

I am against the proposed Western Harbour Tunnel and Beaches Link for the following reasons
- the impact on the environment, including marine ecosystems is unacceptable

1) The impact on Manly Dam Reserve

- The rocky features along Wakehurst Parkway will be blown up and jack hammered. These rocky areas were identified as being habitat for threatened species such as the Rosenberg Goanna and the Large-eared Pied Bat.
- Construction of the Beaches link project would involve the loss of 20.92 hectares of threatened species habitat, most of it along this stretch of road (That's 39 football fields). This includes the removal of nearly 1.5 hectares of Duffys Forest Endangered Ecological Community-some of the rarest vegetation on the planet.
- Wakehurst Parkway cannot be widened to 4-6 lanes without destroying the bush at the top of Manly Dam and Garigal National Park. The ridge is simply too narrow for such a wide road.
- The edge of the road in many places will be either a steep cliff or artificial slope. It will be higher than the trees and visible throughout Manly Dam Reserve and in a lot of Garigal National Park.
- The road is too wide to have adequate runoff water treatment. Untreated water from the road will pour through the bush, scouring the land and filling streams below with sediment every time there is heavy rainfall. The EIS states that "There is the potential for impacts on aquatic biodiversity due to reduced water quality during operation due to the presence of sensitive receiving environments". Impacts to the Galaxias climbing fish that have survived in this fresh water, and Red-crowned toadlet that also needs fresh, clean water to survive.
- Street lighting along Wakehurst Parkway will significantly affect both nocturnal and diurnal animals, causing them to die out from that area. Pygmy possums will be affected.
- Without street lighting, a 4-6 lane road with trucks, bicycles and pedestrians will be a safety hazard. If lights are not installed when the project starts, the accidents that follow will lead to street lighting.
- Light from the road will be visible all through Manly Dam and Garigal National Park. The road is on a ridge, so light from the road will be visible for miles around.
- Encouraging articulated trucks and construction vehicles to use Wakehurst Parkway could result in accidents and spills that will have significant environmental impacts on Manly Dam and Garigal National Park. Any spill of toxic liquid will pour downhill directly into the bush and be extremely difficult to clean.
- There will be a lot of traffic on Wakehurst Parkway. Heavy construction vehicles going 80km/h will dominate the road for the next 30 years. Traffic noise will be heard all across the bush, particularly at night.
- Construction will destroy a large area of bushland at the top of Wakehurst Golf Course around the two water tanks - 20 hectares along Wakehurst Parkway. This area was declared by Sydney Water to be rich in endangered plant and animal species and worthy of conservation.
- The Aboriginal carvings along Engravings Trail will be under threat from road runoff and vibration damage - being only 50m from construction.
- A 26m ventilation outlet along Wakehurst Parkway will produce emissions so great that it will even "Have the potential to affect prescribed airspace". There would be increases in the PM2.5 concentration along Wakehurst Parkway and a large increase in traffic (about 140 per cent) as a result of the project. However, the section of Wakehurst Parkway that is affected crosses bushland, so all the toxic air quality would be released into the very area that people go to for bush walks, biking and leisure activity- An area that comprises Sydney's so called "Green Lungs"!! The unfiltered stack will be on a ridgetop above a natural basin which the bad air quality (complete with a range of toxins) will settle into!! (The EIS for both the Western Harbour and Beaches Link tunnels put future pollution levels at more than double the maximum PM2.5 limits across the route-any amount of PM2.5 does harm according to the WHO

- The Sydney Water site at Kirkwood Avenue, Bantry Bay was saved by the community from a housing development in 2015 and promised to be returned intact to the adjoining War Memorial Park by Mike Baird (Premier of NSW). This very site is now earmarked to become a temporary construction support site with all rare biodiversity cleared

