

SECTION 5 – RISK MANAGEMENT

Management of Project risks

RISK	Assessed		DECLARATIONS
	Yes	No	
Investigation of the potential of natural hazards: Bushfire, Geotechnical and Flood/Coastal have been considered and addressed	✓	<input type="checkbox"/>	BUSHFIRE – The site is not bushfire prone land. GEOTECHNICAL – A geotechnical report has been prepared considering options and issues associated with the reclamation, it is provided as Appendix E as part of the Seawall Design Options Evaluation Final Report. The slope at the rear of the proposed car park has been evaluated and assessed as a minimal risk. Specific detail is provided in the REF in Section 7.7. FLOOD/COASTAL HAZARD – The proposal meets the Estuary Planning Level (EPL) adopted by Council in October 2015 for 2050 planning horizon, this is discussed in Section 7.6 of the REF..
Alternate methods, activities or designs been investigated for alternate method of delivery for all activities other than Level 1 Assessments. Community Consultation has been undertaken	✓	<input type="checkbox"/>	Details are provided in both the Section 6 of the Church Point Plan of Management (see Appendix b) and Section 4.1 of the REF.
The implementation of the recommended mitigation measures will minimise the identified impacts/risks identified in the REF and by the Assessment Panel.	✓	<input type="checkbox"/>	Community consultation has occurred over a number of years the details are provided in Section 6.2 of the REF.
All material supporting the assessment has been detailed in the REF or this assessment with information included in this assessment.	✓	<input type="checkbox"/>	Section 6 of this assessment contains additional requirements and standard conditions for the proposal. This recognises that this environmental assessment is based on a detailed concept design and that there are still components to be finalised that have become apparent during the Environmental Impact Assessment and Technical Panel Assessment as well as the requirements of licenses or permits from relevant authorities. All current supporting information is included in this assessment. Some licenses and additional detailed design will be required prior to commencement. However, these are unlikely to have a significant impact and are provided to minimise the environmental impact of the proposal during construction.

SECTION 6 – APPROVAL

6.1 ENVIRONMENTAL IMPACT ASSESSMENT CONCLUSION

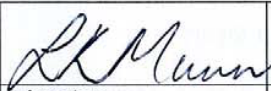
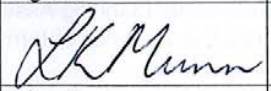

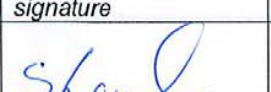
The proposed construction of a car park, land reclamation, sea wall construction and realignment of McCarrs Creek Road has been assessed under Part 5 of the EP&A Act. The REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed activity.



The Proposal was found to have potential for short term and minor impacts to soil, water quality, sea grass, local air quality, noise emissions, visual amenity and utilities. However, impacts would be readily manageable through the application of mitigation measures summarised in the REF and conditions required in Section 7 by Technical Assessment Panel. The works were not found to result in any significant impacts to threatened species, populations or ecological communities listed on the NSW Threatened Species Conservation Act 1995 or the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.

The proposal would also have a range of benefits including improved road safety; additional provision for parking; and safer pedestrian facilities. On balance the proposal is considered justified. If no change is completed, the chronic lack of car parking will continue to cause adverse social impacts and tensions.

The environmental impacts of the proposal are not likely to be significant and therefore it is not necessary for an environmental impact statement to be prepared and approval to be sought for the proposal from the Minister for Planning under Part 5.1 of the EP&A Act. The proposal is unlikely to affect threatened species, populations or ecological communities or their habitats, within the meaning of the Threatened Species Conservation Act 1995 or Fisheries Management Act 1994 and therefore a Species Impact Statement is not required. The proposal is also unlikely to affect Commonwealth land or have an impact on any matters of national environmental significance.

TECHNICAL PANEL ASSESSMENT SIGN-OFF

Project Manager:	Les Munn		18/11/15
	name	signature	Date
Manager: Urban Infrastructure	Les Munn		18/11/15.
	name	signature	Date
Manager: Natural Environment and Education	Mark Beharrell		17/11/15
	name	signature	Date
A/Manager: Reserves and Recreation	Steve Lawler		18/11/15
	name	signature	Date


Manager: Environmental Planning and Assessment	Andrew Pigott		17/11/15
	<i>name</i>	<i>signature</i>	Date
Manager: Catchment Management and Climate Change	Jennifer Pang		17/11/15
	<i>name</i>	<i>signature</i>	Date

6.3 CONCLUSION

The Environmental Impact Assessment under part 5 of the NSW Environmental Planning Assessment Act 1979 for McCarrs Creek Road Realignment and New Car Park has determined that there is unlikely to any significant environmental impact.

The reason for the imposition of the attached additional requirements and standard conditions as detailed in Section 7 is to ensure that the development consented to is carried out in such a manner as to achieve the objectives of the Environmental Planning and Assessment Act 1979 (as amended), pursuant to section 5(a) of the Act, having regard to the relevant matters for consideration contained in section 79C of the Act and the Environmental Planning Instruments applying to the land, as well as section 80A of the Act which authorises the imposing of the consent conditions.

APPROVAL PANEL SIGN- OFF

Director Environmental Planning and Assessment <i>COMMUNITY</i>	Melinda Hewitt		19/11/15
	<i>name</i>	<i>signature</i>	Date

6.4 ENDORSEMENT

Based on the Review of Environmental factors the Environmental Impact Assessment required under 5 of the NSW Environmental Planning Assessment Act 1979 the proposed McCarrs Creek Road Realignment and New Car Park has determined that there is unlikely to any significant environmental impact.

Endorsement of the Impact Assessment
Date


Mark Ferguson
GENERAL MANAGER

7	ADDITIONAL REQUIREMENTS AND STANDARD CONDITIONS
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7.1 PRESCRIBED CONDITIONS

1. All works are to be carried out in accordance with the requirements of the Building Code of Australia.
2. A sign must be erected in a prominent position onsite only showing:
 - a. the name, address and telephone number of the Council contact for the work, and
 - b. the name of the principal contractor or the person responsible for the works and a telephone number on which that person may be contacted outside working hours, and
3. That unauthorised entry to the work site is prohibited.

The sign must to be maintained while the building work, subdivision work or demolition work is being carried out, but must be removed when the work has been completed.

4. Any building work in relation to the development is to be carried out in accordance with the requirements of the Building Code of Australia.

7.2 MATTERS TO BE INCORPORATED INTO THE DEVELOPMENT AND MAINTAINED OVER THE LIFE OF THE DEVELOPMENT

1. If any Aboriginal Engravings or Relics are unearthed all work is to cease immediately and the Aboriginal Heritage Office (AHO) and Office of Environment and Heritage (OEH) are to be notified. If human remains are found work should cease and the NSW Police and OEH should be notified. It is an offence under the NPW Act (Section 86) to disturb or destroy an Aboriginal object.
2. Should any unexpected relics be exposed which are identified as being of non-indigenous heritage significance, work shall cease and the NSW Heritage Office and Pittwater Council shall be informed to determine the appropriate management strategy.
3. Should any such items need to be disturbed (exposed, moved, damaged or destroyed) these works shall not be undertaken until such time as an excavation permit under Section 139 of the Heritage Act 1977 is received.
4. The Estuarine Planning level is 2.68 AHD.
5. The works should also incorporate the following:
 - a. All structural elements below the Estuarine Planning level shall be of flood compatible materials.
 - b. All structures must be designed and constructed to achieve a low risk of damage and instability due to estuarine hazard.
 - c. All electrical equipment, wiring, fuel lines or any service pipes and connections must be waterproofed to the Estuarine Planning Level.
 - d. The storage of toxic or potentially polluting goods, materials or other products which may be hazardous or pollute floodwater is not permitted below the Estuarine Planning level.
 - e. Safe pedestrian access is to be provided for evacuation from estuarine hazards above the Estuarine Planning Level.

6. Prior to the completion of works, all declared noxious weeds are to be removed/controlled in accordance with the Noxious Weeds Act 1993. Environmental weeds are to be removed and controlled. Due to site conditions noxious weeds at the top of the scarpe will be treated post construction and only if bank stability is not compromised. Refer to Pittwater Council website http://www.pittwater.nsw.gov.au/environment/noxious_weeds for noxious/environmental weed lists.
7. No environmental weeds are to be planted on the site. Refer to Pittwater Council website http://www.pittwater.nsw.gov.au/environment/noxious_weeds for environmental weed lists.
8. The existing landscaping required to be retained together with any additional landscaping required by this approval is to be maintained for the life of the development.
9. All natural landscape features, including natural rock outcrops, natural vegetation, soil and watercourses, are to remain undisturbed except where affected by necessary works detailed on approved plans.
10. In accordance with Pittwater Council's Tree Preservation and Management Order, all existing trees shall be retained except where Council's prior written consent has been obtained, or where trees stand within the envelope of approved buildings or within the alignment of approved permanent paved vehicular access roads and parking areas.
11. No water pollution shall result from the operation of any plant or equipment or activity carried out.
12. No odour nuisance to the public or any adjoining premises shall be created by the operation of any plant or equipment or any procedure carried out at the premises.
13. No emissions causing air pollution shall be created by the operation of any plant or equipment or any procedure carried out at the premises.
14. Construction materials that minimise potential vibration and noise shall be utilised on the structures.
15. Flooring on the carpark level shall be treated to ensure that no tyre screech is audible outside the walls of the carpark.
16. A carpark use protocol, signage and associated education program such as 'consider our neighbours' shall be implemented to limit noise associated with the car park and users.
17. Council shall undertake an ongoing review of the carpark with regard to minimising operational noise emissions from the carpark for 12 months following opening of the carpark. During this time, use of the carpark shall be monitored so that at the end of this period, or sooner if practicable, leased and public car parking shall be allocated so as to minimise car movements and associated noise impacts for adjacent residents.
18. The carpark shall incorporate vehicle barriers or restraints to prevent floating vehicles leaving the site for inundation up to 3.18m AHD (the 2100 climate change planning scenario). Consideration should be given to incorporating climate change adaptation measures such as the provision of a higher deck to allow for potential retrofit to a higher ground floor.
19. All disabled spaces shall comply with the provisions of AS 2890.6 and shall be clearly marked and signposted.

