appropriate for this corridor.

While volume criteria may not be exceeded at all locations for all times along the proposed clearways corridor, it is important for road users to have a consistent expectation of parking restrictions along a corridor, and between important state arterial corridors. Analysis of volumes shows that volume guidelines are met in both directions at some point along the Forest Way corridor during morning and afternoon peaks.

For southbound weekday traffic, volumes are above 800 vehicles per hour all day and consistently above 1600 vehicles per hour at Morgan Road for most of any weekday (Figure 6-1). At Adams

Street, volumes are above 800 vehicles per hour all day and peak volumes in both morning and afternoons are close to or above 1600 vehicles per hour consistently during the surveyed week (Figure 6-2). These investigations were undertaken before the major changes associated with the Northern Beaches Hospital occurred.

For southbound weekend traffic at Adams Street, volumes approached but did not exceed 1600 vehicles per hour during the middle of the day (Figure 6-5). During parking surveys undertaken during 2015, no vehicles were observed to be parking in this section of Forest Way, although anecdotal evidence is that when parking does occur it causes substantial issues for road users.

For northbound weekday traffic, volumes are above 800 vehicles per hour all day and peak volumes in both morning and afternoons are close to or above 1600 vehicles per hour consistently during the surveyed week (Figure 6-3). At Warringah Road, volumes are above 800 vehicles per hour all day and peak volumes in the afternoons are above 1600 vehicles per hour consistently during the surveyed week (Figure 6-4). Morning volumes do not exceed 1600 vehicles per hour but build throughout the day. These investigations were undertaken before the major changes associated with the Northern Beaches Hospital occurred.

For northbound weekend traffic at Warringah Road, volumes exceed 1600 vehicles per hour for most of the day (Figure 6-6).

Roads and Maritime also sourced data from a permanent traffic counter on Forest Way at Belrose between Oates Place and Ralston Avenue, Belrose 2085 – ID57025. However, analysis of the data revealed that the counter was missing extensive data with an unacceptable level of variance within the data collected and it was not used during the investigations.

Travel time surveys undertaken along Forest Way during May 2015 found that travel speeds are 30 km/h or below during peak periods in both directions during the morning and afternoon, which verified the information presented within the *Sydney Clearways Strategy*.

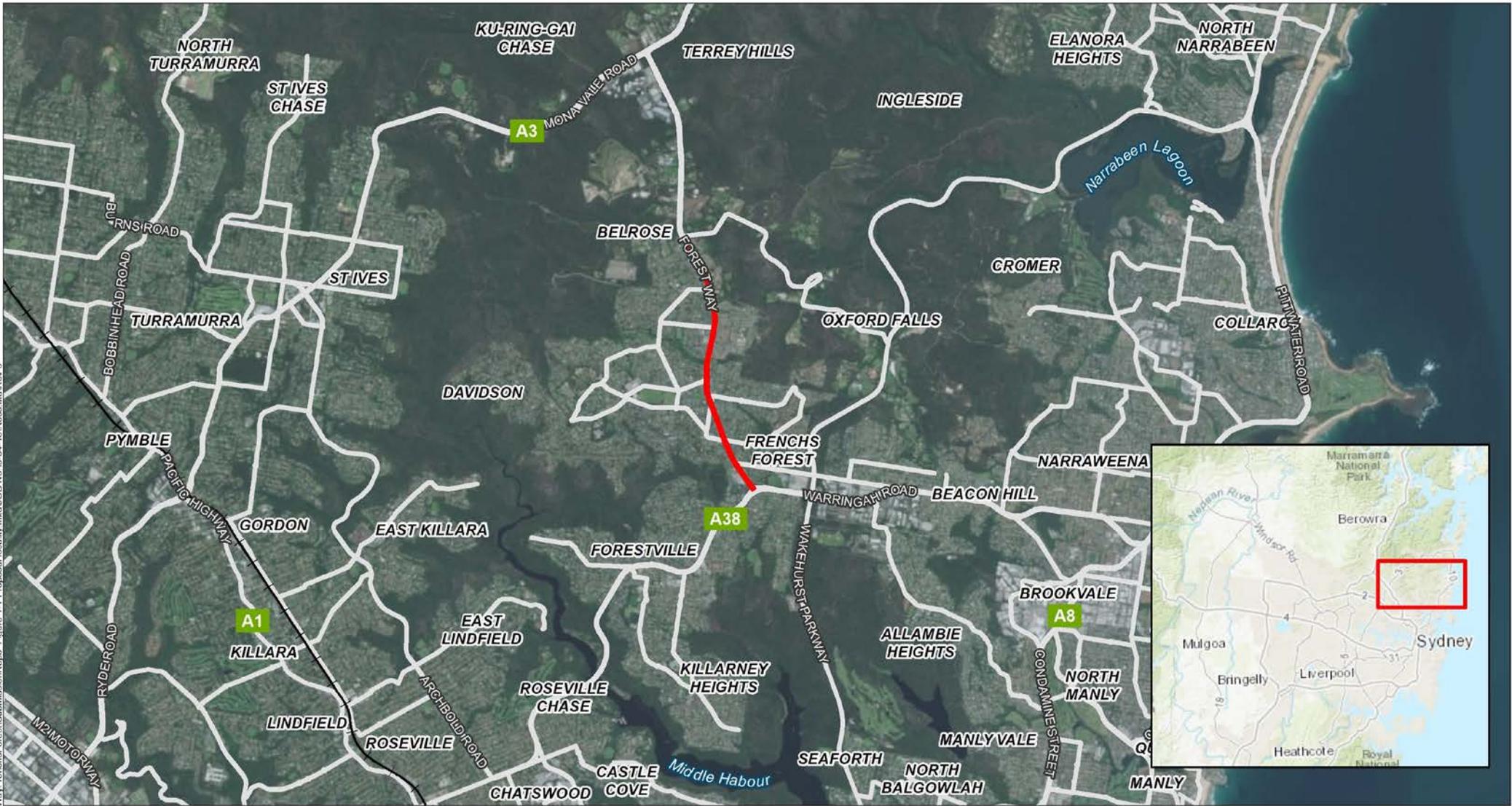
To assess the shorter length appropriately, additional historical peak period travel time data for each day between 2014 to 2016 was sourced by Roads and Maritime and analysed for Forest Way to review travel times in both directions, and provided in Section 6.1.2 of the REF, to validate the original *Sydney Clearways Strategy* assessment and in addition to the Peopletrans data. Analysis of historical records for peak directional travel indicate that average travel speeds of less than 30 km/h are regularly experienced on the southern end of Forest Way and this supported new clearways for this part of the road corridor south of Wyatt Avenue/ Morgan Road.

For weekends, the travel time surveys in 2015 did not find journeys slower than 30 km/h in either direction along Forest Way. Following consultation with the community in 2017, the proposal for weekends was significantly shortened, with implementation proposed for the section between Warringah Road and Adams Street. This was the section that the community told us was most impacted by parking on weekends. The historical data for this short section (Figure 6-9) was assessed and this showed road users are regularly experiencing travel times below 30 km/h.

The availability of the kerbside lane on Forest Way at the entry and exit of key signalised intersections like Adams Street provides more capacity to the intersection and can help to manage congestion and delays by ensuring that as many vehicles as possible can pass through each signal phase. This should benefit road users approaching from all directions on Adams Street and Forest Way.

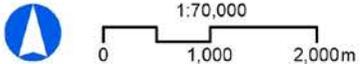
### **Scope and methodology of assessment**

The traffic investigations undertaken along the corridor are considered to be representative of normal conditions and were selected to take place outside of public and school holidays. Traffic observations along Forest Way indicate that there are not substantial seasonal variations i.e. beaches or similar, along the corridor which would make the selected dates unrepresentative.



- Proposal corridor
- Roads
- Railway

Source: Aurecon, LPI, Esri Imagery

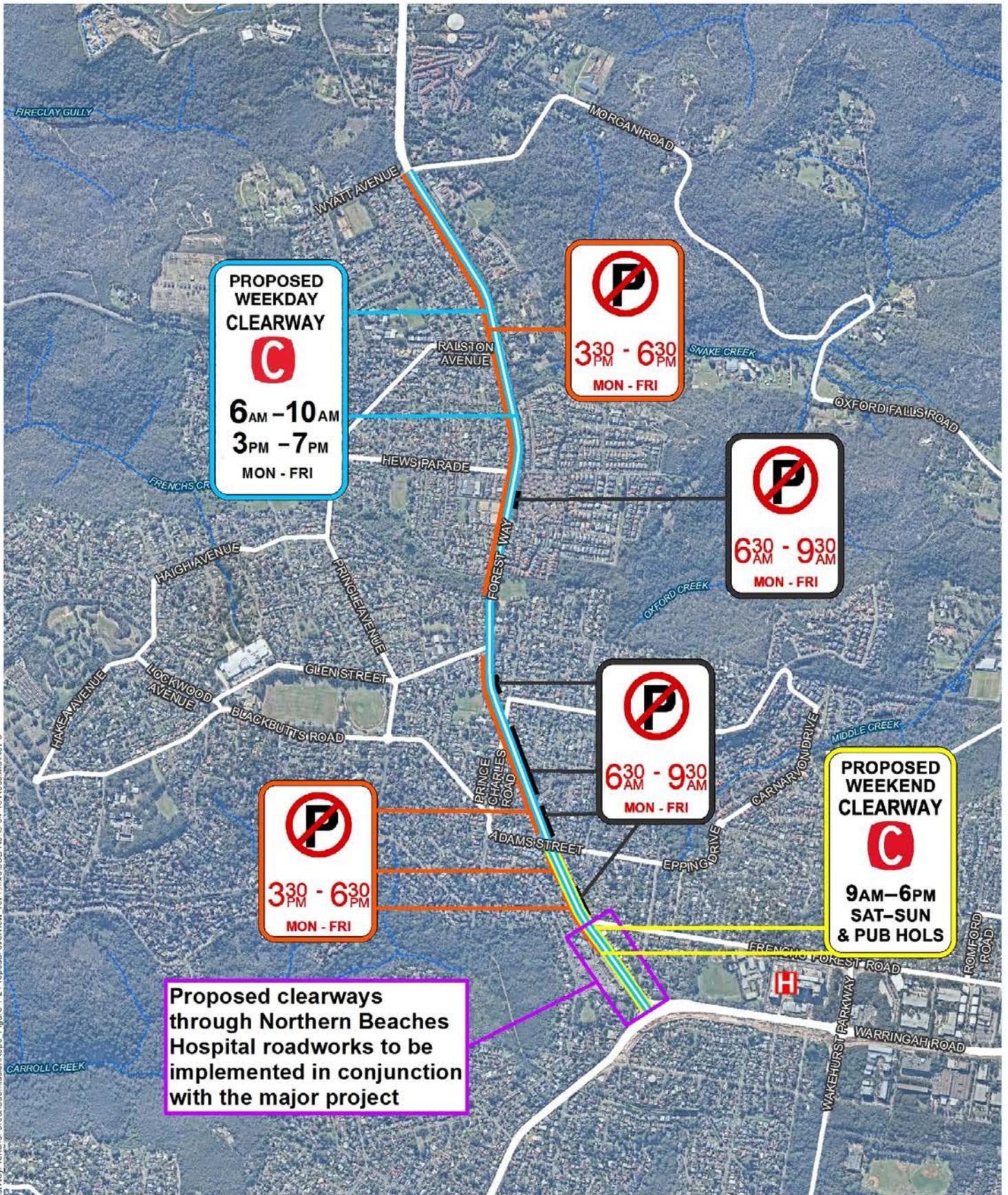


Proposed clearway on Forest Way, Belrose to Frenchs Forest Submissions Report

Projection: GDA 1994 MGA Zone 56

FIGURE 1-1: Proposal Locality

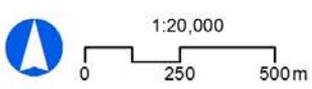
P:\GIS\Project-3\project\258575\_ForestWay\FrenchsForest\Submissions\on\repp. Figure 1-1 Proposal Locality.mxd\JOB No. 16-04-18\Ross.Mat\Rev. 0



- Proposed clearways on weekdays
- Proposed clearways on weekends and public holidays
- Existing Weekday No Parking (northbound)
- Existing Weekday No Parking (southbound)

Northern Beaches Hospital

Source: Aurecon, LPI, Nearmap



## 2 Response to issues

Roads and Maritime received 34 submissions during the public display period of the REF, which raised 193 separate issues. Table 2-1 lists the respondents and each respondent's allocated submission number. The table also indicates where the issues raised in each submission have been addressed in this report.