2) The Impact on Burnt Bridge Creek and Balgowlah Golf Course

- Burnt Bridge Creek will effectively end as a naturally flowing creek. Water flowing down the creek will be drained (flow reduced 96%) and underground water pumped out to a depth of 11m. This is necessary to stop water dripping into the tunnel.
- The creek and area around it will be dried out and incapable of supporting tall leafy trees and riparian bushland.
- The creek through the golf course will be turned into a cement stormwater drain, wider than the current creek and deeper into the ground. This is to remove water more quickly to keep the land dry and prevent water entering the tunnel. This will kill trees and water-loving plants.
- The bat colony will be unable to survive once the creek and water retention dam on the golf course are removed. Other animals will likewise have no water.
- The NSW Government, through Save our Species, lists the key threats to Grey-headed flying foxes as loss, fragmentation and degradation of habitat, and widespread pervasive factors such as impacts of climate change and disease.
- The Beaches Link project will hasten the loss of this endangered protected and ecologically vital grey-headed flying fox colony through extreme, cumulative, long term construction disturbances, loss of access to water due to the de-watering of the creek and the removal of the water retention dam at Balgowlah Golf Course and loss of habitat.
- The quick discharge of water into Manly Creek will increase sediment and send road runoff into the creek without the current filtering process, lowering water quality in Manly Creek and out to Queenscliff beach.
- Instead of a creek, we will have a cement stormwater drain.
- The golf course will be destroyed. It will be replaced by:
 - Burnt Bridge Creek Drive widened to 12 lanes,
 - a four lane road to connect the tunnel to Sydney Rd,
 - an 8 storey high chimney to discharge tunnel fumes,
 - a 3 storey service building built 8m into the ground, with sloping ground around it,
 - a car park for the service building and park,
 - a large toilet block,
 - a stormwater drain,
 - a soccer pitch,
 - a small park.
- Pollution from cars all along the tunnel will be collected and discharged from the 20m (8 storey) chimney on Balgowlah Golf Course, one 26m one on Wakehurst parkway and one on the other side of Middle Harbour. These chimneys are close to a number of schools and will cause problems in air quality when the wind blows the wrong direction. The chimney itself will be an eyesore.

3) The Impacts on Middle Harbour

- The tunnel will pass under Middle Harbour in what is effectively an underwater bridge. The bridge will be supported on four pylons. Building these pylons will take several years and displace mud, possibly laced with toxins from industrial activity, into the harbour.
- The technology used to build the pylons is ancient. Modern technology would build the supports offsite and require only a few days to weeks to put in place, causing less impact on the environment, on traffic and the lives of people in the area.

- The potential environmental impact on marine life in the Middle Harbour area including the Spit, Clontarf, Beauty Point and Sailors Bay. The construction of two cofferdams and the laying of two immersed tunnel tubes are likely to pose significant risk by disturbing the highly sensitive ecological interaction of marine life. The disturbance of sediment and more turbidity will spread accumulated toxins and affect the seagrass and the microscopic organisms within which will threaten the survival of larger animals such as the White's seahorse, several fish species and consequently the Little Penguins (*Eudyptula Minor*).
- Even though all the nesting is located within the protected bays of Manly, the penguins travel all over the harbour for foraging. Many sightings have been reported from the Middle Harbour areas as well as Northbridge, I am deeply concerned that all the disturbance through dredging the sea beds as well as construction side effect such as potential fuel leaks and under-water noise will kill the seagrass patches and with it the foraging opportunities of our last remaining Penguin Colony.

4) Offset impacts/promises

Where biodiversity offsets are proposed, we have no confidence these will limit net losses to our precious environment. We are also painfully aware that offsets have no effect locally, so cannot make up, for example, for the felling of one of the last patches of endangered Duffy Forest, now one of the rarest forest ecosystems on the planet. Likewise, the removal of habitat supporting our local endangered fauna species means they will simply die in situ, they will not be moved elsewhere. We have already witnessed the ineffectiveness of replanting around the Northern Beaches Hospital and other development sites where numerous trees have died. A recent investigation revealed the NSW government has failed to deliver conservation offsets for large areas of bush cleared in Sydney's west for housing and toll road developments over two decades, including the M7 offset at Colebee Reserve that remains an 'ecological wasteland'.

Thank you for reading my submission

Dear Committee,

Thank you for the opportunity to make a submission regarding the Northern Beaches Tunnel. I believe this is the first serious consideration given to the many concerns of Northern Beaches residents. The standard 'community consultations' have been very token gestures. I am therefore grateful for this Inquiry and trust that you will take my and other citizens and residents concerns seriously.

I strongly object to the Beaches Link (including the Gore Hill extension) projects and urge you to recommend that the NSW Government abandon these plans immediately.

I have reviewed other submissions to the inquiry and also submissions made in reply to the proposal when it was first put out to public comment and so my submissions will be a summary of my reasons as many have been covered in better detail and with great evidence than I am able to do.

I have lived on the Northern Beaches for 36 years and my husband and I have 3 adult children. I travel across the area daily and into the inner west to visit my adult children and their families. I am a regular public transport/ active transport user and want to increase the use of public transport rather than it lessen due to construction works that will interfere with more efficient public transport system.