20. The road realignment, sea wall and associated reclamation works shall not have an adverse impact on any surrounding property or estuarine processes up to the Estuarine Planning Level, as demonstrated through an Estuarine Risk Management Report prepared and certified by a registered professional engineer with chartered professional status (CPEng) and with coastal engineering as a core competency.

7.3 MATTERS TO BE SATISFIED PRIOR TO CONSTRUCTION

1. Submission of construction plans and specifications and documentation which are consistent with the approved plans, the requirements of Building Code of Australia and satisfy all conditions shown above are to be submitted.
2. A Quick Check agent/Sydney Water must stamp plans before the works commence.
3. Consult with Sydney Water to establish whether there are any Section 73 Compliance Certificate requirements for this proposal, under the provisions of the Sydney Water Act, 1994. Application must be made through an authorised Water Servicing Coordinator. Please refer to the Building Developing and Plumbing section of the web site www.sydneywater.com.au then refer to "Water Servicing Coordinator" under "Developing Your Land" or telephone 13 20 92 for assistance.

Following application a "Notice of Requirements" will advise of water and sewer infrastructure to be built and charges to be paid. Please make early contact with the Coordinator, since building of water/sewer infrastructure can be time consuming and may impact on other services and building, driveway or landscape design.

4. The following critical stage inspections are undertaken:
 - a. after excavation for, and prior to the placement of, any footings, and
 - b. prior to pouring any in-situ reinforced concrete building element, and
 - c. prior to covering of the framework for any floor, wall, roof or other building element, and
 - d. prior to covering waterproofing in any wet areas, and
 - e. prior to covering any stormwater drainage connections, and
 - f. after building work has been completed and prior to any occupation.

To allow Council to carry out critical stage inspections, at least 48 hours notice must be given before building work is commenced and prior to further work being undertaken.
5. Civil engineering details of the proposed excavation/landfill are to be submitted to the Council. Each plan/sheet is to be signed by a qualified practising Civil Engineer who has corporate membership of the Institution of Engineers Australia (M.I.E) or who is eligible to become a corporate member and has appropriate experience and competence in the related field.
6. A pre-commencement dilapidation report must be prepared and submitted, providing an accurate record of the existing condition of adjoining public and private properties and public infrastructure. Properties to documented include 3 McCarrs Creek Rd (Lot 41 DP 545207), 7 McCarrs Creek Rd (Lot 21 DP 707314), 6 Quarter Sessions Rd (Lot 42 DP 545207), 8 Quarter Sessions Rd (Lot 2 DP 379218) and the General Store at 1860 Pittwater Rd (Lot 318 DP 824048). A copy of the report must be provided to Council, any other owners of public infrastructure and the owners of adjoining and affected private properties.
7. Detailed landscape working drawings and specification, which comply in all respects with the conditions of the approval, are to be submitted prior to construction. Each plan/sheet is to be

certified by a qualified landscape architect, landscape designer/environmental designer or horticulturist, confirming that the plans/details provide for the works to be carried out will achieve the relevant conditions. In particular, the landscape working drawing is to provide full details of the following:

- a. the usage of the dominant tree species growing in the area or locally indigenous species.
 - b. all existing trees and vegetation to be retained, removed and proposed, including canopy spread, trunk location and condition;
 - c. a plant schedule including stratum, species/common names, species' numbers, pot size and staking details;
 - d. a schedule of materials (including such elements as turfing, edging, walling, paving and fencing);
 - e. the proposed finished treatment of planted areas, including soil depth and mulching details;
 - f. the location of underground/overhead services;
 - g. details of irrigation and any on-slab planting;
 - h. All proposed planting shall be located and chosen to soften and screen the building from the road.
8. An aquatic Construction Environment Management Plan (CEMP) shall be prepared prior to reclamation of land and construction of the seawall and carpark.
 9. An erosion and sediment control plan shall be prepared to include detailed specific methods to mitigate erosion and sedimentation during construction. Control measures could include floating booms, silt fencing and sheet piling.
 10. A CEMP shall be prepared to address erosion, sediment control and water quality. This shall include erosion and sedimentation controls which would be prepared in accordance with Soils & Construction: Managing Urban Stormwater 2004 – 'the Blue Book'. The CEMP shall also include site specific details to respond to and address any on-site spills.
 11. The CEMP shall detail appropriate on-site waste management measures during construction, including the mobilisation of waste off site to minimise the potential for negative environmental impacts on drainage systems, downstream watercourses and neighbouring land. It shall also include specific measures for classifying waste as well as its storage, transportation and disposal in accordance with legislative requirements.
 13. Steel sheet piling and floating sediment curtains shall be placed in Pittwater surrounding the site for the duration of construction. These structures shall be maintained in working order during construction.
 12. The eastern end of the sea wall is to key into the existing seawall at the Church Point General Store. Detailed plans of the seawall to be constructed at this site are to be provided to Fisheries NSW for their approval prior to construction.
 13. Notification to the Department of Primary Industries (Fisheries) of all reclamation and dredging works shall be undertaken prior to construction.
 14. Consultation under Section 199 of the Fisheries Management Act shall be undertaken with the Minister for Primary Industries (Department of Primary Industries at least 28 days prior to works commencing.
 15. The site shall not be dewatered unless a Dewatering Management Plan is prepared and submitted as part of the Construction Environmental Management Plan. Any Dewatering

Management Plan shall specifically consider any potential off site impacts as a result of the dewatering operations and contain mitigation controls to effectively arrest any discharge waters to prevent offsite pollution of any receiving waters. A copy of the dewatering plan is to be attached to the Fisheries NSW permit.

17. A detailed design to provide details of the rock wall stabilisation or treatment shall be provided. This may be in the form of initial slope grooming (smoothing) and subsequent grooming once operational and when required, or more permanent measures such as rock bolting and engineered shotcrete retaining walls may be considered.
18. Detailed off shore geotechnical investigations shall be carried out and a report submitted to council, in order to further assess the risks and impacts associated with the location of the proposed new seawall.
19. A preliminary acid sulfate investigation shall be carried out in conjunction with the detailed design and prior to any ground disturbance on site. If required, an acid sulfate soils management plan shall be prepared in accordance with the Acid Sulfate Soils Manual.
20. The detailed design of the carpark shall ensure that the front edge of the parking deck is not visible from off-shore.
21. All vertical concrete surfaces shall be treated to visually integrate them with the surrounding environment.
22. A detailed analysis shall be carried out with cross sections to determine visibility of the parking deck and any mitigation options, such as screen planting or structural screening shall be incorporated into the final design.
23. All façade treatment shall be compatible with the surrounding environment, shall use dark recessive colours, incorporate where possible recycled materials, a maritime theme and public art elements.
24. The proposed vertical timber slats shall visually screen parked cars at ground level and on the deck.
25. Prior to Construction, Form 2 of the Geotechnical Risk Management Policy for Pittwater (Appendix 5 of P21 DCP) is to be completed and submitted to the Accredited Certifier.
26. The design is to incorporate spill containment measures and the treatment of stormwater runoff from the carpark, using water sensitive urban design principles. The stormwater treatment train is to be suitable for removing sediments and oils and greases, and may include sediment sumps and filtration systems incorporated into the landscaping features. All proposed water containment/treatment systems need to be easily maintained over the life of the development.
27. Drainage plans including specifications and details showing the stormwater management are to be submitted. Such details are to be accompanied by a certificate from a qualified practicing Civil Engineer with corporate membership of the Institution of Engineers Australia (M.I.E), or who is eligible to become a Corporate member and has appropriate experience and competence in the related field, that the stormwater management system complies with the requirements of Building Code of Australia and AS/NZS 3500.3.2 - Stormwater Drainage.
28. The stormwater drainage system must be constructed and completed in accordance with the approved design and relevant Australian Standards.

A plan showing pipe locations and diameters of the stormwater drainage system, together with certification by a qualified practicing Civil Engineer that the drainage system has been constructed in accordance with the approved design and relevant Australian Standards must be provided

7.4 MATTERS TO BE SATISFIED PRIOR TO THE COMMENCEMENT OF WORKS AND MAINTAINED DURING THE WORKS:

1. The hours of construction are restricted to between the hours of 7.00am and 5.00pm Monday - Friday and 7.00am to 1.00pm on Saturdays unless specifically authorised. No works are to be carried out on Sundays or Public Holidays unless specifically authorised. Internal building work may be carried out at any time outside these hours, subject to noise emissions from the building or works not being audible at any adjoining boundary.
2. Any proposed demolition works shall be carried out in accordance with the requirements of AS2601-2001 The Demolition of Structures.

Amongst others, precautions to be taken shall include compliance with the requirements of the WorkCover Authority of New South Wales, including but not limited to:

- a. Protection of site workers and the general public.
- b. Erection of hoardings where appropriate.
- c. Asbestos handling and disposal where applicable.
- d. Any disused service connections shall be capped off.

Council is to be given 48 hours written notice of the destination/s of any excavation or demolition material. The disposal of refuse is to be to an approved waste disposal depot

3. A copy of the approved plans is to be kept on the site at all times, during construction.
4. The following facilities must be provided on the site:
 - a. toilet facilities in accordance with WorkCover NSW requirements, at a ratio of one toilet per every 20 employees, and
 - b. a garbage receptacle for food scrapes and papers, with a tight fitting lid.