Table 2-1: Respondents

Respondent	Submission No.	Section number where issues are addressed
Individual	1	Section 2.4.1
Individual	2	Section 2.12
Individual	3	Section 2.3.1, 2.3.2 and 2.3.4
Individual	4	Section 2.12
Individual	5	Section 2.3.2 and 2.4.2
Individual	6	Section 2.2
Individual	7	Section 2.8.4 and 2.8.5
Individual	8	Section 2.1
Individual	9	Section 2.2
Individual	10	Section 2.4.1, 2.8.1 and 2.8.4
Individual	11	Section 2.12
Individual	12	Section 2.3.1, 2.3.2, 2.7.1, 2.8.1, 2.8.4, and 2.10.1
Individual	13	Section 2.3.1, 2.3.2, 2.3.3, 2.8.4 and 2.12
Individual	14	Section 2.4.1, 2.8.1, 2.8.4 and 2.8.5
Individual	15	Section 2.3.1, 2.3.2, 2.3.3, 2.3.4, 2.4.1, 2.8.1, 2.8.2, 2.8.3, 2.8.4, 2.9.1, 2.9.2, 2.9.3, 2.10.1, 2.10.2, 2.10.3 and 2.12
Individual	16	Section 2.4.1 and 2.8.1
Individual	17	Section 2.3.1, 2.4.2, 2.5.1, 2.8.1, 2.8.3, 2.8.4, 2.8.5, 2.9.1, 2.10.1 and 2.11.1
Individual	18	Section 2.3.1, 2.3.4, 2.7.1, 2.8.2, 2.8.3, 2.8.4, 2.8.5, 2.9.1, 2.9.2, 2.10.1, 2.10.2, 2.10.4, 2.11.1 and 2.12
Individual	19	Section 2.8.3, 2.8.5 and 2.10.3
Individual	20	Section 2.3.1, 2.5.1 and 2.6.1

Respondent	Submission No.	Section number where issues are addressed
Individual	21	Section 2.3.1, 2.3.2, 2.3.4, 2.8.1, 2.8.4, 2.8.5, 2.9.2, 2.10.2 and 2.10.3
Individual	22	Section 2.3.1, 2.8.4, 2.8.5, 2.9.2 and 2.10.3
Individual	23	Section 2.3.1, 2.7.1, 2.8.1, 2.8.4, and 2.10.1
Individual	24	Section 2.3.1, 2.8.1, 2.8.5 and 2.9.2
Individual	25	Section 2.3.1, 2.8.4, 2.8.5, 2.9.2 and 2.10.3
Individual	26	Section 2.1
Individual	27	Section 2.1
Individual	28	Section 2.3.1, 2.4.1, 2.8.1 and 2.8.4
Individual	29	Section 2.4.1, 2.8.1 and 2.8.4
Individual	30	Section 2.1
Individual	31	Section 2.8.3 and 2.8.5
Individual	32	Section 2.4.1, 2.8.1 and 2.8.4
Individual	33	Section 2.3.1, 2.3.2, 2.4.1 and 2.8.1
Individual	34	Section 2.3.2, 2.4.1, 2.8.1 and 2.8.4

## 2.1 Overview of issues raised

A total of 34 submissions were received in response to the public display of the REF which raised 193 issues. All 34 submissions were from the community. No submissions were received from government agencies.

Each submission has been examined individually to understand the issues being raised. The issues raised in each submission have been extracted, summarised and collated, and corresponding responses to the issues have been provided.

Where similar issues have been raised in different submissions, only one response has been provided. The issues raised and Roads and Maritime response to these issues forms the basis of this chapter

This submissions report summarises the issues raised and provides responses to each issue. The report also outlines subsequent changes to the proposal as a result of the issues raised in the submissions process and any associated environmental impacts. Additional amendments to the safeguards and mitigation measures for inclusion within the REF are also outlined to address issues raised in submissions as appropriate.

The main issues raised by the public for consideration by the project team in relation to the proposal included:

- need for the proposal – 41 issues
- alternatives and options – 13 issues
- air quality – five issues

- noise and vibration – three issues
- stakeholder and community consultation – four issues
- parking and access – 62 issues
- socio-economic assessment and impacts – nine issues
- traffic and transport assessment and impacts – 31 issues
- environmental assessment process – four issues.

Some of the submissions included a number of suggestions/ issues that were outside the scope of the proposal (seven issues). Two submissions were in general support of the proposal. Four submissions opposed the proposal, without identifying any particular issue.

These issues have been collated and summarised and responses provided in Section 2.2 to Section 2.12 of this report.

## 2.2 General support for the proposal

### Submission number(s)

6, 9

### Issue description

1. General support for proposal.

### Response

1. Roads and Maritime acknowledge support for proposal.

## 2.3 Need for the proposal

### 2.3.1 Traffic and transport

#### Submission number(s)

3, 12, 13, 15, 17, 18, 20, 21, 22, 23, 24, 25, 28, 33

#### Issue description

1. Traffic information that was used to provide the justification for the proposed clearways is flawed. The travel data analysis used in the report is not explained in a way that justifies the proposal. The clearways are only needed in the direction which has the peak traffic i.e. for the AM peak period and PM peak period. For example, the photos included in the REF do not accurately reflect congested traffic conditions and the traffic data presented in the traffic assessment does not justify the implementation of a clearway northbound on Forest Way on the weekends and public holidays. The preferred proposal selected was not supported by the traffic data provided in the Volume and Travel Time Analysis. The existing parking and traffic conditions along the proposal corridor are considered adequate during peak periods on weekdays and weekends.
2. The traffic data presented in the traffic assessment does not justify the implementation of a clearway southbound on Forest Way on the weekends and public holidays. The available traffic volume data and travel time survey do not substantiate the need for a weekend clearway on Forest Way from Warringah Road to Adams Street. Clearways should not be exercised on weekends and public holidays particularly before Adams Street.
3. There is only one occasion that travel speeds were below 30 km/h, as required by the *Sydney Clearways Strategy*. Clearways on Forest Way are considered unnecessary.
4. Traffic data does not meet the criteria specified in the *Sydney Clearways Strategy* to justify implementing a clearway, for off peak periods in a southbound direction. The supplementary

traffic data from Forest Way/ Adams Street, southbound (Figure 6-3 of the REF) used in the assessment cannot be used to justify a morning clearway southbound.

5. Traffic data does not meet the criteria specified in the *Sydney Clearways Strategy* to justify implementing a clearway, for off peak periods in a northbound direction. The supplementary traffic data from Forest Way/ Warringah Road, northbound (Figure 6-4 of the REF) used in the assessment cannot be used to justify a morning clearway northbound. The weekday data shows that between the hours of 6:00am to 10:00am when the additional northbound clearway is proposed, traffic counts do not exceed the requirement of at least 800 cars per lane per hour. The data provided is not justified and does not support the provision of a clearway during that period.
6. The key traffic issue in the area is the number of traffic lights between Morgan Road and Warringah Road, and the school zone, which slows traffic.
7. Forest Way reduces from three lanes to two lanes beyond Adam Street and north of Ralston Avenue. Having a clearway in operation between Russell Avenue and Adam Street would have no impact on overall traffic flow as the bottleneck occurs where the road is reduced to two lanes. The existing clearway hours are sufficient to manage traffic flow throughout the day.
8. Assuming that the proposed clearways can achieve an increase in speed of 20 km/h i.e. from 40 km/h to 60 km/h respondents surmise this would only generate an improvement of 10 seconds in travel time. When considered in combination with the operation of the traffic lights at Adams Street, which causes congestion on Forest Way, this improvement is considered negligible.
9. The data provided in the traffic report is not justified and does not support the provision of a clearway i.e. the traffic volumes are below 1600 vehicles per hour. Forest Way does not experience excessive traffic, only if there are traffic incidents on Forest Way or Warringah Road, which is rare.
10. The operation of a northbound clearway, particularly at the Adams Street/ Forest Way intersection would result in traffic congestion outside of peak periods.

## Response

1. Section 1.4.1 of this report provides a response to issues raised regarding the traffic justification for the proposal. Section 6.1.2 of the REF provides information on the traffic volume and travel speed data obtained during the traffic investigations for the proposal. The photographs in Appendix F of the REF were provided to identify the general location of the proposal only and have not been provided to reflect specific traffic congestion issues along the corridor. More photos of the corridor showing congested traffic conditions are included in Appendix B of the REF. Analysis of the northbound weekday traffic volume data at the northern end of the proposal corridor indicated that the traffic volume threshold of 1600 vph was exceeded at about 9:00am and between 3:00pm to 5:00pm (refer to Figure 6-3 of the REF). Analysis of the northbound weekday traffic volume data at the southern end of the proposal corridor indicated that the traffic volume threshold of 1600 vph (three lane section of road) was exceeded between about 12:00pm to 7:00pm (refer to Figure 6-4 of the REF).

On weekends, analysis of the northbound traffic volume data at the southern end of the proposal corridor indicated that the 1600 vph threshold was met or exceeded between 10:00am and 6:00pm (refer to Figure 6-6 of the REF). It was also noted that higher traffic volumes were observed on a Saturday. Times that traffic volumes exceeded 1600 vph on Forest Way in a northbound direction are shown in Table 6-1 of the REF.

2. The traffic volume data used in the assessment (as detailed in Section 1.4.1 of this report) provides evidence as to the justification of the proposed clearways on Forest Way. Analysis of

the 2016 southbound weekend traffic volume data at the southern end of the proposal corridor indicated that traffic volumes did not exceed the traffic volume threshold of 1600 vph though approached close to 1600 vph during the middle of the day (refer to Figure 6-5 of the REF). During the consultation process the community identified that the main 'right turn' issue causes substantial congestion at the Adams Street intersection along Forest Way. The introduction of clearways on the weekend would assist to improve the performance of the traffic condition at the Adams Street and Warringah Road intersections.

The weekend clearway hours were changed after community consultation and a review of the traffic data, introducing clearways on weekends between the hours of 9:00am and 6:00pm on this section of Forest Way between Adams Street and Warringah Road. Forest Way north of Adams Street at this point in time does not warrant weekend clearways.

3. As detailed in Section 1.4.1, Forest Way currently experiences travel speeds of less than 30 km/h during peak periods. Section 1.4 also outlines the justification for implementing clearways for the proposal.

Travel time survey data identified that at times during weekday peak periods, travel speeds were below 30 km/h. Table 6-2 of the REF identifies the times when the average vehicle speeds were slower than 30 km/h. It was also identified that weekend travel times were on average faster than 30 km/h (refer to Section 6.1 of the REF and Appendix D of the REF). However, the *Sydney Clearways Strategy* outlines that State Roads with travel speeds of less than 30 km/h during peak periods warrant consideration for investigation of a clearway. These conditions were identified for Forest Way and therefore it was recognised as a road corridor for consideration of new clearways within the *Sydney Clearways Strategy*.

4. While volume criteria may not be exceeded at all locations for all times along the proposed clearways corridor, it is important for road users to have a consistent expectation of parking restrictions along a corridor, and between important State arterial corridors. Analysis of volumes shows that volume thresholds are met in both directions at some point along the Forest Way corridor during morning and afternoon peaks. Keeping the kerbside lane available for road users during morning and afternoon peaks in two and three lane sections of Forest Way between Wyatt Avenue/Morgan Road and Warringah Road, and on weekends between Adams Street and Warringah Road would help manage congestion on Forest Way. Section 1.4.1 of this report provides further information in regards to the criteria used in the *Sydney Clearways Strategy* to justify implementing a clearway.
5. For northbound weekday traffic south of Oates Place, volumes are above 800 vehicles per hour (vph) all day and peak volumes in both morning and afternoons are close to or above 1600 vehicles consistently during the surveyed week (Figure 6-3 of the REF). At Warringah Road, volumes are above 800 vph all day and peak volumes in the afternoons are above 1600 vph consistently during the surveyed week (Figure 6-4 of the REF). Morning volumes do not exceed 1600 vph but build throughout the day. Section 1.4.1 provides further information in regards to the criteria used in the *Sydney Clearways Strategy* to justify implementing a clearway.
6. Section 3.1 of the Volume and Travel Time Analysis (refer to Appendix D of the REF) notes that the timing of traffic lights was observed to be the main source of delay for traffic in the proposal corridor, not the number of traffic lights. The Forest Way corridor also has other constraints including school zones. The REF found that if the throughput of intersections could be increased, travel time issues could be addressed through the removal of kerbside parking adjacent to traffic lights on Forest Way, especially at intersection towards the south of the corridor where parking could occur (i.e. near Adams Street). The proposed weekend clearway would help to address the Adams Street intersection congestion issue which was identified by the community during the consultation process. A clearway would help ease congestion, improve traffic flow, improve intersection efficiency and improve safety

Roads and Maritime reviews the timing of the phases for all traffic lights to ensure traffic is managed as effectively as possible. The traffic lights are linked to Sydney Coordinated Adaptive Traffic System (SCATS). SCATS is a traffic management system that synchronises nearby traffic signals to optimise traffic flow across the road network. Section 1.4.1 provides further information in regards to the criteria used in the *Sydney Clearways Strategy* to justify implementing a clearway.

Congestion is generally a consequence of substantial traffic volumes with insufficient road capacity resulting in major roads such as Forest Way operating beyond their capacity. As a result, road users can experience major delays during peak periods, which are beyond the control of traffic signals. The availability of the kerbside lane on Forest Way would provide more capacity, reducing delays especially through the traffic lights at signalised intersections.

7. The controlled merge from three lanes to two lanes along Forest Way takes place around 350 metres after the Adams Street intersection when heading northbound. With good visibility, the line-marked transition to two lanes would be more effective at managing this corridor constraint than a forced merge as a result of a parked vehicle. In addition, parked vehicles nearby to the Adams Street intersection, at both entry and exits, reduce the capacity of the intersection. There are no existing clearway operating hours in place along Forest Way. There are however existing parking restrictions in place, which include weekday timed 'No Parking' restrictions during northbound afternoon peak and southbound morning peak, in two lane sections along the corridor and parking restrictions associated with the bike lane north of Ralston Avenue. There are no timed parking restrictions on weekends. During peak periods, existing parking restrictions are in place on Forest Way, and are effective in improving the performance of the road corridor.
8. The Volume and Travel Time Analysis (refer to Appendix D of the REF) has been used to assess existing conditions in accordance with the *Sydney Clearways Strategy*. The Volume and Travel Time Analysis does not make any predictions about future traffic operations under clearway operations, rather it assesses the effectiveness of existing traffic management methods.

Roads and Maritime reviews the timing of the phases for all traffic lights to ensure traffic is managed as effectively as possible. The traffic lights are linked to Sydney Coordinated Adaptive Traffic System (SCATS). SCATS is a traffic management system that synchronises nearby traffic signals to optimise traffic flow across the road network.

The availability of the kerbside lane on Forest Way would provide more capacity, reducing delays especially through the traffic lights at the intersection of Forest Way/ Adams Street.

9. From the Volume and Travel Time Analysis (refer to Appendix D of the REF), it is evident that Forest Way experiences relative levels of congestion as a consequence of parked vehicles during peak periods. Section 1.4.1 of this report provides more information about the data provided in the traffic report and how it was analysed, justifying the implementation of clearways along Forest Way.
10. Congestion is generally a consequence of substantial traffic volumes with insufficient road capacity, resulting in major roads such as Forest Way operating beyond their capacity. As a result, road users can experience major delays during peak periods, which are beyond the control of traffic signals. The availability of the kerbside lane on Forest Way would provide more capacity, reducing delays especially through the traffic lights at the intersection of Forest Way/ Adams Street.