I wish to address whether this is the best use of public money, the lack of transparency in that it appears no other remedial options have been considered and the impacts to my community and or the environment.

A. Is this wise use of government funds?

Why in light of climate issues are we giving the motor vehicle such prominence?

Have other options such as better and new modes of public transport been considered?

I do not believe alternative options were considered or adequately considered:

These Options are:

Options which encourage or create public transport corridors ;

Options which work to change behaviour or work patterns;

Fresh options, in that it does not appear that a 2021 look at the problem was taken in that the tunnel follows the road plan from the 1960s.

Further, if the tunnel had to go ahead then to avoid large amounts of environmental devastation the tunnel would cause could be eased by the Option of extending the tunnel to the Frenchs Forest intersection;

Option in regard to the current take-up of public transport;

Option of a East-West bus link from Dee Why to Chatswood via Frenchs Forest.

What else could you do with \$14 billion?

Was any consideration given to spending \$14 billion plus on world class fast and efficient public transport linking the northern peninsula to the city, Chatswood and beyond. NSW governments have spent billions on massive road and tunnel toll roads in recent decades and yet congestion continues to plague us and continues to encourage over reliance on cars as the primary means of transport.

The Northern Beaches have less than 300,000 residents yet a huge amount of public money is set to be spent on a small group that have other options available to avoid the congestion that this project is meant to alleviate. It also does not seem a just or proportionate expenditure when there are other areas with many more residents needing investment in their infrastructure.

B. Here I am addressing term of reference (j): the impact on the environment, including marine ecosystems.

1. There will be a direct and irreparable impact on Manly Dam Reserve. The rocky features along Wakehurst Parkway will be blown up and jack hammered. These rocky areas were identified as being habitat for threatened species such as the Rosenberg Goanna and the Large-eared Pied Bat.

2. Construction of the Beaches link project would involve the loss of 20.92 hectares of threatened species habitat, most of it along this stretch of road. This section includes the removal of nearly 1.5 hectares of Duffys Forest Endangered Ecological Community, which is recognised as some of the rarest vegetation on the planet.

3. Wakehurst Parkway which sits on top of the ridge between Manly Dam and the national park cannot be widened to 4-6 lanes without destroying the bush at the top of Manly Dam and Garigal National Park. The ridge is simply too narrow for such a wide road.

Further the edge of the road in many places will be either a steep cliff or artificial slope. It will be higher than the trees and visible throughout Manly Dam Reserve and in a lot of Garigal National Park.

The road is too wide to have adequate runoff water treatment. Untreated water from the road will pour through the bush, scouring the land and filling streams below with sediment every time there is heavy rainfall. The EIS states that "There is the potential for impacts on aquatic biodiversity due to reduced water quality during operation due to the presence of sensitive receiving environments". There will be serious impacts to the Galaxias climbing fish, that have survived in this fresh water, and Red-crowned toadlet that also needs fresh, clean water to survive should the water quality be adversely effected as revealed in the EIS.

4. The introduction of street lighting along Wakehurst Parkway will significantly affect both nocturnal and diurnal animals, causing them to die out from that area. Pygmy possums will be affected.

Without street lighting, a 4-6 lane road with trucks, bicycles and pedestrians will be a safety hazard. If lights are not installed when the project starts, the accidents that follow will lead to street lighting.

Light from the road will be visible all through Manly Dam and Garigal National Park. The road is on a ridge, so light from the road will be visible for miles around.

5. Encouraging articulated trucks and construction vehicles to use Wakehurst Parkway could result in accidents and spills that will have significant environmental impacts on Manly Dam and Garigal National Park. Any spill of toxic liquid will pour downhill directly into the bush and be extremely difficult to clean.

There will be a lot of traffic on Wakehurst Parkway. Heavy construction vehicles going 80km/h will dominate the road for the next 30 years. Traffic noise will be heard all across the bush, particularly at night.

Construction will destroy a large area of bushland at the top of Wakehurst Golf Course around the two water tanks - 20 hectares along Wakehurst Parkway. This area was declared by Sydney Water to be rich in endangered plant and animal species and worthy of conservation.

The Aboriginal carvings along Engravings Trail will be under threat from road runoff and vibration damage as parts of the trail is only 50m from construction.