Toilet facilities are to be provided in a location which will not detrimentally affect the amenity of any adjoining residents at or in the vicinity of the work site during the duration of the development.

5. Where site fill material is necessary, fill materials must:
 - a. be Virgin Excavated Natural Material (VENM) only, as approved under the Department of Climate Change "General Resource Recovery Exemption
 - b. be free of slag, hazardous, contaminated, putrescibles, toxic or radioactive excavated material and soil, rock or similar material. Putrescibles and non-putrescibles solid waste (including demolition material) is not permitted.
6. The following measures shall be implemented in the sequence given below, to minimise soil erosion:

- a. Approved runoff and erosion controls shall be installed before site vegetation is cleared (other than that associated with the construction of the controls). These shall be as shown on an ESCP approved by council.
 - b. Topsoil shall be stripped only from approved areas and stockpiled for re-use during site rehabilitation and landscaping.
 - c. Stockpiles of topsoil, sand, aggregate, spoil or other material shall be stored clear of any drainage line or easement, waters, footpath, kerb or road surface and shall have measures in place to prevent the movement of such materials onto the areas mentioned. All stockpiled materials are to be retained within the property boundaries.
 - d. Uncontaminated runoff shall be intercepted up-site and diverted around all disturbed areas and other areas likely to be disturbed. Diversion works shall be adequately stabilised.
 - e. Runoff detention and sediment interception measures shall be applied to the land. These measures will reduce flow velocities and prevent topsoil, sand, aggregate, or other sediment escaping from the site or entering any downstream drainage easements or waters.
 - f. The capacity and effectiveness of runoff and erosion control measures shall be maintained at all times to conform to the specifications and standards quoted and to any conditions of approval of those measures.
 - g. Measures shall be applied, to the satisfaction of council, to prevent site vehicles tracking sediment and other pollutants onto any sealed roads serving the development.
 - h. All excavations and backfilling associated with the erection or demolition of a building must be executed safely and in accordance with appropriate professional standards.
8. The site must be fenced throughout demolition and/or excavation and must comply with WorkCover New South Wales requirements and be a minimum of 1.8m in height.
 9. Temporary sedimentation and erosion controls are to be constructed prior to commencement of any work to eliminate the discharge of sediment from the site.
 10. Sedimentation and erosion controls are to be effectively maintained at all times during the course of construction and shall not be removed until the site has been stabilised or landscaped.
 12. Adequate measures shall be undertaken to remove clay from vehicles leaving the site so as to maintain public roads in a clean condition.
 13. The construction of the development and preparation of the site, including operation of vehicles, must be conducted so as to avoid unreasonable noise or vibration and not cause interference to adjoining or nearby occupations.
 14. Personnel with appropriate training, or demonstrated knowledge and experience in erosion and sediment control shall be responsible for supervising the installation and maintenance of approved erosion and sediment control measures – during and after construction and until the site has been restored to the satisfaction of council.

15. To minimise soil erosion and sediment movement during construction, the following measures shall be implemented.
- Removal and/or disturbance of vegetation shall be confined to the basal area of the approved building, the site(s) of access ways, land extending a maximum of two metres beyond the outermost projection of the approved building and within a total of two metres of service trenches (that is the sum of the two sides to be a maximum of two metres).
 - Topsoil stripped from the construction site shall be stockpiled and protected from erosion until re-use during landscaping. Soil is to be retained within the property.
 - Stockpiles of construction and landscaping materials, and of site debris, shall be located clear of drainage lines and in such a position that they are protected from erosion and do not encroach upon any footpath, nature strip or roadway.
 - Final site spoil shall be disposed of to conform to the specifications and standards quoted and to any conditions of approval of those measures.
 - Stormwater from roof areas shall be linked to a council approved stormwater disposal system immediately before placement of any roofing materials.
 - Vehicular access shall be controlled so as to prevent tracking of sediment onto adjoining roadways, particularly during wet weather or when the site is muddy. Where any sediment is deposited on adjoining roadways the same shall be removed by means other than washing. All material is to be removed as soon as possible and the collected material is to be disposed of in a manner that will prevent its mobilisation.
 - Vehicular access paths shall be stabilised.
 - All disturbed areas shall be progressively stabilised and/or revegetated so that no areas remain exposed to potential erosion damage for more than 14 days or other such period as may be approved after earthworks cease. All driveways and parking areas shall be stabilised with compacted sub-grade as soon as possible after their formation.
16. A clearly legible Site Management Sign is to be erected and maintained throughout the course of the works. The sign is to be centrally located on the main street frontage of the site and is to clearly state in legible lettering the following:
- The builder's name, builder's telephone contact number both during work hours and after hours.
17. Construction access to the property is to be via the approved access points only.
18. A satisfactory construction traffic management plan (CTMP) prepared by a suitably qualified traffic consultant is required to be submitted prior to the commencement of any site works. The plan is to detail:
- a. Quantity of material to be transported
 - b. Proposed truck movements per day
 - c. Proposed hours of operation
 - d. Proposed traffic routes, noting that 3 tonne load limits apply to some roads within Pittwater
 - e. Location of on/off site parking for construction workers during the construction period.
 - f. Measures to avoid conflict between construction and private vehicles.
19. Prior to commencement of site works, a qualified arborist, horticulturist or landscape architect is to certify that protective fencing consisting of chain wire mesh fencing, a minimum 1.5 metres high with steel pipe support posts has been provided, a minimum distance of 1 metre outside of the dripline of those trees or landscaped areas shown on the approved landscape working drawing.

20. The project manager is to erect signs advising all contractors and visitors to the site that no works or storage are to take place within the dripline of existing trees.
21. No storage of building materials or building waste, excavated fill or topsoil storage is to occur within the dripline of trees shown on the approved landscape working drawing(s) as being retained or within protective fenced areas.

Drainage is to be arranged such that fill, building materials or contaminants are not washed into protective fenced areas.
22. The only waste-derived fill material that may be received at the development site is:

(a) Virgin excavated natural material (within the meaning of the Protection of the Environment Operations Act 1997).
(b) Any other waste-derived material the subject of a resource recovery exemption under CI51A of the Protection of the Environment Operations (Waste) Regulation 2005 that is permitted to be used as fill material.

Any waste-derived material the subject of a resource recovery exemption received at the development site must be accompanied by documentation as to the material's compliance with the exemption conditions.
23. A rock rubble toe shall be placed at the foot of the concrete piled section of the seawall.
24. Site access shall be via the existing road. No vegetation shall be cleared from the site for site access.
25. Compound/stockpile areas shall be established on previously disturbed areas and away from the waterway and riparian vegetation and shall be located above the 1:100 flood level where practicable. Stockpiles and/or dewatering areas shall be appropriately controlled by sediment fencing or other materials prescribed in the "Blue Book" to ensure that sediments do not enter the waterway.
26. No plant, equipment or vehicles shall be parked beneath the dripline of trees.
27. All construction involving waterway use, including but not restricted to barges, shall ensure that anchors and any temporary attachments to the substrate are free of Caulerpra before exiting the area. These shall be followed in accordance with measures outlined in the Department of Primary Industries Caulerpra Control Plan (NSW Fisheries 2004).
28. All construction works to be undertaken on or around the waterway shall occur as far as practicable during periods where heavy rain is not forecast.
29. Disturbed soil shall be graded as close as reasonable and feasible to its original topography.
30. Prior to use at the site and/or entry to the waterway, machinery is to be appropriately cleaned degreased and serviced.
31. A layer of geotextile fabric is to be placed between the inner edge of the seawall and fill material used in the reclamation.
32. A visual inspection of the waterway for dead or distressed fish (indicated by fish gasping at the water surface, fish crowding in pools or at the creek's banks) is to be undertaken daily during the works. Observations of dead or distressed fish are to be immediately reported by

the contractor to Pittwater Council who will liaise with the Contact Officer from Department of Primary Industries (Fisheries). In such a case, all works are to cease until the issue is rectified and approval given to proceed. If requested, Pittwater Council shall commit resources to the satisfaction of the Contact Officer for an effective fish rescue, if, in the view of that officer, a fish kill event is imminent and likely to occur within or adjacent to the works area due to conditions associated with weather, water quality and other parameters.

- 33 All construction plants and vehicles shall be switched off while idle, and plant and vehicular movement between the access roads and the site minimised so as to prevent noise pollution to adjacent properties.
- 34 All construction plan and site shall be maintained in accordance with the manufacturers' requirements and where applicable fitted with suitable noise suppressing equipment to limit engine noise emissions.
- 35 Any noise or vibration complaints received during the course of construction shall be addressed, investigated and responded to appropriately. Construction methods shall be reviewed in response to any noise or vibration complaints and amended if deemed necessary.
- 36 Demolition and construction methods shall utilise best practise with regard to minimisation of vibration and noise to adjacent properties.
- 37 Scheduled construction staging shall minimise multiple use of the noisiest equipment of plant items and shall limit noisy activities in conjunction with peak usage of adjacent commercial facilities.
- 38 General signage shall be placed in the immediate vicinity of the construction site warning of heavy vehicles and advising of altered speed restrictions.
- 39 Warning signs shall be placed at the entrances to the construction site to warn road users or vehicles entering and exiting the construction site.
- 40 Appropriate traffic control and warning signs shall be installed at areas identified as having potential safety risks.
- 41 Transportation of construction materials shall be managed to maximise operational efficiencies and minimise heavy vehicle movements.
- 42 All construction traffic entering and exiting the site shall be restricted to non-peak traffic periods.
- 43 Full access shall be maintained during construction to all adjacent properties.
- 44 Pedestrian access on the site and in the immediate vicinity of the site shall be maintained during construction, including to the Commuter Wharf, by means of temporary structures and/or walkways around construction works.
- 45 When reclamation of land is being undertaken for the road realignment and sea wall, placement of ballast shall be controlled in a fashion that limits the turbidity of surrounding water.
- 46 Reclamation of land shall be undertaken in an organised and efficient method to reduce the amount of disturbance on the surrounding waterway.