### 2.3.2 Consideration of the Northern Beaches Hospital and other works

#### Submission number(s)

3, 5, 12, 13, 15, 21, 33, 34

## Issue description

1. All planning for the proposed clearways should be abandoned until the Northern Beaches Hospital is in operation. Once the hospital is in operation, all roads within the surrounding areas can be properly assessed based on existing circumstances rather than predicted circumstances, as local roadwork improvements for the hospital should be enough to improve traffic conditions on Forest Way. Traffic congestion would decrease, and Forest Way from Belrose towards Dee Why would not require a clearway on weekends as the bottleneck on the corner of Forest Way and Warringah Road would be vastly improved after the current works are completed and allow better traffic flow, thus reducing the need for the third lane on weekends.
2. The clearway investigations assessed the current traffic volumes along the corridor, and did not include the likely traffic changes that would result from the operation of the Northern Beaches Hospital.
3. The roadworks associated with the Northern Beaches Hospital upgrade have resulted in the current level of traffic congestion, including a major bottleneck feeding onto Warringah Road due to road closures on all other eastbound routes, with the exception of Morgan Road. Traffic congestion currently experienced during peak periods in this area is a result of roadworks at the Forest Way/ Warringah Road intersection and would not be improved by the proposed new clearway

## Response

1. Delaying the proposal until the NBH upgrade roadworks are complete would be similar to the 'do nothing' option outlined in Section 2.4.3 of the REF. Traffic delays and congestion experienced on Forest Way would continue to worsen leading to longer travel times and delays for motorists using the road.

The traffic investigations carried out for the proposal were independent of those carried out for the Northern Beaches Hospital (NBH) upgrade roadworks and determined that new clearways are needed now, even without the likely increases in volumes resulting from the hospital upgrade. The investigation work carried out separately for the NBH upgrade roadworks found that traffic volumes in the three-hour AM and PM peak periods are forecasted to increase from the 2012 base case by 12 per cent and 11 per cent respectively in 2018 when the hospital opens. By 2028, traffic volumes are forecast to increase by a further five per cent in the AM peak period and four per cent in the PM peak period.

Should traffic conditions substantially change in the future, the proposed clearway operating hours would be reviewed, as part of a future clearways assessment. More specific information about the NBH upgrade roadworks can be found at [rms.nsw.gov.au/nbh](http://rms.nsw.gov.au/nbh). It is expected that new clearways along the Forest Way corridor would help maximise the benefits of the NBH upgrade roadworks and in conjunction may help to relieve some of the 'rat running' occurring within the local area surrounding the proposal.

2. As discussed in Section 6.1 of the REF and Section 1.4.1 of this report, traffic investigations prepared for the proposal found that the current traffic volumes along Forest Way exceed the guidelines specified in the relevant Australian Standard; *Parking facilities Part 5: On-street parking* (Standards Australia 1993) for the introduction of new clearways. The traffic investigations were independent of the associated environmental impact assessment and traffic impact investigations carried out for the NBH upgrade roadworks. The traffic investigations assessed the current traffic volumes along the proposal corridor, and did not include the likely traffic changes to result from the operation of the NBH (refer to Appendix D and E of the REF). It is expected that new clearways along the Forest Way road corridor would help maximise the benefits of NBH enabling works and in conjunction may help to relieve some of the 'rat running' occurring within the local area surrounding the proposal.

3. The *Sydney Clearways Strategy* provides a framework for the consideration of new clearways operations and recommends these are investigated for a number of key arterial roads in Sydney (including Forest Way) which frequently experience high traffic volumes and low speeds. The traffic data indicated that the investigation of clearways along Forest Way is justified. Section 1.4.1 and 1.4.3 provides a detailed outline of the need and justification for the proposal as well as traffic and transport information.

Based on the outcomes of traffic investigations, the proposed hours are considered appropriate at this point in time. Traffic investigations based on information from 2015 and 2016 determined the new clearways are needed under existing conditions, even without the likely increase in volume resulting from the hospital upgrade. It is expected that new clearways along the Forest Way road corridor would help to manage congestion while construction is underway and help maximise the benefits of NBH enabling works. In conjunction, clearways may help to relieve some of the 'rat running' occurring within the local area surrounding the proposal.

### 2.3.3 Proposal cost

#### Submission number(s)

13, 15

#### Issue description

1. The proposal would be a waste of money and of the Clearways budget.

#### Response

1. Refer Section 1.4.1 of this report. The *Sydney Clearways Strategy* identifies that traffic congestion costs Sydney residents an estimated \$5.1 billion per year. Clearways have an immediate positive benefit to road users at a much lower cost than other civil works such as construction of additional traffic lanes and are one way to make more effective use of existing public assets.

A number of alternatives and options were considered for the proposal, as described in Section 2.3 of the REF. The proposal was selected as the best option in accordance with the *Sydney Clearways Strategy* for establishment of a clearway, and to meet the proposal objectives. These are discussed further in Section 2.3 and 2.4 of the REF.

### 2.3.4 Sydney Clearways Strategy

#### Submission number(s)

3, 15, 18, 21

#### Issue description

1. The REF contains criteria that requires further investigation. The traffic data presented only indicates further investigation of a clearway on Forest Way is warranted, not that a clearway is actually required.
2. There is a question as to the effectiveness of the implementation of a clearway when comparing the proposal to Mona Vale Road and other clearways included in the *Sydney Clearways Strategy*.
3. The *Sydney Clearways Strategy* is out of date and current traffic data does not justify the implementation of a clearway now, but rather 20 years into the future.
4. Planning of projects by Roads and Maritime is not appropriate and the Clearways Strategy would only serve as a band-aid solution.

## Response

1. Refer Section 1.4.1 for a discussion on the need and justification for the proposal as well as Section 1.4.3 which provides an overview of the traffic information. Roads and Maritime undertook investigations in 2015 to verify the traffic flow and travel speed information and to determine if the project would be further developed using additional information including bus and freight priority and alternative business parking options. These investigations showed that clearways would help manage congestion during peak periods on weekdays and weekends on Forest Way.

Following consultation and further traffic investigations in 2016, the proposal was revised to address some of the community's concerns, while balancing the need to deliver congestion managing benefits to road users.

2. Refer to Section 1.4.1 for a discussion on the need and justification of the proposal. In July 2017, a post implementation review completed for new clearways installed on Mona Vale Road between Pacific Highway, Pymble and Kitchener Street, St Ives, and found that there were numerous benefits from the implementation of the clearway. These included, but were not limited to, travel time savings due to an increase in average travel speeds during clearway operating hours, and travel time reliability improved significantly across the day on weekdays and on weekends.
3. The NSW Government's State plan, *NSW 2021* commits to improving travel times for both public transport and the road network. For the road network, the target is to improve the travel times on 100 major roads during the morning and evening peak travel periods. The current clearways network has been in place for several decades and, while it has proven effective in providing more consistent travel times, particularly in peak periods, there have been very few clearways added or extended in the last few years. Traffic growth in Sydney has reached a point where there is a need to consider further improvements in the use of the existing road network to improve travel times. Clearways and other congestion management measures would play an increasingly important role through the use of the entire road space for longer periods of the day, on weekends, and potentially on a broader number of major road segments.

Refer Section 1.4.1 for a discussion on the need and justification for the proposal as well as Section 1.4.3, which provides an overview of the traffic information.

4. The NSW Government is acting to reduce congestion and delays on Sydney's roads by installing new and extended clearways. In December 2013, the NSW Government published the *Sydney Clearways Strategy* which identified routes on Sydney's road network that could benefit from new clearways. Since 2013, Roads and Maritime has installed over 370 km of clearways on some of Sydney's busiest corridors. The NSW Government's *Long Term Transport Master Plan* provides a detailed strategic analysis of alternatives and options that can be implemented to address this challenge and a range of actions to reduce traffic congestion in Sydney, such as broad strategies for reducing reliance on car travel, supporting public transport, unblocking Sydney's constrained road corridors and improving arterial roads. Reducing congestion and better management of traffic is identified in the Plan as a priority action required to improve the flow and capacity of arterial roads such as Forest Way. A number of short, medium and long-term actions are specified in the Plan to achieve this. These include implementation of clearways, on-street parking measures, transit lane systems, long-turn bays, additional traffic lights, bus bypass lanes and B-phasing at intersections.

## 2.4 Alternatives and options

### 2.4.1 Alternative clearway hours

#### Submission number(s)

1, 10, 14, 15, 16, 28, 29, 32, 33, 34,

#### Issue description

1. There were a number of alternative hours for clearways suggested in the submissions received. Below are examples of the suggested clearways time frames that should be considered:  
Alternative hours for the proposed clearway:
  - southbound: 6:00 am to 10:00am Monday to Friday.
  - northbound: 3:00pm to 7:00pm Monday to Friday
  - and, no restrictions on weekends.Alternative hours proposed clearways:
  - Monday to Friday southbound: 6:30 am to 9:30 am or 6:00am to 10:00am
  - Monday to Friday northbound: 3:30pm to 6:30pm or 3:00pm to 7:00pm
  - no restrictions to apply on weekends or Public Holidays.
2. The proposal should implement a clearway, 24 hours per day, including weekends.
3. The section between Adams Street and Wyatt Avenue does not need a clearway operating in both directions during peak periods.

#### Response

1. For consistency across the road network and to make it easier for road users, clearway hours are standard across the road network. Dependent on the traffic information, appropriate clearway hours are chosen. There are also benefits from providing a consistent expectation of parking along a road corridor during peak periods during the day. Wherever possible, we use the following standard hours:
  - weekday morning (6:00am to 10:00am)
  - middle of weekday (10:00am to 3:00pm)
  - weekday afternoon (3:00pm to 7:00pm)
  - weekend short day (9:00am to 6:00pm)
  - weekend long day (8:00am to 8:00pm)
  - 24 hours across seven days (at all times).

Clearways have been installed along Mona Vale Road up to St Ives, and on Boundary Street, Babbage Road, and Warringah Road west of Roseville Bridge. Clearways are also being implemented on Warringah Road east of Roseville Bridge. These important road corridors were all identified in the *Sydney Clearway Strategy*.

A range of sub-options were investigated for the proposed clearway and these are outlined in Section 2.6 of the REF. These included:

- sub-option A: 24/7 clearway
- sub-option B: weekday peak clearways (6:00am to 10:00am and 3:00pm to 7:00pm)
- sub-option C: weekday standard all day clearways (6:00am to 7:00pm)
- sub-option D: weekend standard short day clearways (9:00am to 6:00pm)
- sub-option E: weekend standard long day clearways (8:00am to 8:00pm)
- sub-option F: weekdays or weekends, non-standard clearway hours or days.

Table 2-3 of the REF provides a detailed analysis of these sub-options. Sub-options C and D were found to best satisfy the objectives of the proposal and were combined to form the proposal, as described in Chapter 3 (Description of proposal) of the REF.

In February 2017, Roads and Maritime began consultation with the community based on the hours for Option C and D. As a result of community and stakeholder feedback, and further traffic data investigation, Roads and Maritime chose to further revise the proposal.

Refinements included:

- amending the weekday clearway hours of operation to peaks only (as per sub-option B). Standard weekday peak clearway hours of 6:00am to 10:00am and 3:00pm to 7:00pm in both directions between Warringah Road, Frenchs Forest and Wyatt Avenue/ Morgan Road, Belrose (3.7 km)
  - amending the length of the proposed weekend and public holiday clearways (9:00am to 6:00pm) from the original proposed 3.7 km to 0.8 km between Warringah Road and Adams Street as current weekend traffic volumes start to decrease north of Adams Street. This clearway would apply to both directions.
2. Different operating times for the proposal were considered in Section 2.6 of the REF (and outlined in response one above). Six sub-options were considered which included evaluation of different clearway operating hours, including 24/7 clearway operations. Current traffic flows during the night-time period (7.00pm to 6.00am on weekdays and 6.00pm to 9.00am on weekends) do not currently warrant introduction of clearway restrictions and residents in the local area make use of kerbside parking during these night time hours. Therefore a 24 hour clearway is not warranted.
3. For consistency across the road network and to make it easier for road users, clearway hours are standard across the road network. There are also benefits from providing a consistent expectation of parking along a road corridor during peak periods during the day. Wherever possible, we use the following standard hours:
- weekday morning (6:00am to 10:00am)
  - middle of weekday (10:00am to 3:00pm)
  - weekday afternoon (3:00pm to 7:00pm)
  - weekend short day (9:00am to 6:00pm)
  - weekend long day (8:00am to 8:00pm)
  - 24 hours across seven days (at all times).

On Forest Way, from Adams Street to Wyatt Avenue/ Morgan Road, Belrose, clearways in both directions are proposed from:

- 6:00am to 10:00am and 3:00pm to 7:00pm weekdays
- no weekend clearways.

Roads and Maritime expect there would be road network benefits on Forest Way from having all lanes available through both the entry and exit to the Adams Street intersection in both directions as well as benefits from managing the existing loss of the kerbside lane with good visibility to line-marked merges, rather than forced merges due to parked vehicles. Refer Section 1.4.1 for a discussion on the need and justification for the proposal.

## 2.4.2 Range of options considered

### Submission number(s)

5, 17

### Issue description

1. Traffic lights within the study area are the main contributor to traffic congestion. Upgrades to traffic signals would be a better improvement to congestion than clearways. The Community Consultation Report (2018) indicated that traffic congestion on Forest Way is due to the right turn at the traffic signals at Forest Way / Adam Street intersection however this should not be used to justify the proposed clearways but rather Roads and Maritime should consider adding a right turn arrow at the traffic signals to improve access and safety.

## Response

1. Changes to traffic signals at Adams Street to include a dedicated right turn phase are out of scope of this proposal, however, there are no plans to change the traffic signal operations at this time. During the community consultation process, the community identified that the 'right turn' issue causes substantial congestion at the Adams Street intersection along Forest Way. Removal of parking at the entry and exits of the intersection of Adams Street and Forest Way during weekday and weekend peak periods should ensure more lanes are available for road users to pass through the intersection and help manage congestion in the area.