6. A 26m ventilation outlet along Wakehurst Parkway will produce emissions so great that it will “Have the potential to affect prescribed airspace”. There would be increases in the PM2.5 concentration along Wakehurst Parkway and a large increase in traffic (about 140 per cent) as a result of the project. However, the section of Wakehurst Parkway that is affected crosses bushland, so all the toxic air quality would be released into the very area that people go to for bush walks, biking and leisure activity. This area is part of an area that comprises Sydney’s so called “Green Lungs” The unfiltered stack will be on a ridgetop above a natural basin which the bad air quality (complete with a range of toxins) will settle into (The EIS for both the Western Harbour and Beaches Link tunnels put future pollution levels at more than double the maximum PM2.5 limits across the route).

7. The Sydney Water site at Kirkwood Avenue, Bantry Bay was saved by the community from a housing development in 2015 and promised to be returned intact to the adjoining War Memorial Park by Mike Baird (Premier of NSW). This very site is now earmarked to become a temporary construction support site with all rare biodiversity cleared.

8. Impact on Burnt Bridge Creek and Balgowlah Golf Course

- Burnt Bridge Creek will effectively end as a naturally flowing creek. Water flowing down the creek will be drained (flow reduced 96%) and underground water pumped out to a depth of 11m. This is necessary to stop water dripping into the tunnel.
- The creek and area around it will be dried out and incapable of supporting tall leafy trees and riparian bushland.
- The creek through the golf course will be turned into a cement stormwater drain, wider than the current creek and deeper into the ground. This is to remove water more quickly to keep the land dry and prevent water entering the tunnel. This will kill trees and water-loving plants.
- The bat colony will be unable to survive once the creek and water retention dam on the golf course are removed. Other animals will likewise have no water.

The NSW Government, through Save our Species, lists the key threats to Grey-headed flying foxes as loss, fragmentation and degradation of habitat, and widespread pervasive factors such as impacts of climate change and disease. The Beaches Link project will hasten the loss of this endangered protected and ecologically vital grey-headed flying fox colony through extreme, cumulative, long term construction disturbances, loss of access to water due to the de-watering of the creek and the removal of the water retention dam at Balgowlah Golf Course and loss of habitat.

- The quick discharge of water into Manly Creek will increase sediment and send road runoff into the creek without the current filtering process, lowering water quality in Manly Creek and out to Queenscliff beach.
- Instead of a creek, we will have a cement stormwater drain.
- The golf course will be destroyed. It will be replaced by:
 - Burnt Bridge Creek Drive widened to 12 lanes,
 - a four lane road to connect the tunnel to Sydney Rd,
 - an 8 storey high chimney to discharge tunnel fumes,
 - a 3 storey service building built 8m into the ground, with sloping ground around it,
 - a car park for the service building and park,
 - a large toilet block,
 - a stormwater drain,
 - a soccer pitch,
 - a small park.

- Pollution from cars all along the tunnel will be collected and discharged from the 20m chimney on Balgowlah Golf Course, one 26m one on Wakehurst parkway and one on the other side of Middle Harbour. These chimneys are close to a number of schools and will cause problems in air quality when the wind blows the wrong direction. The chimney itself will be an eyesore.

9. Impacts on Middle Harbour

- The tunnel will pass under Middle Harbour in what is effectively an underwater bridge. The bridge will be supported on four pylons. Building these pylons will take several years and displace mud, possibly laced with toxins from industrial activity, into the harbour.
- The technology used to build the pylons is ancient. Modern technology would build the supports offsite and require only a few days to weeks to put in place, causing less impact on the environment, on traffic and the lives of people in the area.

The potential environmental impact on marine life in the Middle Harbour area including the Spit, Clontarf, Beauty Point and Sailors Bay. The construction of two cofferdams and the laying of two immersed tunnel tubes are likely to pose significant risk by disturbing the highly sensitive ecological interaction of marine life. The disturbance of sediment and more turbidity will spread accumulated toxins and affect the seagrass and the microscopic organisms within which will threaten the survival of larger animals such as the White's seahorse, several fish species and consequently the Little Penguins (*Eudyptula Minor*).

Even though all the nesting of the Little Penguins is located within the protected bays of Manly, the penguins travel all over the harbour for foraging. Many sightings have been reported from the Middle Harbour areas as well as Northbridge, I am deeply concerned that all the disturbance through dredging the sea beds as well as construction side effects such as potential fuel leaks and under-water noise will kill the seagrass patches and with it the foraging opportunities of our last remaining Penguin Colony.

For the reasons set out above I strongly object to the Beaches Link (including the Gore Hill extension) projects and urge you to recommend that the NSW Government abandon these plans immediately.