- 47 Any spoil sites shall be kept as far away from the waterway as practicable.
- 48 Where feasible, works involving reclamation of land and the construction of the seawall and associated structures shall be carried out in dry conditions.
- 49 Controls shall be implemented to ensure contaminants such as sediment, litter, oils and particulates are not transported off site during construction.
- 50 Fuels and chemicals should be stored off site, where practicable. Should any fuels and chemicals need to be stored on site, they shall be stored in an appropriately bunded area.
- 51 Spill kits shall be strategically placed at the construction site.
- 52 Disturbed areas shall be stabilised as soon as feasible following construction.
- 53 Booms or similar shall be used during construction to minimise disturbed soils, including PASS, from entering the waterway from the construction area.
- 54 Water carts shall be used periodically during construction to suppress dust generated by use of the access road, parking and turnaround areas.
- 55 Work shall cease during periods of extreme wind speed or in the event that significant dust emissions are observed.
- 56 All vehicles transporting bulk materials to and from the site such as soil and ballast shall be covered to prevent loss of load and dust generation.
- 57 Construction vehicle speed shall be limited to reduce dust generation from unsealed road surfaces.
- 58 Engine maintenance of plant and equipment shall occur on a regular basis to prevent the emission of black smoke and any other unnecessary emissions.
- 59 Any long-term (greater than 4-8 weeks) soil stock piles shall be vegetated or covered, inclusive of any wet weather.
- 60 Perimeter fencing shall incorporate shade cloth to help suppress dust generated within the site area and act as a wind break.
- 61 A concrete washout shall be established in accordance with Best Practice Guidelines (Dept of Environment and Conservation's Environmental best Practice Management Guidelines for Concreting Contractors). Concrete washout should be located away from drainage lines and be contained using appropriate sediment control measures to prevent any runoff.
- 62 All waste shall be removed by a licenced contractor and shall not be burnt or buried on-site.
- 63 Any excavated soil and existing pavement materials shall be reused on site as fill, where practicable.
- 64 No waste material shall be left on site, once works are complete.
- 65 All waste existing the site shall be recorded on a waste register in accordance with the site specific CEMP.

66. Waste containers shall be made available on site to store domestic recyclable waste, general waste and oil contaminated waste prior to removal from site. Pick and disposal shall be arranged as and when required with the appropriate waste management companies.
67. All soil to be transferred off site shall be tested and deposited at a suitable collection facility based on its determined category.
68. An on-site heritage location map showing the location of all known heritage items including the cemetery, store, wharf and post office shall be prominently placed on site to advise workers of heritage buildings.

7.5 MATTERS TO BE SATISFIED PRIOR TO OCCUPATION

1. Confirmation stating that the development complies with the requirements of the Building Code of Australia must be obtained before the building is occupied or on completion of the construction work.
2. The following documents must be submitted:
 - (a) A certificate from a suitably Qualified Engineer, certifying:
 - (i) the stormwater drainage system
 - (ii) the car parking arrangement and area
 - (iii) any related footpath crossing works
 - (iv) the proposed driveway and layback, and/or
 - (v) other civil works, have been constructed in accordance with the approved plans and conditions of consent.
 - (b) A "Works-as-executed" plan of the engineering and/or drainage works.
3. Disturbed areas shall be rehabilitated by allowing natural regeneration and removing weeds. Rehabilitation shall be completed with 6 months of completion of work. The Ecological Consultant is to certify that rehabilitation works are complete and adequate.
4. Removal of noxious and environmental weeds is to be certified by an Ecological Consultant.
5. The applicant must prepare and submit a post-construction dilapidation report. The report must clearly detail the final condition of all property, infrastructure, natural and man-made features that were originally recorded in the pre-commencement dilapidation report. A copy of the report must be provided to Council, any other owners of public infrastructure and the owners of adjoining and affected private properties.
6. A certificate submitted by a Chartered Professional Engineer confirming to the satisfaction of Council that the works in the public road reserve comply with Council requirements is to be provided.
7. Restoration of all damaged public infrastructure caused as a result of the development to Council's satisfaction.
8. Rubbish bins shall be installed at the site, located appropriately and managed in accordance with Pittwater Council policy.
9. Prior to Occupation, Form 3 of the Geotechnical Risk Management Policy (Appendix 5 of P21 DCP) is to be completed and submitted to the Accredited Certifier.

7.6 ADVICE

1. Failure to comply with the relevant provisions of the Environmental Planning and Assessment Act, 1979 (as amended) and/or the conditions of this approval may result in the serving of penalty notices (on-the-spot fines) under the summary offences provisions of the above legislation or legal action through the Land and Environment Court, again pursuant to the above legislation.
2. Dial before you dig: Prior to excavation the applicant is advised to contact Australia's National Referral Service for Information on Underground Pipes and Cables telephone 1100 or www.1100.com.au
3. It is the Project Managers responsibility to ensure that all of the Component Certificates/certification issued during the course of the project are lodged.
4. To ascertain the date upon which an approval operates, refer to Section 83 of the Environmental Planning and Assessment Act, 1979 (as amended)
5. You are reminded of your obligations under the Disability Discrimination Act.

7.7 CONDITIONS REQUIREMENTS PART 7 of the FISHERIES MANAGEMENT ACT 1994

ADMINISTRATIVE CONDITIONS

1. The **Acceptance of Conditions** form (attached) must be completed and returned to the nominated Contact Officer before commencing any works authorised by this permit.
- 2) The **Works Notification** form (attached) must be completed and sent to the Sydney North Fisheries Office (0419 185 363; wollstonecraft.fisheries@dpi.nsw.gov.au) and the Contact Officer (contact details listed above) at least three (3) days BEFORE the commencement of works authorised by this permit.
- 3) The **Active Works Notification** form (attached) must be completed and sent to the Sydney North Fisheries Office (contact details listed above) and the Contact Officer (contact details listed above) at least 1 day BEFORE works are complete or machinery is removed from the site.
- 4) The **Post Works Notification** form (attached) must be completed and sent to the Sydney North Fisheries Office (contact details listed above) and the Contact Officer (contact details listed above) within 21 days of completion of works at the site.
- 5) This permit (or a true copy) and a copy of the finalised Construction Environmental Management Plan (CEMP) must be carried by the permit holder or sub-contractor operating on-site at all times during work activity in the permit area.

EXTENT OF WORKS

- 6) The permit holder must ensure that all works authorised by this permit are restricted to the permit area and are undertaken in a manner consistent with those described in the permit application and associated documents. Other works, which have not been described, are not to be undertaken. In particular:

- a) Steel sheet piling and a floating sediment curtain are to be erected prior to construction so that they encircle the works site. These structures are to be maintained in working order during construction.
- b) A rock rubble toe is to be placed at the foot of the concrete piled section of seawall.
- c) The eastern end of the seawall is to key into the existing seawall at the minimart. Detailed plans of the seawall to be constructed at this site are to be provided to Fisheries NSW prior to construction. *Reason – This permit has been granted following an assessment of the potential impacts of the described works upon the aquatic and neighbouring environments. Other works, which were not described in the application have not been assessed and may have significant adverse impacts.*

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

- 7) A Construction Environmental Management Plan (CEMP) detailing provisions relating to the items listed in this section below, is to be prepared and **submitted to the Contact Officer listed above for approval two weeks prior to any works taking place.** The CEMP should consist of simple statements and diagrams of how each of the factors will be managed on site to achieve the stated aim.
 - a) Site delineation and marking of “no go” areas (with the aim of keeping the impacted area to a minimum),
 - b) Sediment and erosion control plan (with the aim of achieving an outcome of “no visible turbid plumes reaching the waterway”, for any rainfall event up to a 1 in 2 year Annual Recurrence Interval (ARI) event),
 - c) Use of temporary crossings or other access works (with the aim of keeping the impacted area to a minimum),
 - d) Material storage and stockpiling (with the aim of keeping the impacted area to a minimum),
 - e) Site restoration and clean up (with the aim of ensuring that the impacted area recovers as soon as possible),
 - f) Site rehabilitation and revegetation (with the aim of ensuring that there are no long term impacts after works are completed).

All works undertaken are to be consistent with this statement.

DEWATERING PLAN

- 8) The site shall not be dewatered, unless a Dewatering Management Plan is prepared and submitted as part of the Construction Environmental Management Plan required under Condition 7 of this permit. Any Dewatering Management Plan shall specifically consider any potential off-site impacts as a result of the dewatering operations and contain mitigation controls to effectively treat any discharge waters to prevent offsite pollution of any receiving waters. A copy of the dewatering plan is to be attached to this permit.

WORK IN WATERS

- 9) Machinery is not to enter, or work from the waterway unless in accordance with works proposed in your application for the permit and the requirements of this permit.

- 10) A layer of geotextile fabric is to be placed between the inner edge of the seawall and fill material used in the reclamation.
- 11) Prior to use at the site and/or entry into the waterway, machinery is to be appropriately cleaned, degreased and serviced. Spill kits are to be available on site at all times.