## 2.5 Air Quality

### 2.5.1 Air quality assessment

#### Submission number(s)

17, 20

#### Issue description

1. The REF for the Forest Way clearway does not address air operational impacts satisfactorily and does not provide evidence or data to support the statement that no adverse air quality impacts are anticipated from the operation of the proposal.
2. Greater emissions are released from vehicles stopping and starting than those travelling at a continuous speed. The multiple sets of traffic lights along Forest Way would be a larger influence on traffic emissions, particularly from stop-start activities, regardless of the implementation of clearways. It has not been demonstrated how the proposed clearways would benefit air quality given that stop-start traffic due to the traffic lights cause elevated air quality impacts.
3. The REF does not consider greenhouse gas emissions during the construction and operation of the proposal.
4. Road and Maritime have not assessed the potential impact of the proposal on the health of residents in terms of air quality impacts from vehicle exhausts.

#### Response

1. Environmental impacts were identified and assessed in Chapter 6 (Environmental assessment) of the REF. Air quality impacts were discussed in Section 6.9 of the REF. The changes in traffic conditions along the proposal corridor are anticipated to provide mostly positive impacts to the community, primarily due to improved bus travel times and traffic flow. The REF also found that there would be no adverse air quality impacts from the proposal during operation, as the proposal would not change the traffic volumes along Forest Way but improve traffic flow. Improved traffic flow and reduced congestion, and consequently reduced exhaust emissions, may have a beneficial effect on air quality in the immediate vicinity of the proposal.
2. The implementation of clearways would reduce congestion as there would be all lanes available, with no parked vehicles in the kerbside lane during clearway operating hours. Vehicles, including buses, would not be required to stop and start as frequently resulting in improved traffic flow. This offers an improvement over current conditions even when considered in combination with traffic lights.
3. Greenhouse gas emissions would not change due to the implementation or operation of the clearways on Forest Way. As mentioned above, the construction and operation of the proposal would not result in adverse air quality impacts. Limited materials, plant and equipment are required for the implementation of the clearways. The proposal would not change the traffic volumes along Forest Way but improve traffic flow.

4. As mentioned above, the construction and operation of the proposal would not result in adverse air quality impacts. Improved traffic flow and reduced congestion, and consequently reduced exhaust emissions, may have a beneficial effect on air quality in the immediate vicinity of the proposal.

## 2.6 Noise and vibration

### 2.6.1 Noise assessment

#### Submission number(s)

20

#### Issue description

1. The REF for the Forest Way clearway does not address operational noise impacts satisfactorily, in particular the cumulative noise impacts from surrounding local developments including the Northern Beaches Hospital and residential development, have not been considered in the REF.

#### Response

1. As stated in REF, the proposal would not increase the volume of traffic currently using Forest Way. The proposal does not bring the road any closer to receivers. Therefore, no measurable increase of noise impact on adjacent receivers is expected during operation of the proposal.

Overall there is not expected to be a noticeable change in road traffic noise due to the operation of the new clearway operating hours. The introduction of clearways would aim to ease congestion on Forest Way. Vehicles, including buses, would not be required to stop and start as frequently as there would be no parked vehicles in the kerbside lane which may result in an improvement to the level of overall traffic noise.

## 2.7 Stakeholder and community consultation

### 2.7.1 Consultation process

#### Submission number(s)

12, 18, 23

#### Issue description

1. From the information provided at the information night for the proposal, it was evident that a decision for the implementation of clearways was predetermined.
2. The original proposal put to community consultation in February-March 2017 indicated clearways on weekends. The current REF indicates clearways on weekends and public holidays.
3. Changes to the original proposal show that the consultation process was effective in listening to community needs.

#### Response

1. Following community and stakeholder consultation during February and March 2017 and further traffic data investigation, Roads and Maritime chose to further revise the initial proposal.

Refinements included:

- amending the weekday clearway hours of operation to peaks only. Standard weekday peak clearway hours of 6:00am to 10:00am and 3:00pm to 7:00pm in both directions between Warringah Road, Frenchs Forest and Wyatt Avenue/ Morgan Road, Belrose (3.7 km)

- amending the length of the proposed weekend and public holiday clearways (9:00am to 6:00pm) from the original proposed 3.7 km to 0.8 km between Warringah Road and Adams Street

The traffic investigations carried out for the proposal (refer to Section 6.1 of the REF) show that traffic volumes are sufficient to justify implementation of a new clearway on Forest Way between Warringah Road, Frenchs Forest and Wyatt Avenue/ Morgan Road, Belrose. The information contained within Section 6.1.2 of the REF is considered to be a true and accurate representation of data collected during the Volume and Travel Time Analysis (refer to Appendix D of the REF). Refer Section 1.4.1 for a discussion on the need and justification for the proposal.

2. Public holidays have been included in the proposal subsequently to the initial community consultation process to provide consistency across the greater Sydney road network. The new clearway hours on weekends and public holidays was included subsequently in the consultation material for the REF to allow for comment from the community.

Introducing new and extended clearways on weekdays between 6:00-10:00am and 3:00pm-7:00pm and on weekends and public holidays between 9:00am and 6:00pm between Warringah Road and Adams Street would help manage current traffic flow and would also maximised road capacity, and help road users get to their destinations sooner and in a more reliable timeframe.

3. Feedback is noted and appreciated.

## 2.8 Parking and access

### 2.8.1 Property access and mobility

#### Submission number(s)

10, 12, 14, 15, 16, 17, 21, 23, 24, 28, 29, 32, 33, 34

#### Issue description

1. Visitors with limited mobility such as those with a disability and the elderly would have to travel further distances to access properties on Forest Way. This will limit visitor access to properties.
2. Loss of parking would make it difficult to manage cars in and out of driveways on weekends.

#### Response

1. Roads and Maritime seek to balance the needs of the community as well as road users. Forest Way is a key arterial road, and its role in connecting people and moving goods across Sydney's north would continue as Sydney continues to grow. However, the primary purpose of a State Road such as Forest Way is to move people and goods efficiently across Sydney.

Roads and Maritime understands that the new clearway operating hours would change parking conditions in front of residential properties, which may cause some inconvenience for residents and visitors.

Parking investigations over nine days from 13 June to 21 June 2015 found that there was a low demand for parking most of the time during the proposed clearway operating hours on Forest Way.

Following a review of community feedback and re-evaluation of the traffic data, Roads and Maritime reduced the proposed clearway operating hours to operate only at times where warranted by existing Forest Way traffic volumes. The revised clearway operating hours would limit the impact of the proposed clearways for most residents who live on this corridor.

Vehicles which do not fit in existing on-site garages, car ports or driveways would be required to park on nearby side streets. It is recommended for residents who are less mobile or that have a disability, that they use their parking on-site in garages, car ports, and driveways to access properties as occurs during existing weekday parking restrictions on Forest Way.

2. Management of cars within properties and driveways should be considered to improve sight distance. The implementation of a clearway would improve sight distance for vehicles exiting and entering driveways as there would not be parked cars blocking their view.

Parking investigations identified that properties in the residential sections of Forest Way have access to onsite parking for multiple vehicles. It is recognised that there would be some inconvenience for residents to manage the parking of vehicles onsite, however this needs to be considered in the context of the function of Forest Way as a state road with the primary purpose to efficiently and safely move people and goods across Sydney.

## 2.8.2 Business parking

### Submission number(s)

15, 18

### Issue description

1. The REF appears flawed with respect to business parking. It is not clear how the alternative business parking availability has been identified. The parking study in Appendix E did not include conclusions around business parking used in the REF. The parking study has not considered parking for home operating businesses, mobile businesses or services.
2. The proposal has not taken into account the future business parking needs required as a result of the Northern Beaches Hospital and future developments along Forest Way – this is not addressed in the parking study or in the cumulative impact assessment section of the REF.
3. Nearby side streets do not provide enough parking spaces and using these parking spaces would impact local businesses

### Response

1. The *Sydney Clearway Strategy* provides for the offset of business parking demand for parking that is removed through the introduction of a clearway. There are sections along the proposal corridor that have some business uses including the Forest Way Shopping Centre and medical centre near Russell Avenue, Frenchs Forest. Parking investigations found that there was minimal demand for business parking along the corridor and any demand could be accommodated on-site or in nearby side streets with no changes to current parking restrictions as a result of the proposal.

The majority of the road corridor where parking was observed is occupied and zoned for residential use, however, there are some sections along the proposal corridor that have industrial, commercial and business uses. The traffic and parking investigations carried out in 2015 found that there was minimal demand for parking adjacent to businesses fronting the State Road along the proposal corridor and any loss could be accommodated by existing on-site parking at businesses or nearby in side streets with no changes to current parking restrictions. The assessment was based on existing conditions along the corridor.

Land along most of either side of Forest Way is zoned 'R2 Low Density Residential' under the Warringah Local Environmental Plan (LEP) 2011. The R2 zone does not permit the operation of a 'business premise'. However, Roads and Maritime acknowledges that there may be some 'home occupations' or 'home businesses' which are permitted in the R2 zones.

The *Sydney Clearways Strategy* allows for the provision of alternate business parking (based on existing demand and in conjunction with local councils) to assist in mitigating the impact of new and/ or extended clearways on local businesses. As no parking was observed in front of businesses along Forest Way it is recommended that owners or visitors of home businesses use existing on-site driveways, garages, car ports or nearby side streets to access any businesses located along the proposal corridor during clearway operating hours.

Section 1.4.2 provides an overview of the parking study process and information.

2. The Parking Study (refer to Appendix E of the REF) carried out in May 2015 found that there was very little demand for business parking along the proposal corridor and any loss could be accommodated by existing on-site parking at businesses or in nearby side streets with no changes to current parking restrictions.

Any future developments or changes to land use along the corridor would be subject to a separate impact assessment by the relevant body which would include an assessment of parking requirements.

3. The Parking Study carried out in May 2015 found that there is relatively low demand for parking on Forest Way. Given the resident's parking behaviour during existing restrictions and proposed changes to hours of operation of parking restrictions, the independent parking investigations carried out site visits and examined aerial imagery and concluded that it is likely that there are appropriate vacancies either in nearby side-streets or contained within the residential properties to provide a replacement for the reduced supply on Forest Way.

Section 1.4.2 provides an overview of the parking study process and information.

### 2.8.3 Parking study

#### Submission number(s)

15, 17 18, 19, 31

#### Issue description

1. The REF indicates that parking studies have been done that show very low demand. Only a single non-representative study was done and no conclusions were made with respect to business parking as claimed in the REF and the Community Consultation report. The information provided is misleading.
2. The Executive Summary quotes "parking surveys", implying more than one survey has been conducted. This is deceptive since the only parking study presented is the single, preliminary, limited duration survey in Appendix E.
3. The REF has not assessed impacts of parking loss adequately and dismisses the loss of 324 parking spaces, with claims that parking demand was low.
4. This parking assessment was based on limited data provided in the Parking Study and was conducted over 2.5 years ago which is not representative of the existing conditions. Current parking is significantly higher than indicated in the limited survey period.
5. The assessment of alternative parking is totally inadequate. The same methodology used for the main parking assessment, and over a longer period of time to ensure it is representative, should be used for assessing alternative parking.

#### Response

1. The *Sydney Clearways Strategy* includes a parking framework to guide this process. The framework consists of a process for business parking that requires:

- quantification of the number of parking spaces to be removed
- assessment of land uses and businesses in areas adjacent to the proposed clearway
- review of prevailing parking conditions, including existing parking restrictions
- consultation with the relevant local government authority about the need to change parking arrangements in adjacent streets through the introduction of timed parking restrictions, construction of new car parks or other means
- consideration of any funding methods for any parking mitigation measures for business parking.

This process was followed for the proposal. While the NBH upgrade roadworks are currently underway and having an impact on the local community, there has been no major change to land use where parking was observed during the parking surveys, and as such, it is considered that the parking survey remains representative of the area.

Section 1.4.2 provides an overview of the parking study process and information. Section 6.2 of the REF summarises the results of a detailed Parking Study (Peopletrans 2018b) that was carried out for the proposal (refer to Appendix E of the REF). The objectives of this Parking Study were to determine parking demand and utilisation on Forest Way as well as identifying parking impacts and alternatives to parking on Forest Way, if required.

The Parking Study (refer to Appendix E of the REF) found that the establishment of new clearway operating hours would change parking conditions in front of residential properties along Forest Way, however, this is similar to all other State Roads where clearways and 'No Stopping' or 'No Parking' restrictions are currently in place. The Parking Study found that the proposal corridor was subject to a relatively low demand for parking most of the time during the proposed clearway operating hours (refer to Table 6-3 of the REF) and that no business parking was identified.

All parking spaces on the proposal corridor were surveyed by driving along the entire road corridor at hourly intervals and recording vehicles parked on an in-car video camera. Hourly video surveys were recorded for nine days (a Monday to Friday weekday period and two weekends) between 13 June 2015 and 21 June 2015 on weekdays (6:00am to 7:00pm) and weekends (8:00am to 8:00pm). Across the nine-day survey period, four locations were identified as locations where State Road parking was regularly used during the daytime survey hours. The Parking Study (Peopletrans 2018b) included a duration-of-stay parking survey along the proposal corridor in these four locations (shown on Figure 6-11 in the REF).

The Parking Study (refer to Appendix E of the REF) found that all of the properties surveyed where parking was observed have some level of off-street car parking, and additional parking was available in nearby side streets throughout the week.

As no areas of business parking demand were identified during the parking investigations, Roads and Maritime determined that parking mitigation measures, such as introducing timed parking on side streets close to Forest Way, was not suitable for this proposal.

All parking spaces on the proposal corridor were surveyed by driving along the entire road corridor at hourly intervals and recording vehicles parked on an in-car video camera. Hourly video surveys were recorded for nine days (a Monday to Friday weekday period and two weekends) between 13 June 2015 and 21 June 2015 on weekdays (6:00am to 7:00pm) and weekends (8:00am to 8:00pm). One parking study was undertaken as a result of these surveys.