Yours faithfully,

Judith Kerr

We commend the Public Works Committee for undertaking this Inquiry, and thank the Committee for the opportunity to make a submission to the Inquiry.

We are addressing the following terms of Reference of the Inquiry:

(j) the impact on the environment, including marine ecosystems.

Direct impact on Manly Dam Reserve

- The rocky features along Wakehurst Parkway will be blown up and jack hammered. These rocky areas were previously identified as being habitat for threatened species such as the Rosenberg Goanna and the Large-eared Pied Bat.
- Construction of the Beaches link project would involve the loss of 20.92 hectares of threatened species habitat, most of it along this stretch of road (That's 39 football fields). This includes the removal of nearly 1.5 hectares of Duffys Forest Endangered Ecological Community-some of the rarest vegetation on the planet. This is one of the only places this exists.
 - Wakehurst Parkway cannot be widened to 4-6 lanes without destroying the bush at the top of Manly Dam and Garigal National Park. The ridge is simply too narrow for such a wide road.
 - The edge of the road in many places will be either a steep cliff or artificial slope. It will be higher than the trees and visible throughout Manly Dam Reserve and in a lot of Garigal National Park.
 - The road is too wide to have adequate runoff water treatment. Untreated water from the road will pour through the bush, scouring the land and filling streams below with sediment every time there is heavy rainfall. The EIS states that "There is the potential for impacts on aquatic biodiversity due to reduced water quality during operation due to the presence of sensitive receiving environments". Impacts to the Galaxias climbing fish that have survived in this fresh water, and Red-crowned toadlet that also needs fresh, clean water to survive. As well as all other species requiring fresh water including flyfox who dip at this dam.
 - Street lighting along Wakehurst Parkway will significantly affect both nocturnal and diurnal animals, causing them to die out from that area. Pygmy possums will be affected.
 - Without street lighting, a 4-6 lane road with trucks, bicycles and pedestrians will be a safety hazard. If lights are not installed when the project starts, the accidents that follow will lead to street lighting.
 - Light from the road will be visible all through Manly Dam and Garigal National Park. The road is on a ridge, so light from the road will be visible for miles around.
 - Encouraging articulated trucks and construction vehicles to use Wakehurst Parkway could result in accidents and spills that will have significant environmental impacts on Manly Dam and Garigal National Park. Any spill of toxic liquid will pour downhill directly into the bush and be extremely difficult to clean.
 - There will be a lot of traffic on Wakehurst Parkway. Heavy construction vehicles going 80km/h will dominate the road for the next 30 years. Traffic noise will be heard all across the bush, particularly at night.
 - Construction will destroy a large area of bushland at the top of Wakehurst Golf Course around the two water tanks - 20 hectares along Wakehurst Parkway. This area was declared by Sydney Water to be rich in endangered plant and animal species and worthy of conservation. This area is a huge hot spot for death of wildlife that will still need to cross the road.
 - The Aboriginal carvings along Engravings Trail will be under threat from road runoff and vibration damage - being only 50m from construction.
- A 26m ventilation outlet along Wakehurst Parkway will produce emissions so great that it will even "Have the potential to affect prescribed airspace". There would be increases in the PM2.5 concentration along Wakehurst Parkway and a large increase in traffic (about 140 per cent) as a result of the project. However, the section of Wakehurst Parkway that is affected crosses bushland, so all the toxic air quality would be released into the very area that people go to for

bush walks, biking and leisure activity- An area that comprises Sydney's so called "Green Lungs"!!

The unfiltered stack will be on a ridgetop above a natural basin which the bad air quality (complete with a range of toxins) will settle into!! (The EIS for both the Western Harbour and Beaches Link tunnels put future pollution levels at more than double the maximum PM2.5 limits across the route - any amount of PM2.5 does harm according to the W.H.O.)

- The Sydney Water site at Kirkwood Avenue, Bantry Bay was saved by the community from a housing development in 2015 and promised to be returned intact to the adjoining War Memorial Park by Mike Baird (Premier of NSW). This very site is now earmarked to become a temporary construction support site with all rare biodiversity cleared. More lies from our Government.