AVOIDING HARM TO SNAGS, MARINE AND RIPARIAN VEGETATION

- 12) When working near marine vegetation (seagrass, mangroves and saltmarsh), riparian vegetation or water land these areas need to be identified and appropriately delineated as "No Go" areas (with the aim of avoiding harm to these areas). Harm to marine vegetation, riparian vegetation or water land outside the work footprint approved under the authority of this permit is not permitted and any harm caused is to be documented and reported to the contact officer. Any harm caused is to be restored in accordance with directions provided by the contact officer.
- 13) Material storage and stockpiling is not to be undertaken on water land, marine vegetation (saltmarsh, mangrove, seagrass) or riparian vegetation. Stockpiling must be undertaken in a manner to avoid harm to these types of vegetation or water land and should be located away from drainage lines, overland flow paths and above the 1:100 year flood level. Stockpiles and/or dewatering areas should be appropriately controlled by sediment fencing or other materials prescribed in the "Blue Book" to ensure sediments do not enter the waterway.
- 14) On completion of the works the site is to be rehabilitated and stabilised including but not limited to:
 - a) Surplus construction materials and temporary structures (other than silt fences and other erosion and sediment control devices) installed during the course of the works are to be removed.

COMPENSATORY / OFF-SET WORKS

- 15) The loss of 70 m2 of seagrass habitat from these works are to be compensated according to one of the two following offset measures:
 - a) The creation of an additional 140m2 area of saltmarsh and/or mangrove habitat, or the rehabilitation of 140m2 of degraded saltmarsh or mangrove habitat. These on-ground offsetting works are to be determined by the Contact Officer to be a suitable offsetting measure prior to implementation. Appropriate on-ground offsetting works must be identified and reported to the Contact Officer within 8 weeks of the date of issue of this permit (i.e. prior to 6 November 2015). A plan outlining the proposed works, including the timing of implementation, is to then be provided to the contact officer for approval by 20 November 2015. Should suitable on-ground offset not be found prior to 6 November 2015, then option
 - (b) below will be implemented;

Monetary compensation to the value of \$3724.00 is to be paid into the Fisheries NSW Conservation Trust Fund. Fisheries NSW will issue an invoice to Council for this payment, should a suitable on-ground option according to offset (a) above not be agreed upon prior to 6 November 2015.

FISH KILL CONTINGENCY

- 16) A visual inspection of the waterway for dead or distressed fish (indicated by fish gasping at the water surface, fish crowding in pools or at the creek's banks) is to be undertaken daily during the works. Observations of dead or distressed fish are to be immediately reported by the contractor to Pittwater Council who will liaise with the Contact Officer from Department of Primary Industries (Fisheries). In such a case, all works are to cease until the issue is rectified and approval given to proceed. If requested, Pittwater Council shall commit resources to the satisfaction of the Contact Officer for an effective fish rescue, if, in the view of that officer, a fish kill event is imminent and likely to occur within or adjacent to the works area due to conditions associated with weather, water quality and other parameters.

APPENDICES

Appendix A – Review of Environmental Factors

Appendix B – Church Point Plan of Management

Appendix C1 – Adopted Concept Masterplan

Appendix C2 – Civil Drawings

Appendix D1 – Photomontage

Appendix D2 – Photomontage - Detailed Elevation

Appendix D3 – Landscape Plan

Appendix E – Seawall Design Options Report

Appendix F – Geotechnical Investigation Report

Appendix G – Access Report

Appendix H1 – NSW Fisheries Permit

Appendix H2 – Gazettal of the Foreshore Reserve



Church Point Parking Demand Management Review

Client // Pittwater Council
Office // NSW
Reference // 15S1086000
Date // 03/09/15

Church Point Parking Demand Management Review

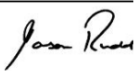
Issue: D 03/09/15

Client: Pittwater Council

Reference: 15S1086000

GTA Consultants Office: NSW

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	01/04/15	Final	Chris Slenders/ Michael Lee	Michael Lee	Jason Rudd	Jason Rudd
B	07/04/15	Final – Minor Text Update	Chris Slenders/ Michael Lee	Michael Lee	Jason Rudd	Jason Rudd
C	26/08/15	Final – Update to Introduction	Michael Lee	Jason Rudd	Jason Rudd	Jason Rudd
D	03/09/15	Final – Minor text change	Michael Lee	Jason Rudd	Jason Rudd	

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1. Introduction

1.1 Background

GTA Consultants (GTA) have been engaged by Pittwater Council (Council) to undertake a review the current car parking arrangements at Church Point and to develop a range of options to potentially address identified parking issues for the consideration by Council.

It is recognised that, short of simply constructing large scale multi storey car parking facilities, there is no one single measure which will address all of the parking related issues within Church Point. Thus this review has sought to develop and evaluate a range of options from which Council can consider the opportunities and constraints within the broader context of the future planning for Church Point. As such it is not the intention of this study to formulate a car park management plan for Church Point, but rather provide Council with information to enable a car park management plan to be developed with consideration of the existing Church Point Plan of Management.

In addition, it may be possible for some options to be implemented in a staged manner such that any initial implications due to the implementation of the options could be spread out over time.

The development of car parking options has included consideration of community attitudes and ideas towards car parking obtained through consultation with various key stakeholders and user groups.

Car parking, or more specifically the lack of available parking, is a contentious issue within the community of Church Point. The demand for the limited on-street and off-street public car parking has been an on-going issue since the 1980s.

Publicly accessible car parking within Church Point has traditionally serviced both on shore and off shore communities. Off shore communities such as Scotland Island do not have an opportunity to park vehicles on the islands and as such residents park their vehicles on shore and access the islands by boat. The on shore communities have also traditionally relied upon publicly accessible parking to service the demands of residents and their visitors, patrons to commercial operations and general visitors to the idyllic recreational facilities that Church Point, Pittwater and the Hawkesbury River provide.

Each of these communities is considered itself to be appropriate users of publicly accessible car parking within Church Point. However, over the years, it has been recognised by the general community that the increasing demand for parking is currently at a level which exceed the available parking supply, particularly on weekends and peak summer and holiday periods. The pressures on car parking supply within Church Point have been exacerbated by the removal of unauthorised spaces and formalisation of other areas.

The implications of this lack of parking results in residents, residential visitors, tradespeople and general visitors to Church Point enduring additional circulation of traffic on the local road system as vehicles look for a car parking space.

Furthermore, illegal parking or parking on both sides of the streets especially on narrow streets obstructs the free flow of through traffic on these streets, especially for emergency and service vehicles. In addition, lack of parking especially during weekends has an adverse effect on businesses in Church Point that rely on tourism.

The demand for off-street public car parking spaces in Church Point is generated by a number of competing uses including:

- o Church Point residents and their visitors
- o off-shore residents (residents from Scotland Island, Morning Bay, Lovett Bay and Elvina Bay) and their visitors
- o marina and water vessel users (including private mooring leases)
- o local general store and restaurant/café (Waterfront Café) and function centre (Pasadena)
- o tourist and recreational visitors, and
- o people residing on boats.

Church Point is effectively a transport interchange for residents of Scotland Island as well as other various bays on the western foreshore of Pittwater which are not accessible by land based transport (Lovett Bay, Morning Bay and Elvina Bay). The offshore residents are required to transfer from water transport to land transport modes. This is combined with mainland residents, recreational and commercial uses.

From the consultations with various resident association groups undertaken as part of this study, it is apparent that each of these users considers that they have a right to park in the off-street public car park at Church Point and in most cases with priority over other users.

Pittwater Council and the local residents (through the various resident association groups) have worked cooperatively over a long period of time to address parking issues at Church Point. This has culminated in the adoption of the Church Point Plan of Management (PoM) by both Council and the State Government in November 2009.

In recognition of the short fall of parking in Church Point, the PoM makes provision for additional car parking spaces to be provided in Church Point. It identifies McCarrs Creek Road located within Precinct 1, one of three precincts in the PoM study area, to be realigned so that a new car park can be constructed on the southern side of the re-aligned McCarrs Creek Road. Following the PoM, a number of options were developed for Council's consideration.

In a meeting on 16 December 2013, Council voted to proceed with Option 2 which would have two decks of parking providing a total of 120 car parking spaces.

Notwithstanding the proposed new car parking facility, it is acknowledged by Council that the provision of 120 additional spaces is unlikely to fully accommodate the current demand for car parking within Church Point.

In recognition of this, Council resolved in December 2013 that *"a further report be presented on transport options, resident parking scheme, availability of parking stickers and other mechanisms to reduce parking demand at Church Point for consideration by Council"*.

To this end, Council commissioned GTA Consultants to conduct a desktop study to develop strategies to manage car park demand in Church Point.

It is envisaged that the implementation of suitable parking demand measures (as discussed in this report) and additional car parking spaces will be required to achieve a balance between the demand for and provision of car parking.

1.2 Purpose of this Study

The purpose of this study is to identify and evaluate a range of measures to manage car parking demand within Church Point. In this context, the term "manage" is defined as a better utilisation

of existing public parking spaces between competing users with a view to reducing the parking demand.

It is envisaged that the measures identified in this report will be presented to the community for further comment and to Council for further consideration as part of the broader Plan of Management for Church Point.

This report documents the investigations undertaken in the study, and presents short and long term measures to manage car parking demands identified during the study.

It is noted that in one of the submissions from the local resident groups (dated 25 June 2014 by Church Point Friends) identified one of the key issues for parking in Church Point, namely:

"There will never be enough parking for all the people who want to park at Church Point."

This statement reflects the sentiment that the issue of car parking at Church Point cannot be simply resolved through the provision of more and more off-street public car parking spaces. The management of demand is also a key component to resolving car parking issues.

It is noted that on-street and public car parking spaces are generally not provided for the exclusive utilisation of one particular land use. Furthermore, it is not the responsibility of Council (rate payers) to necessarily fund or provide parking for developments both residential and commercial uses within Church Point or other precincts in the local government area. However, it is further noted that the adopted Pittwater Council PoM for the Church Point precinct allows for consideration of the opportunity to provide up to 60 leased car spaces.