2. As outlined above, one parking study was undertaken for the proposal. This consisted of parking surveys conducted over nine separate days. Any misunderstanding in regards to the number of studies was unintentional.

3. Parking and access impacts are assessed in Section 6.2 of the REF. Data used in this section is based on the Parking Study (refer to Appendix E of the REF) and was based on an inventory of the parking supply along the proposal corridor, recorded by Peopletrans in June 2015. For this study, Peopletrans travelled the entire length of the route (two-way) and measured the available parking spaces. The methodology to determine the existing parking supply is provided in Section 6.2 of the REF. The Parking Study (refer to Appendix E of the REF) found that all of the properties surveyed where parking was observed have some level of off-street car parking, and additional parking was available in nearby side streets throughout the week. Section 1.4.2 provides an overview of the parking study process and information.
4. Although the Parking Study completed for the proposal was undertaken 2.5 years ago, it is still considered relevant. The relevance of the study is based on the land use changes within the study area and the impact these land uses have on the proposal. Section 1.4.2 provides an overview of the parking study process and information.
5. Roads and Maritime seek to balance the needs of the community as well as road users. Forest Way is a key arterial road, and its role in connecting people and moving goods across Sydney's north would continue as Sydney continues to grow.

Roads and Maritime understands that the new clearway operating hours would change parking conditions in front of residential properties, which may cause some inconvenience for residents and visitors. Assessing parking removed from the State Road was considered as part of the Parking Study prepared for the proposal (refer to Appendix E of the REF). This study is also summarised in Section 6.2 of the REF. Relatively few vehicles were observed parked on Forest Way during most of the survey period, especially during the proposed clearway operating hours.

The proposal may result in some vehicles, currently parking on State Roads, needing to park in nearby side streets during the new clearway operating hours. Given the relatively few vehicles which were observed parking on Forest Way, it is not expected that existing traffic volumes in nearby side streets would be significantly impacted by additional traffic as a result of the proposal. As mentioned above, the methodology used to determine the existing parking supply is detailed in Section 6.2.1 of the REF. Section 1.4.2 provides an overview of the parking study process and information.

## 2.8.4 Residential parking and side streets

### Submission number(s)

7, 10, 12, 13, 14, 15, 17, 18, 21, 22, 23, 25, 28, 29, 32, 34

### Issue description

1. The removal of parking provisions on Forest Way would cause a great inconvenience to residents and visitors. Clearways on weekends would result in reduced parking availability, impacting residents and visitors that park along the proposal corridor.
2. Residents of Forest Way should be able to offer family, friends and visitors the on-street parking on Forest Way.
3. Most residents do their utmost to avoid parking unnecessarily on Forest Way out of respect for the public and a desire not to unnecessarily impede the traffic. However, there are times when parking on Forest Way is required such as; family gatherings, including weekend lunches, public holiday celebrations such as Christmas. Residents along Forest Way have limited parking space in their driveways, and would have to find alternate parking areas.
4. Nearby side streets do not provide enough parking spaces to accommodate for the loss of parking spaces due to the clearways and would become overloaded due to the implementation of clearways.

5. If visitors want to park they have to walk a long way. Parking in side streets are too far away from most residences.
6. Parking in the surrounding local streets would put pressure on parking availability and create congestion.
7. Funding for alternative parking has not been addressed in the REF, therefore Roads and Maritime has not met its clearways strategy.
8. No mitigation measures are proposed for the impacts of loss of parking to residents. The REF only addresses safeguards during the pre-construction or construction stage of the project, not the operational stage. The REF must address mitigation measures for the operations stage, particularly how loss of parking would be mitigated.
9. Residents with large commercial vehicles would have to seek alternative parking areas, and the surrounding streets are not equipped to facilitate heavy vehicle movements.
10. There is already limited parking available in nearby side streets and these streets will not provide enough parking spaces to accommodate for the loss of parking on Forest Way as a result of the proposal. The proposal does not provide any parking solutions for residents. Parking on nearby side streets, such as Adams Street, is not routinely available as this area has been developed with medium density. Parking availability in Bowman Avenue is already at capacity and parking in Russell Avenue is not permitted. Parking availability on other nearby side streets such as Naree Road is unclear due to development of the new hospital and associated roadworks, and Grace Avenue is narrow and there are existing parking issues as the street is reduced to one lane when cars are parked. As such, the nearest available parking to Forest Way is 300 metres away
11. The proposed clearway will remove parking from outside my property.
12. Parking at the shopping centre is limited to a three-hour limit and is for shoppers only. It is not possible to park for longer periods.

## **Response**

1. Roads and Maritime understands that the new clearway operating hours would change parking conditions in front of residential properties, which may cause some inconvenience for residents and visitors. Assessing parking removed from the State Road was considered as part of the Parking Study prepared for the proposal (refer to Appendix E of the REF). This study is also summarised in Section 6.2 of the REF. Relatively few vehicles were observed parked on Forest Way during most of the survey period, especially during the proposed clearway operating hours. Section 1.4.2 provides an overview of the parking study process and information.
2. Roads and Maritime understands that the new clearway operating hours would change parking conditions in front of residential properties, which may cause some inconvenience for residents and visitors. Roads and Maritime seek to balance the needs of the community as well as road users. Forest Way is a key arterial road, and its role in connecting people and moving goods across Sydney's north would continue as Sydney continues to grow. However, the primary purpose of a State Road such as Forest Way is to move people and goods efficiently across Sydney. Section 1.4.2 provides an overview of the parking study process and information.
3. Roads and Maritime appreciates the consideration residents along Forest Way have for the public during peak periods, by assisting not impeding traffic with parked cars. Roads and Maritime understands that the new clearway operating hours would change parking conditions in front of residential properties, which may cause some inconvenience for residents and

visitors. Roads and Maritime seek to balance the needs of the community as well as road users. Section 1.4.2 provides an overview of the parking study process and information.

4. For residents on the western side of Forest Way, who cannot utilise parking facilities within their own property, there is parking available in nearby Adams Street, with the exclusion of eastbound morning peak 'No Parking' restrictions from 7:30-9:30am, Prince Charles Road, Bambara Road and Glen Street with the exclusion of eastbound 'No Parking' restrictions on school days 8am-4pm. Access is also available through to Grace Avenue via the pedestrian access near 46 Forest Way.

For residents on the eastern side of Forest Way, who cannot utilise parking facilities within their own property, there is parking available in nearby Prince Charles Road, Bowman Avenue, Adams Street and Rabbett Street. Access is also available through to Grace Avenue via the pedestrian access near 83 Forest Way.

Parking is also currently available in Naree Road, though Roads and Maritime acknowledge there may be access and restriction changes associated with the Northern Beaches Hospital Works which may change the suitability for parking along this street for nearby residents.

There are also pedestrian crossing opportunities across Forest Way at Glen Street, Adams Street and near Rabbett Street

5. Assessing parking removed from the State Road was considered as part of the Parking Study prepared for the proposal (refer to Appendix E of the REF). This study is also summarised in Section 6.2 of the REF. Relatively few vehicles were observed parked on Forest Way during most of the survey period. Section 1.4.2 provides an overview of the parking study process and information.

The proposal may result in some vehicles, currently parking on State Roads, using parking in nearby side streets. Given the relatively few vehicles which were observed to park on Forest Way, it is not expected that existing traffic volumes in nearby side streets would be significantly impacted by additional traffic as a result of the revised proposal.

In addition, the proposal may contribute to road safety improvements. It is considered that the relocated parking from the State Road onto side streets may provide a safer parking environment than currently provided on Forest Way as pedestrians are not getting in/ out of vehicles adjacent to a high speed traffic lane.

6. The proposal may result in some vehicles, currently parking on State Roads, using parking in nearby side streets. Given the relatively few vehicles which were observed to park on Forest Way, it is not expected that existing traffic volumes in nearby side streets would be significantly impacted by additional traffic as a result of the proposal. Section 1.4.2 provides an overview of the parking study process and information.
7. As mentioned in Section 2.8.2 of this report, The *Sydney Clearways Strategy* allows for the provision of alternate business parking only (based on existing demand and in conjunction with local councils) to assist in mitigating the impact of new and/ or extended clearways on local businesses. As no areas of parking associated with business demand were identified during the parking investigations, Roads and Maritime determined that parking mitigation measures, such as introducing timed parking on side streets close to Forest Way, were not suitable for this proposal.
8. Roads and Maritime understands that the new clearway operating hours would change parking conditions in front of residential properties, which may cause some inconvenience for residents and visitors. Roads and Maritime seek to balance the needs of the community as well as road users. The loss of parking during clearway hours would be mitigated by the availability of side streets and driveways. The low parking demand in the study area, indicated by the Parking

Study also reduces the impact of the clearway as alternative parking options are available. Section 1.4.2 provides an overview of the parking study process and information.

9. Roads and Maritime understands that new and extended clearway hours would change parking conditions in front of residential properties, which may cause some inconvenience. However, the primary purpose of a state road is to move people and goods effectively across Sydney.

Vehicles can continue to park between 7pm and 6am along the corridor and between 10am and 3pm. North of Adams Street, vehicles can park on weekends as well. Like all other residents, commercial vehicle drivers would need to find an appropriate safe space in onsite garages or driveways or in nearby side streets.

Under NSW Road rules, heavy vehicles (GVM of 4.5 tonnes or more) or long vehicles (7.5 m long or longer) must not stop on a length of road for longer than one hour (buses excepted)

10. Assessing parking removed from the State Road was considered as part of the Parking Study prepared for the proposal (refer to Appendix E of the REF). This Parking Study is also summarised in Section 6.2 of the REF. Relatively few vehicles were observed parked on Forest Way during most of the survey period.

The proposal may result in some vehicles, currently parking on State Roads, needing to park in garages, carports or driveways on-site or in nearby side streets. Given the relatively few vehicles which were observed to park on Forest Way, it is not expected that existing parking volumes in nearby side streets would be significantly impacted as a result of the proposal.

For residents on the western side of Forest Way, who cannot utilise parking facilities within their own property, there is parking available in nearby Adams Street, with the exclusion of eastbound morning peak 'No Parking' restrictions from 7:30am-9:30am, Prince Charles Road, Bambara Road and Glen Street with the exclusion of eastbound 'No Parking' restrictions on school days 8:00am-4:00pm. Access is also available through to Grace Avenue via the pedestrian access near 46 Forest Way.

For residents on the eastern side of Forest Way, who cannot utilise parking facilities within their own property, there is parking available in nearby Prince Charles Road, Bowman Avenue, Adams Street and Rabbett Street. Access is also available through to Grace Avenue via the pedestrian access near 83 Forest Way.

Parking is also currently available in Naree Road, though RMS acknowledge there may be access and restriction changes associated with the Northern Beaches Hospital Works which may change the suitability for parking along this street for nearby residents.

There are also pedestrian crossing opportunities across Forest Way at Glen Street, Adams Street and near Rabbett Street

Section 1.4.2 provides an overview of the parking study process and information.

11. Following a review of the community feedback received during the community consultation process and a re-evaluation of the traffic data, we reduced the proposed clearway operating hours to operate only at times where warranted by existing Forest Way traffic volumes. Existing weekend traffic volumes and congestion can be significant for road users entering and exiting Warringah Road from Forest Way in particular. While the NBH upgrade roadworks would help to address some of these issues, the proposed weekend clearways will also help to address issues during construction of the NBH upgrade roadworks and maximise benefits of the works. The revised clearway operating hours would limit the impact of the clearways for most residents who live on the proposal corridor.

Most properties can provide off-street access and parking for people with limited physical capacity, and taxis are permitted to stop in clearways for pickup and set down of passengers under the Australian Road Rules. In addition to taxis, the drivers of public buses and emergency vehicles are permitted to stop along a clearway when dropping off or picking up passengers.

12. Parking in the Forest Way shopping centre is intended to be for shopping customers. It is recommended that residents and visitors explore options for parking either on-site in garages, car ports or driveways, and if not available, then using nearby local streets.

Section 1.4.2 provides an overview of the parking study process and information.

## 2.8.5 Tradesman and deliveries parking

### Submission number(s)

7, 14, 17, 18, 19, 21, 22, 24, 25, 31

### Issue description

1. The clearway would impact deliveries, service and trades people, and increase the cost of services due to restriction to access. Clearways limit ability to schedule work for tradesman on the alternate side of the road morning or afternoon peak period or on weekends. Clearways would result in the need to park on side streets which would increase the time required for a job.
2. Clearways would require service vehicles to park on back streets that are not equipped to cater for heavy vehicles and the like.

### Response

1. Roads and Maritime seek to balance the needs of the community as well as road users. Forest Way is a key arterial road, and its role in connecting people and moving goods across Sydney's north would continue as Sydney continues to grow.

Roads and Maritime understands that the new and extended clearway operating hours would change parking conditions in front of residential properties, which may cause some inconvenience for residents, tradespeople and visitors.

However, the primary purpose of a State Road such as Forest Way is to move people and goods efficiently across Sydney. Any parking currently permitted on the State Road is not specifically allocated to residents or properties. Kerbside parking impacts the primary function of the road and Roads and Maritime change parking restrictions across the State Road network to ensure they are meeting their primary purpose.

The *Sydney Clearways Strategy* provides a framework for addressing loss of parking for businesses which front state roads and rely on the state road for customer parking and deliveries.

Under the proposed clearway operations, public buses, taxis, and emergency vehicles would continue to be permitted to stop on Forest Way when dropping off or picking up passengers. If residents expect any private deliveries, they would need to consider where the delivery vehicle could stop to unload. Forward planning for deliveries to ensure driveways and carports are available would provide on-site space for delivery drivers during clearway operating hours. This is similar to all other State Roads where clearways and 'No Stopping' restrictions are in place.

Deliveries can often be scheduled outside of the proposed clearway hours, for example, groceries can be delivered across the day from 5:00am until 10:00pm or major furniture retailers can deliver from 7:00am to 9:00am on weekends if required.

It is recommended that residents and tradespeople explore options for parking either on-site in garages, car ports or driveways, and if not available, then using nearby local streets.