Impact on Burnt Bridge Creek and Balgowlah Golf Course:

- Burnt Bridge Creek will effectively end as a naturally flowing creek. Water flowing (just 4%) down the creek will be drained (flow reduced 96%) and underground water pumped out to a depth of 11m. This is necessary to stop water dripping into the tunnel.
- The creek and area around it will be dried out and incapable of supporting tall leafy trees and riparian bushland. The impact on leafy outlooks will be immediate. The impact on wildlife driven from their homes will be horrific. Are they proposing a private zoo for all of these displaced wildlife or will they just die?
- The creek through the golf course will be turned into a cement stormwater drain, wider than the current creek and deeper into the ground. This is to remove water more quickly to keep the land dry and prevent water entering the tunnel. This will kill trees and water-loving plants.
- The bat colony will be unable to survive once the creek and water retention dam on the golf course are removed. Other animals will likewise have no water.
- The NSW Government, through Save our Species, lists the key threats to Grey-headed flying foxes as loss, fragmentation and degradation of habitat, and widespread pervasive factors such as impacts of climate change and disease.
- The Beaches Link project will hasten the loss of this endangered protected and ecologically vital grey-headed flying fox colony through extreme, cumulative, long term construction disturbances, loss of access to water due to the de-watering of the creek and the removal of the water retention dam at Balgowlah Golf Course and loss of habitat. The bat camp at Balgowlah is a maternity camp that has survived many long periods of drought. It did not collapse due to heat stress like a lot of other camps because it was located near a creek, near Manly dam and had the golf course
- The quick discharge of water into Manly Creek will increase sediment and send road runoff into the creek without the current filtering process, lowering water quality in Manly Creek and out to Queenscliff beach. the threat to our beaches is really a worry this is tourism dollars involved as well as peoples health.
- Instead of a creek, we will have a cement stormwater drain.
- The golf course will be destroyed. It will be replaced by:
 - Burnt Bridge Creek Drive widened to 12 lanes,
 - a four lane road to connect the tunnel to Sydney Rd,
 - an 8 storey high chimney to discharge tunnel fumes,
 - a 3 storey service building built 8m into the ground, with sloping ground around it,
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other side of Middle Harbour. These chimneys are close to a number of schools and will cause problems in air quality when the wind blows the wrong direction. The chimney itself will be an eyesore.

Impacts on Middle Harbour

- The tunnel will pass under Middle Harbour in what is effectively an underwater bridge. The bridge will be supported on four pylons. Building these pylons will take several years and displace mud, possibly laced with toxins from industrial activity, into the harbour.
 - The technology used to build the pylons is ancient. Modern available technology would build the supports offsite and require only a few days to weeks to put in place, causing less impact on the environment, on traffic and the lives of people in the area.
- The potential environmental impact on marine life in the Middle Harbour area including the Spit, Clontarf, Beauty Point and Sailors Bay. The construction of two cofferdams and the laying of two immersed tunnel tubes are likely to pose significant risk by disturbing the highly sensitive ecological interaction of marine life. The disturbance of sediment and more turbidity will spread accumulated toxins and affect the seagrass and the microscopic organisms within which will threaten the survival of larger animals such as the White's seahorse, several fish species and consequently the Little Penguins (*Eudyptula Minor*).
- Even though all the nesting is located within the protected bays of Manly, the penguins travel all over the harbour for foraging. Many sightings have been reported from the Middle Harbour areas as well as Northbridge, I am deeply concerned that all the disturbance through dredging the sea beds as well as construction side effect such as potential fuel leaks and under-water noise will kill the seagrass patches and with it the foraging opportunities of our last remaining Penguin Colony.

Offset impacts/promises

Where biodiversity offsets are proposed, I have no confidence these will limit net losses to our precious environment. Where is the map showing the locations of where these offsets are. It is really seeming to be smoke and mirrors why wont the government provide actual locations linked to projects in the pipeline and completed. Is this on the never never, - never was never will be? I am also painfully aware that offsets have no effect locally, so cannot make up, for example, for the felling of one of the last patches of endangered Duffy Forest, now one of the rarest forest ecosystems on the planet. Likewise, the removal of habitat supporting our local endangered fauna species means they will simply die in situ, they will not be moved elsewhere. We have already witnessed the ineffectiveness of replanting around the Northern Beaches Hospital and other development sites where numerous trees have died. A recent investigation revealed the NSW government has failed to deliver conservation offsets for large areas of bush cleared in Sydney's west for housing and toll road developments over two decades, including the M7 offset at Colebee Reserve that remains an 'ecological wasteland'.

I am shocked and outraged that the NSW government would consider this is ok to proceed with. I attach photos of a flying fox with baby, cockatoo in tree hollow, Australasian grebe, sacred kingfisher, bottlebrush. Do you know that there are common species but suddenly they aren't there. They don't have a voice or a value except as food, product or for human enjoyment.. The saddest thing is that the sound of extinction is SILENCE..