As such, GTA's approach in developing the recommended short and long term measures is to strike a balance examining options at managing existing facilities and at the same time provide new parking facilities to meet the reasonable local parking demand of Church Point.

1.3 References

In preparing this report, the following documents and data have been reviewed:

- o Church Point Plan of Management, November 2009
- o Northern Beaches Bus Rapid Transit (BRT) Pre-Feasibility Study (Summary Report), TfNSW, June 2012
- o Australian Bureau of Statistics Census Data
- o Church Point Friends' Submission "Parking Demand Management" dated 25 June 2014
- o Joint Letter (from West Pittwater Community Association, Church Points Friends Scotland Island Resident Association and Bayview-Church Point Residents Association Incorporated) "Parking Demand Management" dated 24 September 2014
- o West Pittwater Community Association, Church Points Friends Scotland Island Resident Association and Bayview-Church Point Residents Association Incorporated Joint Submission "Council Report on Reducing Parking Demand at Church Point" dated 15 October 2014
- o parking survey data from April 2013 and August 2014 conducted by Scotland Island residents
- o Guide to Traffic Management Part 11: Parking, Austroads, 2008
- o Regional Boating Plan Hawkesbury River, Pittwater and Brisbane Water Region Consultation Draft, TfNSW, August 2014, and
- o Moorings Review Issues Paper, TfNSW, March 2014.

2. Existing Conditions

2.1 Study Area

Church Point is located on Sydney's northern beaches approximately 4km north-west of Mona Vale town centre. The hub of Church Point is located at the junction of McCars Creek Road and Pittwater Road near the Church Point Post Office and Thomas Stephens Reserve. This is the key activity area within Church Point.

The study area and areas of interest are shown in Figure 2.1.

Figure 2.1: Study Area



Background Image Source: UBD 2009, DVD version 6.0.0

Scotland Island is located approximately 400m north-east of Church Point. Residents of Scotland Island generally park at the Church Point Reserve and commute to the mainland via the Commuter Wharf or the Church Point Ferry Wharf.

In addition, there are other habitable areas on the western foreshore of Pittwater namely Elvina Bay, Lovett Bay and Morning Bay which cannot be accessed by land based transport from the mainland. Like residents of Scotland Island, residents of the western foreshore local areas use Church Point as an "interchange".

Church Point can be accessed from Pittwater Road and also from McCarrs Creek Road. Pittwater Road and McCarrs Creek Road are both regional roads. Council manages Pittwater Road and McCarrs Creek Road with some funding assistance from Roads and Maritime Services (RMS).

Both Pittwater Road and McCarrs Creek Road within the study area have one traffic lane in each direction with intermittent kerbside parking. They are both sign posted with a speed limit of 50km/hr.

2.2 Public Transport

2.2.1 Bus Services

Sydney Buses operates a number of scheduled bus services serving Church Point. These are summarised in Table 2.1.

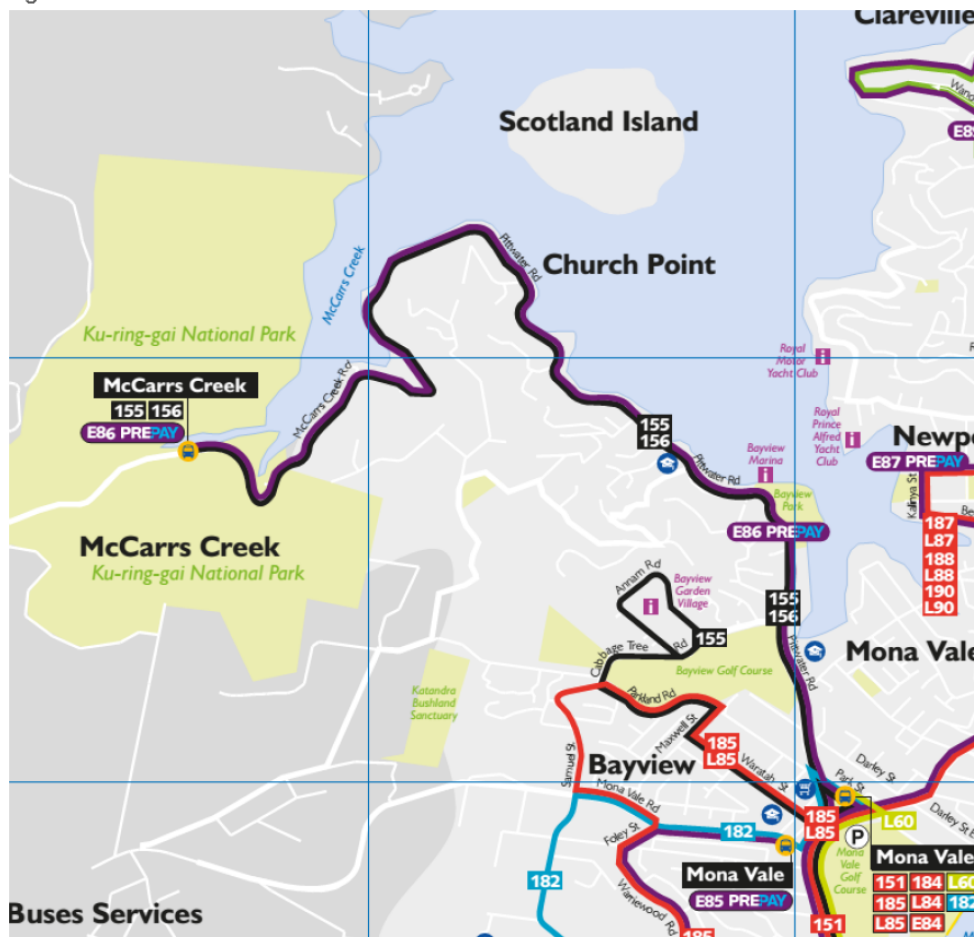
Table 2.1: Church Point Bus Services

Bus Routes	Route Description	Weekday Service Span	No. of Weekday Services	Saturday Service Span	No. of Saturday Services
155	Manly to Bayview Village	18:40 – 23:43	5	6:30 – 23:43	6
	Bayview Village to Manly	18:26 – 00:04	6	6:52 – 23:58	10
156	Manly to McCarrs Creek	8:10 – 18:06	13	10:13 – 19:57	11
	McCarrs Creek to Manly	8:36 – 17:35	10	9:37 – 19:06	9
E86 (Prepay)	Railway Square to McCarrs Creek/Church Point	17:46 – 19:13	4	N/A	N/A
	McCarrs Creek/Church Point to Railway Square	6:47 – 7:39	3	N/A	N/A
L85	Mona Vale to City (McCarrs Creek extension)	15:00	1	N/A	N/A
	City to Mona Vale (McCarrs Creek extension)	14:41	1	N/A	N/A
Total Daily			43		36

As can be seen in Table 2.1, Church Point is serviced by four bus routes with 43 services on a typical weekday and 36 services on a Saturday. Service frequencies are generally low throughout the day.

The local area bus network is shown in Figure 2.2. It is noted that Mona Vale is a significant interchange point.

Figure 2.2: Church Point Bus Services



Source: http://www.sydneymbuses.info/routes/14054_STA_region_web_map_north.pdf viewed 8/10/2014

2.2.2 Ferry Services

Scotland Island is serviced by the Church Point Ferry Service and Pink Water Taxis. The Church Point Ferry Service runs to a timetable whereas the taxi service is an on-demand service that generally operates on Sundays and Mondays between 6:00am and 10:00pm and Tuesday to Saturdays between 6:00am and midnight.

2.3 Demographics

Demographics for Church Point and the surrounding areas have been sourced from ABS data. However, only Church Point and Scotland Island have consistent area data available for the 2006 and 2011 Census.

It is difficult to compare 2006 and 2011 data for the western foreshore areas, including McCarrs Creek, Elvina Bay, Lovett Bay and Morning Bay. Previous data was available in finer detail at Collector District (CD) whereas the smallest area available for 2011 data is provided in Great Mackerel Beach Statistical Subdivision (SSD). This includes the entire Lambert Peninsula.

The available demographics information is presented in Table 2.2.

Table 2.2: Summary of 2006 and 2011 Study Area Demographics

Suburbs	Population		Occupied Dwellings		Car Ownership	
	2006	2011	2006	2011	2006	2011
Church Point	1,121	1,076	402	407	2.0	1.99
Scotland Island	631	695	247	263	1.18	1.29
Lambert Peninsula Areas						
Morning Bay, Towlers Bay, McCarrs Creek (1240103 CD)	90	N/A	34	N/A	N/A	N/A
Lovett Bay/ Elvina Bay (1240111 CD)	111	N/A	50	N/A	N/A	N/A
Great Mackerel Beach, Currawong Beach, Coasters Beach (1240101 CD)	70	N/A	45	N/A	N/A	N/A
Great Mackerel Beach (Entire Lambert Peninsula SSC)	271	277	129	131	N/A	1.1

Given the change in finiteness of the provided census analysis, it is difficult to assess the change in population and dwellings in the study area over the previous two census periods. It is not expected that there was a population or dwelling reduction on the Lambert Peninsula. The comparison of Scotland Island census survey periods indicates a gradual rise in population, dwellings and car ownership.

It is also noted that car ownership in Church Point is also high at 1.99 vehicles per dwelling. As a comparison, the average car ownership in the greater Sydney area was 1.43 vehicles per dwelling based on 2011 census data. This reflects the lack of public transport in the area.