2. Roads and Maritime seek to balance the needs of the community as well as road users. Forest Way is a key arterial road, and its role in connecting people and moving goods across Sydney's north would continue as Sydney continues to grow.

Roads and Maritime understands that the new and extended clearway operating hours would change parking conditions in front of residential properties, which may cause some inconvenience for residents.

Large service vehicles would have to seek alternative parking areas and may need to utilise the surrounding local and regional streets to find areas to park. This would be similar to when these vehicles service those side streets.

## 2.9 Socio economic impacts

### 2.9.1 Scope of the assessment

#### Submission number(s)

15, 17, 18

#### Issue description

1. The proposal would have considerable impacts on the community and would provide minimal benefits.
2. The REF does not adequately address socio-economic issues including street parking.

#### Response

1. The proposal would benefit the local and regional community through improving travel reliability for commuters and public transport services travelling along the Forest Way road corridor.

Roads and Maritime seek to balance the needs of the community as well as road users. Forest Way is a key arterial road, and as Sydney continues to expand over the coming years, its role in moving people and goods would continue to grow in importance. Clearways are a way to manage congestion immediately. As clearways continue to be rolled out across Sydney, road users would experience more efficient, safer, and more reliable journey times. This means less time in the car, and more time doing the things they enjoy.

2. Roads and Maritime has an environmental impact assessment (EIA) procedure which has been developed to ensure consistency and quality in EIA. This is regularly reviewed and kept up to date to reflect best practice.

Section 5.6 (formerly Section 111A) of the EP&A Act requires determining authorities such as Roads and Maritime to consult on environmental impact assessments.

Parking impacts as a result of the proposal have been assessed in the Parking Study (Appendix E of the REF) and Section 6.2 of the REF.

### 2.9.2 Property values

#### Submission number(s)

15, 18, 21, 22, 24, 25

## Issue description

1. The socio-economic impact of resident's housing values has not been considered in the REF. The REF has made no attempt to quantify the economic loss to affected residents. Roads and Maritime should include an analysis, using data on property resale prices, before and after the implementation of extended clearways elsewhere. The rented properties along Forest Way would experience reduced rental return as a result of the proposal, and this has not been addressed in the socioeconomic section of the REF. No compensation is being offered by Roads and Maritime for the resultant reduced value of the properties and loss of amenity.
2. The claim by Roads and Maritime that there would be no impact on property values is without merit, without foundation and with no evidence.
3. The proposal would devalue the properties on Forest Way as a result of changes in access.

## Response

1. We understand that the new and extended clearway operating hours would change parking conditions in front of residential properties, which may cause some inconvenience for residents and visitors. However, any parking currently permitted on Forest Way, as for any public road, is not specifically allocated to residents or properties. The REF determined that the introduction of new clearways would not change the land use, land size or development capacity of any private property.
2. Please see response 1 above.
3. Please see response 1 above.

## 2.9.3 Amenity

### Submission number(s)

15

### Issue description

1. The proposal would result in a loss of community amenity.

### Response

1. Roads and Maritime seek to balance the needs of the community as well as road users. Forest Way is a key arterial road, and as Sydney continues to expand over the coming years, its role in moving people and goods would continue to grow in importance. Clearways are a way to manage congestion immediately. Congestion often contributes to a reduction in community amenity. The provision of clearways would aim to provide road users with efficient, safer, and more reliable journey times. This means less time in the car, and more time doing the things they enjoy.

## 2.10 Traffic and transport

### 2.10.1 Traffic data

#### Submission number(s)

12, 15, 17, 18, 23,

#### Issue description

1. Traffic information that was used to provide the justification for the proposed clearways is flawed.

2. The traffic studies carried out by Roads and Maritime show that criteria for congestion on this three lane section is not met 90 per cent of the sampled times. Of the 168 samples taken 143 did not exceed the criteria and of the 25 samples that exceeded the criteria all but four occurred when the current parking restrictions were operational.
3. Northbound traffic failed to meet criteria where travel speed is greater than 30 km/h on three occasions out of 109 samples, or 2.75 per cent of the time. 97.25 per cent of the time the average speed was greater than the congestion criteria. These three times correspond to the timing of the operation of afternoon school zones on Forest Way at Covenant Christian School. It is highly likely It is well understood that implementation of school zones is a significant contributor to congestion. It is therefore clear that implementation of a clearway would not lead to improved traffic flow when the school zones are in operation.
4. For the 2015 weekday results southbound, all speeds were more than 30 km/h except for seven occasions out of 61 data points. Three of these occasions occurred in the morning peak and another two were clearly due to road works.
5. No data is presented for traffic volumes northbound at Adams Street. To declare that traffic data south of Adams Street is representative of traffic volumes north of Adams Street is speculative if not misleading. The northbound AM data at Forest Way/ Perentie Street is too far away to be representative of traffic between Warringah Road and Glen Street.
6. The traffic data used in the report is misleading. The validity of the travel speed survey is questionable given the different distance surveyed compared to the length of the proposal .ie 5.9km surveyed and proposal 3.9km. The sets of traffic data used to demonstrate overall weekday traffic flow are 2.7 km apart (southbound) and 3.4 km (northbound). This ignores the traffic movements occurring in between residential locations on Forest Way and at the intervening junctions.
7. Traffic analysis does not consider movement off and around the corridor for example at the sets of traffic signals at Wearden Road and Glen Street.
8. Insufficient credible data has been produced to claim a threshold has been breached per the criteria to introduce a new PM southbound parking restriction between Glen Street and Warringah Road.

## Response

1. Section 1.4.3 of this report provides the details of the traffic data collected for the proposal. The REF considered data from a variety of sources including Roads and Maritime SCATS data and volume counts from the Volume and Travel Time Analysis (Peopletrans 2018a) (Appendix D of the REF).
2. Clearways are not determined solely based on one particular guideline within the strategy, but rather a balance between the needs of the local community for parking and demand for road users. The primary purpose of a State Road such as Forest Way is to move people and goods across Sydney.

The Australian Standard recommends that clearways should be continuous, embracing short intermediate sections which might not otherwise be justified on the basis of warrant considerations alone.

To this end, the clearway hours were determined to provide consistency throughout the corridor and to help improve travel times after considering factors such as traffic volumes and travel speeds. The strategic importance of the road and an assessment of business parking is also considered when developing proposed hours of operation.

Traffic investigations were undertaken in 2015, which were not a measure of congestion, but of traffic volumes and travel time investigations along the corridor.

Volume investigations from tube surveys undertaken in 2015 found that volumes were exceeded 1600 vph on Forest Way south of Oates Place between 25 May 2015 and 31 May 2015

- southbound – between 8:00am-9:00am and 3:00pm-6:00pm on weekdays and 12:00pm to 5:00pm on weekends
- northbound – between 8:00am-9:00am and close between 3:00pm-6:00pm on weekdays.

Additional volume data was sourced in December 2016 to supplement the 2015 data. More information on investigations can be found in Section 1.4.3 of this report.

More information on traffic investigations can be found in Section 6.1.2 of the REF and Section 1.4.3 of this report.

3. As outlined above, clearways are not determined solely based on one particular guideline within the strategy, but rather a balance between the needs of the local community for parking and demand for road users. The primary purpose of a State Road such as Forest Way is to move people and goods across Sydney.

The Australian Standard recommends that clearways should be continuous, embracing short intermediate sections which might not otherwise be justified on the basis of warrant considerations alone.

To this end, the clearway hours were determined to provide consistency throughout the corridor and to help improve travel times after considering factors such as traffic volumes and travel speeds. The strategic importance of the road and an assessment of business parking is also considered when developing proposed hours of operation.

Travel time surveys undertaken in 2015 were used to validate the findings of the *Sydney Clearways Strategy* which identified Forest Way for further investigation of clearways. These travel time investigations found that there were seven occasions southbound and four occasions northbound when travel between Mona Vale Road and Warringah Road was slower than 30 km/h during peaks. The corridor included a long, high speed section where no parking is permitted, so Roads and Maritime sourced additional historical data, with a larger sample size which was more relevant to where parking occurs. In addition to the community consultation process, this led the revised extents of the project.

More information on traffic investigations can be found in Section 6.1.2 of the REF and Section 1.4.3 of this report.

4. As outlined above, clearways are not determined solely based on one particular guideline within the strategy, but rather a balance between the needs of the local community for parking and demand for road users. The primary purpose of a State Road such as Forest Way is to move people and goods across Sydney.

The Australian Standard recommends that clearways should be continuous, embracing short intermediate sections which might not otherwise be justified on the basis of warrant considerations alone.

To this end, the clearway hours were determined to provide consistency throughout the corridor and to help improve travel times after considering factors such as traffic volumes and travel speeds. The strategic importance of the road and an assessment of business parking is also considered when developing proposed hours of operation.

As mentioned previously, travel time surveys undertaken in 2015 were used to validate the findings of the *Sydney Clearways Strategy* which identified Forest Way for further investigation

of clearways. These travel time investigations found that there were seven occasions southbound and four occasions northbound when travel between Mona Vale Road and Warringah Road was slower than 30 km/h during peaks. The corridor included a long, high speed section where no parking is permitted, so Roads and Maritime sourced additional historical data, with a larger sample size which was more relevant to where parking occurs. In addition to the community consultation process, this led the revised extents of the project.

More information on traffic investigations can be found in Section 6.1.2 of the REF and Section 1.4.3 of this report.

5. Clearways are not determined solely based on one particular guideline within the strategy, but rather a balance between the needs of the local community for parking and demand for road users. The primary purpose of a State Road such as Forest Way is to move people and goods across Sydney.

The Australian Standard recommends that clearways should be continuous, embracing short intermediate sections which might not otherwise be justified on the basis of warrant considerations alone.

To this end, the clearway hours were determined to provide consistency throughout the corridor and to help improve travel times after considering factors such as traffic volumes and travel speeds. The strategic importance of the road and an assessment of business parking is also considered when developing proposed hours of operation.

Volume data for the northbound corridor was sourced at the start of the corridor (Warringah Road) and the end of the corridor (south of Oates Place) While there can be variation along a State Road corridor as road users enter and exit to their destinations, or regional and local roads, the volume of traffic along the state road is usually relatively consistent along the corridor. The two traffic volume sample locations which are around 3 km apart and less than two km from Glen Street are considered to be generally appropriate for this corridor.

While volumes at Warringah Road are less than the guidelines during morning peaks, volumes are sufficient at the northern end of the corridor, and the southern section has been included for consistency, and to provide efficiencies for the local intersections.

6. Clearways are not determined solely based on one particular guideline within the strategy, but rather a balance between the needs of the local community for parking and demand for road users. The primary purpose of a State Road such as Forest Way is to move people and goods across Sydney.

The Australian Standard recommends that clearways should be continuous, embracing short intermediate sections which might not otherwise be justified on the basis of warrant considerations alone.

To this end, the clearway hours were determined to provide consistency throughout the corridor and to help improve travel times after considering factors such as traffic volumes and travel speeds. The strategic importance of the road and an assessment of business parking is also considered when developing proposed hours of operation.

Volume data for the northbound corridor was sourced at the start of the corridor (Warringah Road) and the end of the corridor (south of Oates Place) While there can be variation along a State Road corridor as road users enter and exit to their destinations, or regional and local roads, the volume of traffic along the state road is usually relatively consistent. Two traffic volume sample locations around 3 km apart is considered to be generally appropriate for this corridor.

More information on traffic investigations can be found in Section 6.1.2 of the REF and Section 1.4.3 of this report.

7. The Australian Standard recommends that clearways should be continuous, embracing short intermediate sections which might not otherwise be justified on the basis of warrant considerations alone.

While there can be variation along a state road corridor as road users enter and exit to their destinations, or regional and local roads, the volume of traffic along the State Road is usually relatively consistent. Two traffic volume sample locations around 3km apart near the start and end of the proposal is considered to be generally appropriate for this corridor.

More information on traffic investigations can be found in Section 6.1.2 of the REF and Section 1.4.3 of this report.

8. Southbound volume data was collected at Belrose and at Frenchs Forest to help inform the clearways proposal. The volume data collected shows that volumes sufficient to implement clearways restrictions were present at both locations and road users would benefit from removal of parking during peaks along the State Road.  
For Southbound weekday traffic, volumes are above 800 vehicles per hour all day and consistently above 1600 vehicles per hour at Morgan Road for most of any weekday (Figure 6-1 of the REF). At Adams Street, volumes are above 800 vehicles per hour all day and peak volumes in both morning and afternoons are close to or above 1600 vehicles per hour consistently during the surveyed week (Figure 6-2). These investigations were undertaken before the major changes associated with the Northern Beaches Hospital occurred
9. Traffic volume data is discussed in Section 6.1.2 of the REF. Section 1.4.3 of this report provides more information in regards to southbound traffic data.

## 2.10.2 Scope and methodology of traffic study

### Submission number(s)

15, 18, 21

### Issue description

1. The “Data Report – Volume and Travel Time Analysis” presented in Appendix D of the REF is preliminary in nature, of limited duration and has a number of flaws. The traffic analysis does not consider reports and other assessments that have been completed for the study area.
2. The location of the tube survey at Morgan Road, measuring traffic volume, is not reflective of the various sections of Forest Way as it:
  - does not reflect the section of Forest Way from Warringah Road to Glen Street where the peak clearly occurs in the evening
  - does not reflect the section of the road from Warringah Road to Glen Street where the peak clearly occurs in the morning
  - extrapolation of tube survey results from this single location (near Morgan Road) is not valid for other sections of Forest Way.The results of the tube survey only uses one set of data for the northbound traffic. It is unclear why only select data was used in this survey for inclusion in the study.
3. The supplementary data obtained from the Morgan Road southbound traffic volumes is significantly different to the Adams Street traffic information. Showing considerable amounts of traffic lower on Adams Street. This proves that data obtained in the 2015 survey at Morgan Road cannot be used to draw any conclusions for the Forest Way/ Adams Street stretch.