I am a born-and-bred Northern Beaches resident and have a long-standing interest I in protecting our unique and ancient bushland which is being continually chipped away for developments. I strongly object to the proposed Beaches Link and Gore Hill Freeway Connection which will have a deleterious impact on Manly-Warringah War Memorial Reserve (Manly Dam).

The proposed Beaches Link and Gore Hill Freeway Connection will be an extremely damaging project to the amenity of the local area, especially to the long-standing suburbs of Balgowlah and Seaforth, and will have flow-on effects throughout the Northern Beaches and to the local environment, particularly to Manly-Warringah War Memorial Reserve which is one of the most pristine areas of bushland remaining in urban Sydney. There are better ways to improve access to Sydney from the Northern Beaches - catering to mostly single-occupant private vehicles heading to and from Sydney CBD and other suburban hubs for employment is not one of them. The COVID lockdown has shown that the future of work may see a reduced dependence on commuting.

DIRECT IMPACT ON MANLY-WARRINGAH WAR MEMORIAL RESERVE (MANLY DAM RESERVE)

Over 15 hectares of pristine bush are destined to be destroyed to expand the Wakehurst Parkway, including the removal of nearly 1.5 hectares of Duffys Forest Endangered Ecological Community -some of the rarest vegetation on the planet. This is listed as a serious and irreversible impact (pg 207 of Appendix S in EIS). Please look for other ways to move people to and from the Northern Beaches - including increased public transport.

Both Garigal National Park and Manly-Warringah War Memorial Reserve are important refuges for wildlife. There are 23 endangered species in Manly Dam Reserve alone, including the Eastern Pygmy Possum, the Red-crowned Toadlet, the Climbing Galaxias and the Large-eared Pied Bat and species abundance and diversity has actually increased in the last twenty years (eg the return of wallabies to Manly Dam in the 2000s after an absence of sixty years, along with the return of lyre-birds, echidnas and bandicoots) and this is due to ongoing control of feral species, particularly foxes. Both reserves are also wildlife corridors from surrounding regions and widening of Wakehurst Parkway to to become virtually an elevated freeway will curtail wildlife movement.

Wakehurst Parkway cannot be widened from two to four or six lanes without destroying the bush at the top of Manly Dam Reserve and Garigal National Park. The ridge is simply too narrow for such a wide road.

The road is too wide to have adequate runoff water treatment. The edge of the road in many places will be either a steep cliff or artificial slope full of rubble. Untreated water from the road will pour through the bush, scouring the land and filling streams below with sediment every time there is heavy rainfall. The soil profile, laid down over aeons, will be covered in runoff and affect all the bushland downhill in both Manly Dam Reserve and Garigal National Park. This cannot be repaired and native flora will also be affected. This would be a disaster in heritage-listed bushland.

Similarly, accidents and spills of toxic liquids that would pour downhill directly into Manly Dam and Garigal National Park and have significant environmental impacts.

A widened Wakehurst Parkway will be elevated above the tree-line and visible throughout Manly Dam Reserve and in a lot of Garigal National Park. One of the attractions of Manly-Warringah

War Memorial Reserve is that it is large enough to for a walker to experience being in a natural area where no artificial structures are visible. One could be two hundred kilometres from the City of Sydney rather than it being less than 15km away over the bush-shrouded horizon.

Light from the road will be visible all through Manly Dam and Garigal National Park. The road is on a ridge, so light from the road will be visible for miles around.

Manly Dam is one of the last sizable refuges for nocturnal wildlife away from noise, light and other human disturbance. In the last decade or so new light installations such as at Allambie Oval and/or Tennis Courts and at Wakehurst Tennis Courts have vastly increased lighting which beams out of the surrounding darkness and already spoils the 'wild' amenity to some extent. (Previously only the water towers had modest lighting). Streetlights all along an elevated, four-lane Wakehurst Parkway will vastly amplify light sources. This will create a swathe of bright light between the Dam and National Parks. This is a big concern for wildlife and insect biodiversity. Light pollution is now (finally) being considered a contributor to global insect decline as bright lights are also attract flying insects away from their habitat to be fried by the intensity of the lighting. Insects play a pivotal role in maintaining a healthy ecosystem as currently exists in Manly-Warringah War Memorial Park.

Streetlights will also markedly impact on how Manly Dam Reserve looks at night, causing a significant upscaling in light pollution. It's currently a secluded area for nocturnal wildlife with minimal light pollution (at least by Sydney standards). Viewed from (for example) Allambie Hts, bright lights will be visible along the entire top ridge and will very much 'urbanise' this sanctuary.