2.4 Journey to Work

The Bureau of Transport Statistics publishes Journey to Work data based on ABS Census data. This data answers the question “How do workers commutes from the area?”, that is the modes of transport for commuters. The latest data available from the 2011 census data is presented in Table 2.3.

Table 2.3: 2011 Journey to Work Transport Modes

Transport Modes	Church Point (705) [†]	Scotland Island (382) [†]	Lambert Peninsula (130) [†]	Combined (1,217) [†]	Greater Sydney
Car Driver	77%	49%	50%	65%	67%
Car Passenger	5%	5%	3%	5%	5%
Public Transport	13%	25%	26%	19%	20%
Walk	2%	6%	3%	3%	4%
Other	3%	15%	18%	8%	4%
Total	100%	100%	100%	100%	100%

[†] numbers in parenthesis denote the number workers (i.e. those who commute) for each of the respective area

From Table 2.3, it can be seen that the combined area of Church Point, Scotland Island and Lambert Peninsula has similar modal splits to the Greater Sydney area. However, more Church Point residents appear to favour the use of their cars for travel to work.

It is noted that residents of Scotland Island and other offshore community have a higher usage of public transport than the Sydney average or the residents living of Church Point mainland. It is further noted that residents of Scotland Island and other offshore community also have a lower car ownership rate than residents living within Church Point (see Table 2.2).

2.5 Existing Parking Requirements

Church Point is essentially a residential area with a number of ancillary uses supporting the residential use e.g. café, post office. In addition, Church Point being a coastal area it also has some water based recreational uses.

These uses generate competing demand for parking – a scarce resource in Church Point.

Below is a discussion of these uses.

2.5.1 Residential Uses

From 2011 census data, Church Point has 464 dwellings (including 57 unoccupied dwellings). Similarly, Scotland Island has 344 dwellings (including 81 unoccupied dwellings). In relation to the western foreshore local areas, it is difficult to determine how many dwellings are in this area, but assuming that the dwellings in the western foreshore areas constitute some 75 per cent (based on 2006 census information) of the Lambert Peninsula, therefore the number of dwellings in the western foreshore areas would be some 250 dwellings (including 150 unoccupied dwellings).

Therefore, the total number of dwellings is 1,058 dwellings including unoccupied dwellings. These generate parking demand from both the residents and their visitors.

While Church Point residents can generally park on their own property, the offshore dwellings (a total of 594 dwellings) rely on parking located on mainland. These dwellings share parking with other visitors to the area i.e. public parking areas.

Council's development control plan (Pittwater 21 Development Control Plan 2014, DCP) stipulates the following minimum parking rates for low density residential developments:

- o small dwelling (1 bedroom) – one space
- o large dwelling (2 bedrooms or more) – two spaces.

In addition, for Scotland Island the required parking is a maximum of one space per dwelling (on site).

Assuming the western foreshore dwellings comprising 50 per cent small dwellings and 50 per cent large dwellings, therefore some 413 car parking spaces are required for the offshore residents (noting that the Church Point residents can generally park on their own property). These car parking spaces are required to be provided on the mainland (as it is difficult or impossible to access the offshore dwellings by roads).

In relation to visitor parking, there is no published guidance for low density residential developments. It is noted that Roads and Maritime Services, RMS suggested a visitor parking rate of one space per five dwellings for high density residential developments. On the basis that not all residential visitations would occur at the same time visitor parking rate of one space per 10 dwellings has been assumed. Therefore, some 77 visitor parking spaces would be required for offshore residential visitors (assuming that visitors to Church Point residents would generally park within the property of the resident they are visiting).

Based on current Council's DCP parking requirements, the Church Point residential dwellings would require some 490 car parking spaces (assuming Church Point onshore residents could continue to park on their properties).

Separately, based on current demand (current car ownership and dwelling occupancy rates for offshore residents) the required parking provision for offshore residents would be 447 parking spaces. This is slightly higher than the required parking provision based on current Council's DCP.

Therefore, the parking provision for offshore residents and for visitors to onshore and offshore residents would be some 525 parking spaces.

2.5.2 Holiday Homes

An analysis of the 2011 census data indicates there were a high proportion of unoccupied homes – some 288 unoccupied dwellings (57 dwellings in Church Point, 81 on Scotland Island plus 150 on the western foreshore area). These are assumed to be holiday homes which are generally not occupied for most time of the year. Some of these may be available for rental whilst some may be private and not available for rental.

To estimate parking demand for these holiday homes, it is assumed that these holiday homes when occupied have a parking demand similar to the general dwellings (see Table 2.2).

Additionally, it is assumed that parking demand from onshore holiday homes would be satisfied onsite.

Therefore, the parking demand for holiday homes would be some 380 parking spaces.

2.5.3 Pasadena

The Pasadena site is located at 1858 Pittwater Road, Church Point. The current approved development on the site includes a licensed restaurant with motel accommodation for 15 suites plus other ancillary use.

The current building on the site contains two levels. Currently, the building is unoccupied. From aerial imagery, it is estimated the floor area would be some 770m² per level. Assuming the licensed restaurant is located on the ground floor and the motel on the upper level, based on current Council's DCP parking requirements it is required to provide some 40 parking spaces.

2.5.4 Waterfront Café

The Waterfront Café site is located at 1860 Pittwater Road, Church Point. The site includes the general store and post office as well as a café.

Based on information available from Council's archive, the last consent (via a court order dated 7 November 2006) allows the site to have a total seating capacity of 100 seats. The consent did not specify the allowable floor area.

Council's DCP specify parking for restaurants and cafés based on the seating capacity at a rate of one space per 30m² of gross floor area. The DCP does not specify parking based on seating capacity.

However, based on information in the RMS guidelines a 100 seating capacity would be equivalent to approximately 210m². Therefore, the required parking (based on Council's DCP) would be seven spaces. This is considered to be low.

RMS guidelines suggest a parking rate of one space per three seats or 15 spaces per 100m² of gross floor area. The required parking for a 100 seat restaurant would be 33 parking spaces, or 32 spaces for a restaurant with 210m². Therefore, a more accurate estimate of parking requirement for the Waterfront Café would be some 33 car parking spaces.

Separately, the area of general store has been estimated to be approximately 200m². The general store would require five parking spaces based on Council DCP parking rate of one space per 30m² for retail premises.

It is assumed that the post office use would not require additional parking as customers of the post office would also visit the general store at the same time, or the (offshore) residents visiting the post office on the way home from work.

Therefore, the Waterfront Café site would require a total of 38 car parking spaces.

2.5.5 Marinas

There are four marinas operating in the area. A search of Council's archive for information relating to their approvals returned very limited information. Attempts were made to contact these businesses, but for commercial and privacy reasons they were reluctant to provide the information.

Information relating to the characteristics of these marinas was obtained through review of their website, aerial photography and TfNSW documentation. The publicly available information was generally consistent with the data available from Council's archive. As the publicly available information was more comprehensive, these data was used instead. The information is presented in Table 2.4.

Table 2.4: Local Marinas

Marina	Gibson Marina Bayview	Bayview Anchorage Marina	The Quays	Holmeport Marinas
Address	1710 Pittwater Rd, Bayview	1714 Pittwater Rd Bayview	1856 Pittwater Rd, Church Point	2A McCarrs Creek Rd, Church Point
Wet Berths	57	65	95	80
Swing Mooring	<70	13	69	160
Total Vessels	~110	78	164	240
On-site Parking Provision†	36	25	110	64
RMS Required Parking Provision§	48	42	71	80

† On-site car parking provision based on observations on-site.

§ Based on number of vessels.

Table 2.4 also includes an assessment of parking requirements based on Roads and Maritime, RMS (*Guide to Traffic Generating Developments*). Council's DCP does not stipulate parking rates for marinas. The RMS guidelines stipulate parking requirement for marinas as follows:

0.6 spaces per wet berth plus 0.2 spaces per dry storage berth plus 0.2 spaces per swing mooring plus 0.5 spaces per employee.

As the number of dry berths and employees was not available, it is not possible to estimate parking demand for these uses. In addition, it is noted that each marinas include additional uses on their respective sites which may generate additional parking demand.

It can be seen from Table 2.4 that all, but one local marinas provide on-site car parking less than typical rates set out by the RMS. There is a combined shortfall of some 14 parking spaces for the nearby marinas. However, as the marinas are located at different locations and is not possible to share parking the total shortfall is actually some 51 parking spaces.

2.5.6 Private Moorings

RMS issues private swing mooring licenses in NSW. The mooring license numbers are set numbers in agreement with the local councils.

RMS advises there is a total of some 438 licenses available in the Church Point area (Scotland Island, McCarrs Creek, Elvina Bay and Lovett Bay). RMS also advises there are some 247 additional available licenses within Bayview. Therefore, the total potential swing moorings in Church Point/Bayview are 685.

However, RMS also advises that private swing moorings located at Scotland Island and the western foreshore (some 207 private moorings) are only available to the local residents i.e. the applicant for one of these private moorings will require to show proof of residency. Private moorings located in McCarrs Creek and Bayview (some 478 private moorings) are available to the general public.

Strictly speaking, the private moorings located at Scotland Island and the western foreshore areas would not generate additional parking demand as they are only available for the residents which their parking requirements have already been accounted. Nevertheless, parking demand was estimated for all private mooring licenses available (i.e. some 685 moorings).

Based on RMS guidelines (parking rate of 0.2 spaces per swing mooring), the potential required parking for the private swing moorings would be 137 parking spaces.

2.5.7 Parking Requirement Summary

From the above analysis, the current parking demand at Church Point is summarised in Table 2.5.