4. Roads and Maritime have evaluated traffic volumes based on data not relevant to Forest Way to Adams Street and has used misleading criteria (i.e. used the 800 vph instead of 1600 vph). The evaluation from 2015 is not valid for the proposed weekend clearway section.
5. The time travel survey states that there is an 80km/h speed limit on Forest Way which has resulted in a higher average travel time, however this is not the appropriate metric, but rather lane capacity on approaches to intersections should be considered.
6. The traffic data provided in the REF is not reflective of standard conditions. This data was collected pre-Christmas weekend, which is not an accurate representation. For example, sections of Forest Way that area not accurately reflected in the assessment include:
  - Forest Way/Warringah Road intersection
  - areas around Forest Way Shops, Glenrose Shops and Belrose Supa Centre
  - between Russell Avenue (immediately after the shopping centre) to Adams Street
  - between Warringah Road and Adams Street.
7. The REF traffic assessment results were predetermined prior to the preparation of the Volume and Travel Time Analysis.

## Response

1. All data sourced for the REF, including the data and results of the Volume and Travel Time Analysis (Peopletrans 2018a) were published in the REF (refer to Appendix D and Section 6.1 of the REF). Refer Section 1.4.1 for a discussion on the need and justification for the proposal as well as Section 1.4.3 which provides an overview of the traffic information.

The Community Consultation Report (Roads and Maritime 2018b) also included that data for both the 2015 initial investigation data and the 2016 verification data to present both sets of results (refer to Appendix B of the REF).

Since investigations started in 2015, Roads and Maritime has compiled sufficient data to complete an appropriately robust traffic and transport assessment for the proposal, which is representative of the corridor from Wyatt Avenue/ Morgan Road to Warringah Road. More information about the study Volume and Travel time report can be found in Section 1.4.3. of this report.

2. Discussion of traffic volumes along the corridor is contained with Section 6.1.2 of the REF and Section 1.4.3 of this report.

During the initial investigation of the entire 5.9 km length of Forest Way from Mona Vale Road, Terrey Hills to Warringah Road, Frenchs Forest, a tube survey was undertaken in 2015 as part of the Traffic Study south of Oates Place, Belrose to measure traffic volumes. Once the proposal corridor was refined (Wyatt Avenue/ Morgan Road to Warringah Road), additional supplementary traffic volume data from December 2016 was collected from locations along Forest Way, to verify that obtained from tube counts. This included traffic data from traffic signals at the southern end of the proposal corridor from the Roads and Maritime Sydney Coordinated Adaptive Traffic System (SCATS) data.

While there can be variation along a State Road corridor as road users enter and exit to their destinations, or regional and local roads, the volume of traffic along the State Road is relatively consistent. Two traffic volume sample locations approximately three km apart is considered to be generally appropriate to survey this road corridor.

An assessment of the impacts on the local community from removal of parking during these periods identified that parking demand is generally low and alternative parking can be found

within residential and commercial properties and in nearby side streets. Section 1.4.2 provides an overview of the parking study process and information.

3. Since investigations started in 2015, Roads and Maritime has compiled sufficient data to complete an appropriately robust traffic and transport assessment for the proposal. Section 1.4.3 provides more information in regards to traffic volume data and locations assessed throughout the study area. Volume data was collected by PeopleTrans in 2015 to validate the *Sydney Clearways Strategy*. Supplementary volume data for southbound traffic was collected in 2016 for vehicles entering the Morgan Road and Adams Street intersections. The 2016 data was considered valid and was used for the analysis of traffic volumes along the proposal corridor.

Analysis of 2016 SCATS data for the southbound weekday traffic volume data at the southern end of the proposal corridor, which includes the section of road between Warringah Road and Adams Street, indicated that 1600 vph was exceeded in both AM and PM peak periods at 7:00am and around 5:00pm to 6:00pm (refer to Figure 6-2 of the REF).

Analysis of the northbound weekday traffic volume data at the southern end of the proposal corridor indicated that 1600 vph was exceeded between about 12:00pm to 7:00pm (refer to Figure 6-4 of the REF).

On weekends, analysis of the southbound 2016 traffic volume data at the southern end of the proposal corridor indicated that traffic volumes did not exceed 1600 vph though approached close to 1600 vph during the middle of the day (refer to Figure 6-5 of the REF).

The peak afternoon period volumes at Adams Street, when compared with Morgan Road, show that some vehicles are using intersections to exit the corridor, while others are entering. In addition to the 2016 Adams Street data, the 2015 data taken from south of Oates Places (Refer to Appendix D of the REF) shows sufficient volume further along the corridor to justify clearways during morning and afternoon peaks.

4. All data sourced for the REF, including the data and results of the Volume and Travel Time Analysis (Peopletrans 2018a) were published in the REF (refer to Appendix D and Section 6.1 of the REF). Since investigations started in 2015, Roads and Maritime has compiled sufficient data to complete an appropriately robust traffic and transport assessment for the proposal, which is representative of the corridor from Wyatt Avenue/ Morgan Road to Warringah Road. Further information about traffic data used in the assessment can be found in Section 1.4.3.
5. The Volume and Travel Time Analysis (Appendix D of the REF) has considered both speed and traffic volumes in the assessment. In doing so, a better understanding of traffic congestion on Forest Way could be considered in response to various factors. Section 1.4.3 of this report provides further information about the methodology and results of the traffic analysis undertaken for the proposal.
6. The Volume and Travel Time Analysis (refer to Appendix D of the REF) assessed the entire length of the proposal corridor, between Wyatt Avenue/ Morgan Road and Warringah Road, and Section 6.1 of the REF provided a summary of this assessment. This assessment included a review and analysis of traffic volume data, travel time data, historical travel time data, crash statistics, public transport data including bus services and bus dwell times, pedestrian and cyclist movements and journey to work data. Section 1.4.3 which provides an overview of the traffic information.

The traffic investigations undertaken along the corridor are considered to be representative of normal conditions and were selected to take place outside of public and school holidays. Traffic observations along Forest Way indicate that there are not substantial seasonal variations i.e. access to beaches or similar, along the corridor which would make the selected dates unrepresentative.

7. Details regarding the methodology and scope of the traffic assessment are provided in Section 1.4.3. The results of the traffic assessment completed for the proposal provided evidence of congestion and supported the requirement of a clearway on Forest Way. The traffic assessment that forms part of the REF is based on the Volume and Travel Time Analysis (refer to Appendix D of the REF) completed for the proposal.

### 2.10.3 Road and pedestrian safety

#### Submission number(s)

15, 19, 21, 22, 25

#### Issue description

1. If clearways were exercised on Forest Way, it would result in services and trades people having to park in residential driveways, and reverse into oncoming traffic upon exit. This would be difficult and unsafe.
2. Removal of parked cars on the kerbside lane may reduce side swipe crashes but would not prevent front fences from being demolished, presenting a danger to pedestrians.
3. The REF states that pedestrian crossings in the study area can be used, however pedestrian crossings are located at distances over 400 metres apart. In addition, pedestrians have to cross only four lanes of moving traffic rather than six, which is easier.
4. Surrounding streets are not equipped to facilitate heavy vehicle movements, posing a risk to pedestrians and animals.

#### Response

1. The proposed clearway would remove parking in the kerbside lane during the proposed clearway operating hours. It is considered that the relocated parking from the State Road onto side streets may provide a safer parking environment than currently provided on Forest Way as pedestrians are not getting in/ out of vehicles adjacent to a busy high volume, 70 km/h traffic lane. Additionally, the need for through traffic to weave and change lanes to manoeuvre around parked vehicles would be alleviated during clearway operation (refer to Section 6.1 of the REF). Removal of parked cars from the kerbside lane during the proposed clearways hours would improve line-of-sight for vehicles exiting driveways and vehicles travelling along the kerbside lane and assist in the reducing the risk of crashes
2. The proposed clearways on Forest Way would remove parking in the kerbside lane during the proposed clearways hours. This would reduce the need for through traffic to weave and change lanes to manoeuvre around parked vehicles (refer to Section 6.1 of the REF). It is expected that smoother traffic flow would result in an increase in road safety.
3. Roads and Maritime recommend pedestrians use signalised pedestrian crossings, to safely cross busy State Roads, like Forest Way. There are also pedestrian crossing opportunities across Forest Way at Glen Street, Adams Street and near Rabbett Street.
4. RMS acknowledges that some side streets in the area would experience an increase in parked vehicles and use by other road users, such as heavy vehicles. Drivers would need take care in these side streets, similar to all other regional and local roads in Sydney where heavy vehicles sometimes require access.

### 2.10.4 Proposal documentation

#### Submission number(s)

18

## Issue description

1. There was inconsistent data between the different reports and consultation report. This shows lack for QA and the validity of the information.

## Response

1. Following a review of the community feedback received during the consultation process and a revaluation of the traffic data, we reduced the clearway hours to operate only at times where warranted by Forest Way traffic volume. Existing weekend volumes and congestion can be substantial for road users entering and exiting Warringah Road from Forest Way in particular. While the Northern Beaches Enabling Works would help to address some of these issues, the weekend clearways would help to address issues during construction and maximise benefits of the works. The revised clearway hours would limit the impact of the clearways for most residents who live on this corridor.

## 2.11 Environmental legislation

### 2.11.1 Environmental assessment process

#### Submission number(s)

17, 18

#### Issue description

1. There is concern for the quality and integrity of the reporting process including the consultation process and REF process.
2. The REF is inadequate and does not fulfil the requirements of Section 111 of the EP&A Act.
3. The cursory assessment given in some sections of the REF are inadequate, not supported by sufficient (or any) data, data and criteria are misquoted, statements are made that are clearly incorrect, and the assessment does not meet the purported requirements of the REF. The REF does not take into account to the fullest extent possible, the following aspects:
  - available traffic data
  - parking requirements and loss
  - socio-economic considerations.
  - mitigation measures
4. The REF stated that “Overall, the proposal would encourage the promotion and co-ordination of the economic use and development of the land”. Roads and Maritime cannot state this as they have not done any economic analysis on development of land in the corridor.

#### Response

1. Roads and Maritime has an environmental impact assessment (EIA) procedure which has been developed to ensure consistency and quality in EIA. This is regularly reviewed and kept up to date to reflect best practice.

The REF was publicly displayed, inviting submissions on the proposal. This arrangement is considered to be consistent with the intent of the EIA procedure, which is to provide stakeholders opportunity to comment on the REF.

Consultation on the proposal as described in the REF was also carried out by Roads and Maritime during February and March 2017, prior to the public display of the REF. All stakeholders were encouraged to provide their feedback/ comments via mail, email, and phone. A summary of all community and stakeholder consultation activities carried out as well as community feedback and issues raised during community consultation (prior to public

display of the REF) is provided in Chapter 5 (Stakeholder and community consultation) of the REF. The Community Consultation Report is provided in Appendix B of the REF.

Following feedback from the community and review traffic data the hours of operation for the clearway were revised to the current proposal.

2. Roads and Maritime is authorised to assess activities that are subject to Part 5 of the EP&A Act. Roads and Maritime has assessed the REF and determined that it has adequately examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment associated with the proposed clearway.

This has included consideration of conservation agreements and plans of management under the NPW Act, joint management and biobanking agreements under the TSC Act, wilderness areas, critical habitat, impacts on threatened species, populations and ecological communities and their habitats and other protected fauna and native plants. It has also considered potential impacts to matters of national environmental significance listed under the Federal EPBC Act. Refer to Chapter 4 (Statutory and planning framework) and Chapter 8 (Conclusion) of the REF for more details on the legislative framework of the EP&A Act applicable to this REF.

As mentioned above, Roads and Maritime has an environmental impact assessment (EIA) procedure which has been developed to ensure consistency and quality in EIA. This is regularly reviewed and kept up to date to reflect best practice.

Section 5.6 (formerly Section 111A) of the EP&A Act require determining authorities such as Roads and Maritime to consult on environmental impact assessments.

Roads and Maritime has carried out an extensive stakeholder and community consultation program for the proposal that has included delivery of newsletters to more than 4,000 residences, community information sessions, direct meetings, advertisements in local newspapers and public exhibition of the REF. Issues raised through this process were considered in the Community Consultation Report that was appended to the REF (Appendix B) and summarised in Chapter 5 (Community and stakeholder consultation) of the REF.

Through the consultation and REF process, a series of management measures were developed to mitigate impacts associated with the proposal. These are summarised in Chapter 7 (Environmental management) of the REF.

3. All aspects of the environment potentially impacted upon by the proposal are considered in Chapter 6 (Environmental assessment) of the REF, including traffic and transport, parking and access, socio-economic, landscape character and visual impacts, noise and vibration, Aboriginal and Non-Aboriginal heritage, biodiversity, air quality, soils and contamination, water quality and flooding, waste and resource use and cumulative impacts.

In response to the specific matters raised in this submission, consideration has been given to the following, as described in the REF:

- potential impacts on matters of national environmental significance under the EPBC Act (addressed in Appendix A and Chapter 6 of the REF)
- the factors specified in the guidelines Is an EIS required? (DUAP 1995) as required under clause 228(1) of the Environmental Planning and Assessment Regulation 2000 and the Roads and Related Facilities EIS Guideline (DUAP 1996) (addressed in Appendix A and Chapter 6 of the REF)
- traffic data (provided in Appendix D and summarised in Section 6.1 of the REF)
- parking requirements and loss (addressed in Section 6.2 of the REF)
- socio-economic considerations (addressed in Section 6.3 of the REF)
- safeguard and mitigation measures to manage potential impacts of the proposal (addressed in Chapter 7 (Environmental management) of the REF)

- community feedback and issues raised during community consultation in February 2017 and March 2017 (addressed in Chapter 5 (Stakeholder and community consultation) and Appendix B of the REF).
4. From a regional perspective, the proposal is consistent with a number of national, State and local strategies and plans, including:
- NSW 2021: A Plan to Make NSW Number One (Department of Premier and Cabinet 2011)
  - State Infrastructure Strategy 2012-2032, (Infrastructure NSW 2012)
  - NSW Long-term Transport Master Plan (Transport for NSW 2012)
  - Sydney Clearways Strategy (Transport for NSW 2013)
  - Sydney's Bus Future (Transport for NSW 2013b)

According to the *NSW Long-term Transport Master Plan*, the costs of congestion across Sydney are considerable and have been estimated \$5.1 billion each year. From a regional perspective, the proposal would result in a more efficient use of the road network which would benefit all the road users by managing traffic congestion. Therefore, the proposal would contribute to encourage the promotion and co-ordination of the economic use and development of the land at a regional scale.