There will be a lot of additional traffic on Wakehurst Parkway. Heavy construction vehicles will dominate the road for the next decade. Traffic noise day and night will cause many species of wildlife to flee their territories.

Construction will destroy a large area of bushland at the top of Wakehurst Golf Course around the two water tanks. This area was declared by Sydney Water to be rich in endangered plant and animal species and worthy of conservation.

The Aboriginal carvings along the Engravings Trail will be under threat from road runoff.

Manly Dam bushland has survived in its present high-conservation state as it was the original water supply catchment for Manly, being last utilised during WWII. Residents place a high value on its conservation and it is dismaying to see the damage the NSW Govt is proposing to do to the bushland and surrounding suburbs via this Beaches Link Tunnel.

IMPACT ON BURNT BRIDGE CREEK AND BALGOWLAH GOLF COURSE

Burnt Bridge Creek will effectively end as a naturally flowing creek. Water flowing down the creek will be drained (flow reduced by 96%) and underground water pumped out to a depth of 11m. The creek through the golf course will be turned into an unsightly, fenced cement stormwater drain, wider than the current creek and deeper into the ground. This is to remove water more quickly to keep the land dry and prevent water entering the tunnel but it will kill trees and riparian bushland.

The bat colony will be unable to survive once the creek and water retention dam on the golf

course are removed. Other fauna will also have no water.

The quick discharge of water into Manly Creek will increase sediment and send road runoff into the creek without the current filtering process, lowering water quality in Manly Creek and out to Queenscliff Beach.

Balgowlah Golf Course will be destroyed. It will be replaced by:

- Burnt Bridge Creek Deviation widened to 12 lanes,
 - a four lane road to connect the tunnel to Sydney Rd,
 - an 8 storey high chimney to discharge tunnel fumes,
 - a 3 storey service building built 8m into the ground, with sloping ground around it,
 - a car park for the service building and park,
 - a large toilet block,
 - a stormwater drain,
 - a soccer pitch,
 - a small park.
- Pollution from cars all along the tunnel will be collected and discharged from an ugly 20m (8 storey) chimney on Balgowlah Golf Course, another one 26m high on Wakehurst Parkway and one on the other side of Middle Harbour.

These chimneys are close to a number of schools and will cause problems in air quality when the wind blows from the wrong direction.

IMPACTS ON MIDDLE HARBOUR

- The tunnel will pass under Middle Harbour in what is effectively an underwater bridge. The bridge will be supported on four pylons. Building these pylons will take several years and displace mud, possibly laced with toxins from industrial activity, into the harbour.

ECONOMIC IMPACTS

- The project is economically negative: the cost of investment is larger than expected benefit.
- The Beaches Link is a much more expensive project than the Harbour Bridge and Harbour Tunnel but also much more expensive at an estimated \$14 billion. Not a good value project.
- The Beaches Link will facilitate massive development at Frenchs Forest, to justify the siting of a hospital in the wrong place (despite public opposition to the location). Residents do not want this.

OVERALL DESIGN

Traversing Sydney through fast-paced underground car tunnels and tollways is grim and stressful; a public mass-transit option is far better.

- Beaches Link would be a 6-lane underground highway, 50% wider than the Harbour Tunnel but with far less traffic. It would be the deepest road in Australia with steep underground hills when a flat tunnel route is safer.
- The tunnel does not allow bicycles, electric scooters etc or pedestrians no dedicated bus lane. There is little thought about future transport that might be different from today.
- There are no side exits off Beaches Link to the Lower North Shore. This will mean some traffic for Mosman etc will travel to the Northern Beaches and have to double back over the Spit Bridge.

- Entrances and exits to the tunnel are too wide: Crows Nest is 20 lanes, the poorly located Balgowlah is 12 lanes, and Seaforth is 6 lanes. Welcome to LA.
- The tunnel could be obsolete soon after completion as transport modes change as the world moves away from fossil fuels.

Residents live on the Northern Beaches because of the beach and bushland environment and the sense of community separated from Greater Sydney. The tunnel to Sydney will only increase, not decrease, congestion and parking issues, and inevitably lead to pressure for massively increased development. It will turn our beautiful area into a construction hell-hole for at least the next ten years.

The Sugarloaf Bridge was cancelled due to its unsuitability for this area, so too should the Beaches Link Proposal, on environmental grounds. A public transport solution remains the only feasible option.