## 2.12 Out of scope

### Submission number(s)

2, 4, 11, 13, 15, 18

### Issue description

1. Traffic signals at the Adam Street intersection should be changed. In particular, the right-hand turn into Adams Street from Forest Way when travelling north should be removed to reduce potential traffic incidents.
2. Traffic control at the Russell Avenue and Forest Way intersection should be implemented to facilitate traffic movements at Forest Way Shops.
3. A 'No Stopping' sign should be included outside 80 Forest Way near the intersection of Bowman Avenue and Forest Way to allow drivers to make a U-turn when travelling south.
4. A 'Keep Clear' area should be implemented at the end of Altona Avenue on the Northbound side of Warringah Road to improve access in and out of Altona Avenue.
5. The roadworks associated with Northern Beaches Hospital are currently delayed.
6. The potential redevelopment of the existing Forest Way shopping centre would result in the loss of parking currently available. This has not been taken into consideration in the parking study.
7. There is no testing station in the vicinity of the proposal to test heavy vehicles. Noise levels produced from these vehicles is unacceptable
8. A speed limit of 70/80 km/h on a residential road is unsafe and would result in increased traffic incidents. The existing speed limit is dangerous as B Doubles and trucks fitted with air brakes miss traffic lights and often have to break as lights change to red.

### Response

1. Changes to traffic signal arrangements at the intersection of Forest Way and Adam Street is outside the scope of the *Sydney Clearways Strategy* (TfNSW 2013a) and this proposal. We

have forwarded your request to the relevant Roads and Maritime department for their consideration.

2. The provision of traffic signals at the intersection of Forest Way and Russell Avenue is outside the scope of the *Sydney Clearways Strategy* (TfNSW 2013a) and this proposal. We have forwarded your request to the relevant Roads and Maritime department for their consideration.
3. While this issue is outside the scope of the current proposal, clearways would remove parking at this location during the AM peak where it is currently permitted. We have forwarded your request to the relevant Roads and Maritime department for their consideration.
4. This is outside the scope of this proposal. Queuing across and blocking of intersection is illegal under the Australian Road Rules. NSW Police is responsible for monitoring the road network to ensure users comply with all road rules. We encourage members of the public to report illegal behaviour on the road network to the police.
5. Specific information about the NBH upgrade can be found at [rms.nsw.gov.au/nbh](https://rms.nsw.gov.au/nbh).
6. New development and changes in the local area is outside the scope of this proposal. Any changes would be subject to planning approvals which would have their own environmental impact assessments.
7. Noise from heavy vehicle engine compression brakes is a significant and on-going cause of complaint for many NSW residents. Roads and Maritime completes periodic inspection of heavy vehicles at testing stations to ensure that silencers are fitted and maintained. Heavy vehicles on Australian roads during normal operation and acceleration must meet noise requirements outlined in the Australian Design Rules. Roads and Maritime is part of a Commonwealth process coordinated by the National Transport Commission to look at ways of reducing engine compression brake noise.

A heavy vehicle inspection bay operates periodically on Mona Vale Road near St Ives Showground to inspect Heavy Vehicles.

For more information on heavy vehicle exhaust noise please contact Roads and Maritime on 1300 786 748 or visit the website [rms.nsw.gov.au/about/environment/reducing-noise/index.html](https://rms.nsw.gov.au/about/environment/reducing-noise/index.html).

8. Speed limits in NSW, as in other parts of Australia, are determined by a number of factors including the road geometry, surrounding conditions, road usage, adjacent development, vehicle types and volumes, crash history and the number of access points along the route. The current posted speed limits are considered appropriate at this time.

NSW Police is responsible for monitoring the road network to ensure users comply with all road rules and regulations. NSW Police regularly enforce speed limits along Forest Way.

An initiative of the *NSW Speed Camera Strategy* (TfNSW 2012b) is to allow NSW residents to nominate locations for speed camera enforcement. Roads and Maritime recommends visiting the website: [saferroadsnsw.com.au/haveyoursayspeedcameras.aspx](https://saferroadsnsw.com.au/haveyoursayspeedcameras.aspx) to formally nominate a location as a potential site for a NSW Speed Camera. The information you provide, together with crash data and other road safety information would help to prioritise future locations for speed cameras in NSW.

## 3 Environmental management

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The REF for the *Proposed Clearways on Forest Way, Belrose to Frenchs Forest*, identified the framework for environmental management, including safeguards and management measures that would be adopted to avoid or reduce environmental impacts (Section 7.2 of the REF).

Should the proposal proceed, environmental management would be guided by the framework and mitigation measures outlined below.

### 3.1 Environmental management plans (or system)

A number of safeguards and management measures have been identified in order to minimise adverse environmental impacts, including social impacts, which could potentially arise as a result of the proposal. Should the proposal proceed, these management measures would be incorporated into the detailed design and applied for the proposal.

### 3.2 Summary of safeguards and management measures

The *Proposed Clearways on Forest Way, Belrose to Frenchs Forest Review of Environmental Factors* (Roads and Maritime 2018a) identified a range of environmental outcomes and management measures that would be required to avoid or reduce the environmental impacts.

Should the proposal proceed, the environmental management measures in Table 3-1 would be adopted in the subsequent implementation phase of the *Proposed Clearways on Forest Way, Belrose to Frenchs Forest*.

Table 3-1: Summary of environmental safeguards and management measures

No.	Impact	Environmental safeguards	Responsibility	Timing
<b>Traffic and transport</b>				
1	Construction traffic management	<ul style="list-style-type: none"> <li>Works would operate under an approved construction traffic management plan*.</li> </ul>	Construction Contractor	Pre-construction
<b>Parking and access</b>				
2	Altered parking arrangements	<ul style="list-style-type: none"> <li>Notification of the proposed clearway changes would be made to all affected stakeholders at least five days prior to implementation of the Clearway work and commencement of new clearway operating times.</li> </ul>	Roads and Maritime/ Construction Contractor	Pre-construction
3	Congestion and safety	<ul style="list-style-type: none"> <li>Traffic control would be provided in accordance with the approved construction traffic management plan to manage and regulate traffic movements during construction*.</li> </ul>	Construction Contractor	Construction
4	Access to properties	<ul style="list-style-type: none"> <li>Property access would be maintained at all times where practicable.</li> <li>In the unlikely event, changes to access arrangements are necessary, Roads and Maritime would advise owners and tenants and consult with them in advance regarding alternate access arrangements.</li> </ul>	Roads and Maritime/ Construction Contractor	Construction
<b>Socio-economic</b>				
5	Socio-economic	<ul style="list-style-type: none"> <li>A Communication Plan (CP) would be prepared and implemented to help provide timely and accurate information to the community prior construction. The CP would include (as a minimum):                             <ul style="list-style-type: none"> <li>Mechanisms to provide details and timing of proposed activities to affected residents, businesses and other key stakeholders including schools and local Councils of changed traffic and parking conditions</li> <li>The notification would include details of: the proposal; implementation date; contact information; complaint and incident reporting; and how to obtain further information.</li> </ul> </li> </ul>	Roads and Maritime	Pre-construction/ construction

<b>Landscape character and visual impacts</b>				
6	Light spill	<ul style="list-style-type: none"> <li>Ensure all lights are directed away from residential properties where ever practicable.</li> </ul>	Construction Contractor	Construction
<b>Noise and vibration</b>				
7	Noise and vibration	<ul style="list-style-type: none"> <li>Considerations in equipment selection would include: <ul style="list-style-type: none"> <li>Quieter and less noise emitting construction methods where feasible and reasonable</li> <li>All plant and equipment to be appropriately maintained to ensure optimum running conditions</li> <li>Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on-site and for any out of hours work.</li> </ul> </li> </ul>	Construction Contractor	Pre-construction/ construction
<b>Non-Aboriginal heritage</b>				
8	Non-Aboriginal heritage	<ul style="list-style-type: none"> <li>Inform all site personnel of the location and significance of the heritage item during site induction.</li> </ul>	Construction Contractor	Construction
9	Non-Aboriginal heritage	<ul style="list-style-type: none"> <li>Should any remains of historic heritage be encountered during the proposed work that have not been assessed in the REF, cease work in that location and follow the Roads and Maritime's <i>Unexpected Archaeological Finds procedure</i> (Roads and Maritime 2015).</li> </ul>	Construction Contractor	Construction
<b>Aboriginal heritage</b>				
10	Aboriginal heritage	<ul style="list-style-type: none"> <li>Stop all work if Aboriginal heritage items are uncovered</li> <li>Immediately contact the regional environment officer and Roads and Maritime's Aboriginal cultural heritage advisor</li> <li>Follow the steps in the Roads and Maritime Standard Management Procedure: <i>Unexpected Archaeological Finds</i> (Roads and Maritime 2015)</li> <li>Work would only re-commence once the requirements of that Procedure</li> </ul>	Construction Contractor	Construction

		have been satisfied.		
<b>Biodiversity</b>				
11	Biodiversity	<ul style="list-style-type: none"> <li>Where vegetation trimming is necessary, it would be limited to no more than 10 per cent of the tree canopy</li> <li>If unexpected threatened fauna or flora species are discovered, works would be stopped immediately and follow the Roads and Maritime's <i>Unexpected Threatened Species Find Procedure</i> in the Roads and Maritime's <i>Biodiversity Guidelines 2011 – Guide 1 (Pre-clearing process)</i></li> <li>Protocols for preventing or minimising the spread of noxious and environmental weeds would be developed and implemented as appropriate</li> <li>All construction work would be undertaken in accordance with Roads and Maritime's <i>Biodiversity Guidelines, Protecting and Managing Biodiversity on RMS Projects (2011b)</i>.</li> </ul>	Roads and Maritime/ Construction Contractor	Pre-construction
<b>Air quality</b>				
12	Air quality	<ul style="list-style-type: none"> <li>Turn machinery off rather than left to idle when they are not in use</li> <li>Maintain vehicles to manufacturer's standards.</li> </ul>	Construction Contractor	Pre-construction
<b>Soils and contamination</b>				
13	Contamination of soils	<ul style="list-style-type: none"> <li>If indicators of contamination are encountered during construction (such as odours or visually contaminated materials), work in the area would cease until advice on the need for remediation or other action is obtained from an environmental consultant</li> <li>A fully equipped emergency spill kit would be kept in vehicles</li> <li>The refuelling of plant and maintenance of machinery would be carried out in designated bunded areas.</li> </ul>	Construction Contractor	Construction
<b>Water quality and flooding</b>				
14	Accidental spill	<ul style="list-style-type: none"> <li>An emergency spill plan would be developed, and include spill management measures in accordance with the Roads and Maritime <i>Code of Practice for</i></li> </ul>	Construction Contractor	Pre-construction/ Construction

		<i>Water Management</i> (RTA 1999). The plan would address measures to be implemented in the event of a spill, including initial response and containment, notification of emergency services and relevant authorities (including Roads and Maritime and EPA officers).		
15	Water quality	<ul style="list-style-type: none"> <li>There would be no release of dirty water into drainage lines and/or waterways.</li> </ul>	Construction Contractor	Construction
<b>Waste and resource use</b>				
16	Waste minimisation	<ul style="list-style-type: none"> <li>The following resource management hierarchy principles would be followed: <ul style="list-style-type: none"> <li>Avoid unnecessary resource consumption as a priority</li> <li>Avoidance would be followed by resource recovery (including reuse of materials, reprocessing, and recycling and energy recovery)</li> <li>Disposal would be a last resort (in accordance with the WARR Act).</li> </ul> </li> </ul>	Construction Contractor	Construction
17	Waste management	<ul style="list-style-type: none"> <li>All wastes would be managed in accordance with the POEO Act.</li> </ul>	Construction Contractor	Construction

\*Note construction would be undertaken in coordination with Northern Beaches Hospital upgrade roadworks.

### 3.3 Licensing and approvals

In addition to the REF prepared under the *Environmental Planning and Assessment Act 1979* (EP&A Act), Table 3-2 identifies relevant licences, permits, notifications and approvals needed to construct and operate the proposal.

Table 3-2: Summary of licensing and approval required

Instrument	Requirement	Timing
<i>Roads Act 1993</i> (Roads Act) (NSW)	<p>Section 138 of the <i>Roads Act 1993</i> (Roads Act) requires consent from the relevant road authority for the carrying out of work in, on or over a public road. However, under clause 5(1) in Schedule 2 of the Roads Act, public authorities do not require consent for work on unclassified roads. Therefore, the proposal only requires consent from the relevant roads authority for work impacting classified roads within the proposal corridor. The affected classified roads are identified below.</p> <p>The proposal would involve works on Forest Way, which is a classified State Road maintained by Roads and Maritime. Consent under the Roads Act would not be required as the road is maintained by Roads and Maritime. However, Road Occupancy Licence/s would be obtained for roadworks and any temporary road closures from the relevant roads authority by the Contractor. The proposal would require temporary partial road closures for activities such as line marking.</p>	Prior to start of the activity
<i>State Environmental Planning Policy (Infrastructure) 2007</i>	The proposal is permissible without development consent and can be assessed under Part 5 of the EP&A Act. Part 2 of the State Environmental Planning Policy (Infrastructure) 2007 contains provisions for public authorities to consult with local councils and other agencies prior to the commencement of certain types of development. Chapter 5 of the REF outlines the consultation carried out in accordance with the requirements of the State Environmental Planning Policy (Infrastructure) 2007.	Prior to construction
<i>Warringah Local Environmental Plan 2011</i>	The proposal is located within the former Warringah LGA (now Northern Beaches LGA). The proposal traverses land zoned SP2 Infrastructure under the Warringah LEP 2011. Under the Warringah LEP, development for the purposes of roads within this zone is permitted with consent. However, the provisions of the ISEPP remove the requirement for development consent from Northern Beaches Council.	Design stage and construction

## 4 References

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