Table 2.5: Church Point Parking Demand

Land Uses	Parking Requirement
Onshore Residents	Nil§
Offshore Residents	525†
Holiday Homes	380
Pasadena	40
Waterfront Café	38
Marinas Shortfall	51
Private Swing Mooring (including Bayview)	137
Total	1,171

§ - it is noted that parking demand generated by onshore residents would be met on-site as the owners and visitors would generally park on the individual property

† - includes parking demand from visitors visiting offshore residents

Based on existing land use, the required parking provision is some 1,171 car parking spaces.

2.6 Existing Car Parking Capacity

A parking inventory survey of the existing available public parking spaces within Church Point was conducted. The area surveyed includes all residential streets (including Pittwater Road and McCarrs Road) within 2km walking distance of Church Point activity hub at the general store/post office. It is considered that it is unlikely that people would walk in excess of 2km for a parking space. The areas included in the inventory surveys are shown in Figure 2.3.

Figure 2.3: Area of Parking Inventory Survey

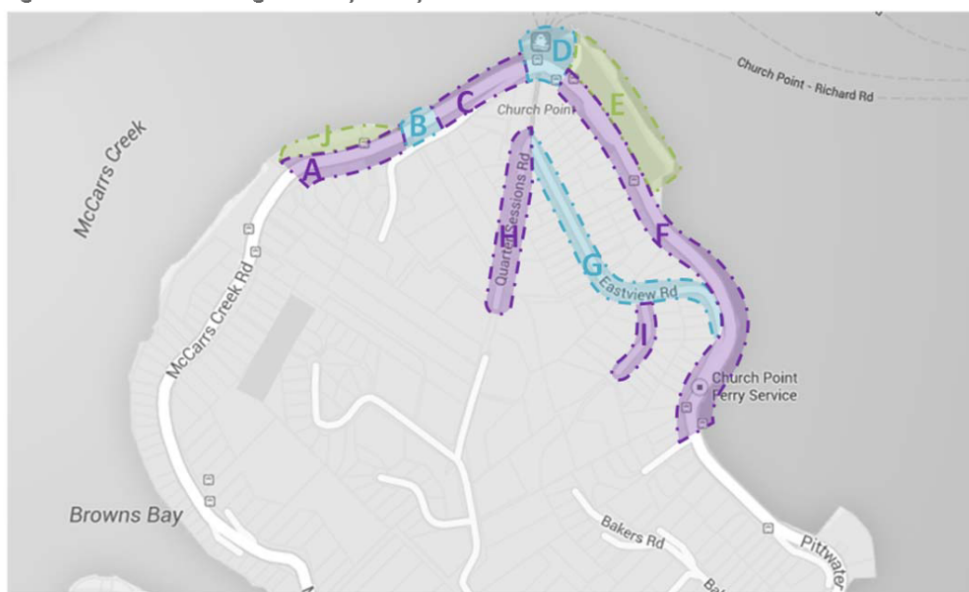


Table 2.6 presents a summary of the available public parking spaces within Church Point.

From the inventory survey, there are a total of 435 public car parking spaces within study area (depicted in Figure 2.3) comprising 405 formal spaces and 30 informal spaces. Formal spaces are those spaces there are line marked and/or on a hardstand area, while informal spaces are those spaces that are not on a hardstand area. It is noted there are approximately 200 on-street spaces.

It is noted that these are existing available parking spaces within the study area (as depicted in Figure 2.3). There are other existing spaces outside of the study area (an additional of at least 100 odd parking spaces). In addition, they do not include the additional spaces that would be available following the completion of the proposed car park structure on McCarrs Creek Road.

The largest car parking area is located at the Church Point Reserve. There are approximately 303 paid parking spaces including six spaces for people with disabilities. The Church Point Reserve Car Park also has parking spaces for motorcycles and bicycles.

A permit scheme is in operation for Church Point residents. There are nine spaces with 4 hour parking restriction for all users. These are located at the north end of the car park.

In selected locations, car parking is permitted within McCarrs Creek Road/Pittwater Road carriageway and is generally subject to restrictions.

Residents living on Scotland Island, Morning Bay, Lovett Bay and Elvina Bay that own a vehicle generally park at Church Point and commute by water vessel between Church Point and their dwellings.

Table 2.6: Available Public Car Parking Spaces

Area	Location	Type of Parking	Parking Restriction	Formal Spaces	Informal Spaces
A	Bus stop Outside Holmeport Marina - Cargo Wharf	Parallel	4P (6am - 5pm Church Point Permit Holders Excepted)	6	-
		90 Degree	No Restriction	15	-
		30 Degree	4P (6am - 5pm Church Point Permit Holders Excepted)	8	-
B	Cargo Wharf	90 Degree	4P (6am - 6pm Church Point Permit Holders Excepted)	7	-
		Motorcycle	P	8	-
C	Cargo Wharf - Waterfront Café		5Min	3	-
D	Outside Pasadena	Parallel	5min/School Bus Zone	3	-
		90 Degree	1/2P	5	-
			1P	7	-
E	Church Point Reserve Car Park	Parallel	P	272	-
			4P	9	-
		Disabled	P	6	-
		Motorcycle	No Restriction	16	-
F	Church Point Car Park Access – No. 2137B Pittwater Rd	Parallel	1P	4	-
G	Eastview Road	Parallel	No Parking Sat, Public Holidays	6	-
			No Restriction	16	21
I	Baroona Street	Parallel	No Restriction	12	-
			No Parking Thursday Only	2	-
H	Quarter Sessions Road	Parallel	No Restriction	-	9
J	Homeport Marinas Car Park	Private Car Park – Not Surveyed			
Sub-Total				405	30
Total (Formal + Informal)				435	

2.7 Parking Assessment Summary

From the above, the current parking demand from existing land uses is some 1,171 car parking spaces.

A parking inventory survey conducted by GTA found that at present, Church Point within the nominated study area (depicted in Figure 2.3) has some 435 car parking spaces. It is noted that there are other existing additional spaces located outside of the nominated study area.

2.8 Waterfront Café Travel Survey

To ascertain the level of parking demand generated by what is considered by the local residents to be one of the greatest parking demand generators in Church Point the Waterfront Café, travel surveys were conducted during its busy trading periods. The surveys were conducted during two

separate periods, namely Friday (17 October 2014) evening from 5:00pm to 8:00pm and Saturday (18 October 2014) midday from 11:00am to 2:00pm.

The surveys asked patrons of the café a series of questions relating to their travel behaviours:

- are you a local resident or visitor to the area?
- how did you get here?, and
- if you drove, where did they park?

The survey results are presented in Figure 2.4 to Figure 2.7.

Figure 2.4: Are you a local resident or visitor? (Friday)

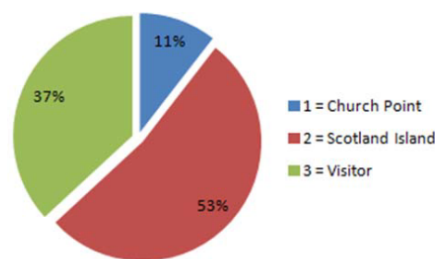
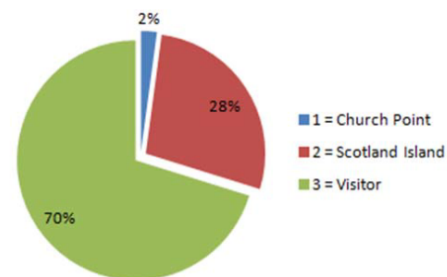


Figure 2.5: Are you a local resident or visitor? (Saturday)



During the Friday trading period, residents from Scotland Island constituted some 53 per cent of the restaurant patrons, while visitors from outside of Church Point constituted some 37 per cent. During the Saturday trading period, visitors outside of Church Point constituted some 70 per cent of the restaurant patrons.

Figure 2.6: How did you travel here? (Friday)

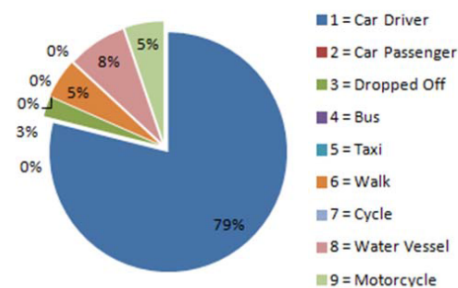
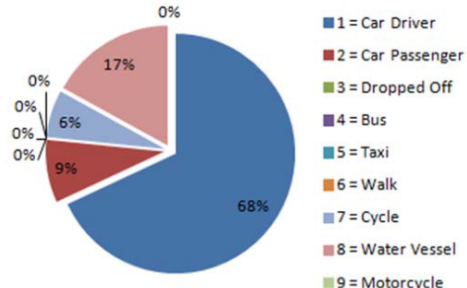


Figure 2.7: How did you travel here? (Saturday)



During both trading periods surveyed, the largest portion of patrons arrived by private car at some 79 per cent and 68 per cent during the Friday and Saturday survey periods respectively. The second largest portion of travel mode share was by water vessel with eight and 17 per cent of patrons during Friday and Saturday survey periods respectively.

The surveys also revealed that some 60 per cent of the café patrons parked within the Church Point Reserve Car Park, while some 30 per cent parked outside Pasadena within on-street parking spaces. The remaining 10 per cent parked on various residential streets. These figures relate to both Friday and Saturday surveyed periods.

Finally, from the surveys it can also be estimated that the café generated some 30 and 32 parking spaces during the Friday and Saturday surveyed periods. This is consistent with the estimate based on RMS's suggested parking rate for restaurants.

2.9 Parking Surveys Provided by Scotland Island Residents Association

Scotland Island residents conducted a survey of parking usage in Church Point. The survey was conducted at 4:00am on the morning of Wednesday 10 April 2013.

At the Church Point Reserve Car Park, the survey indicated there were a total of some 283 parked vehicles. Of these 283 parked vehicles, 264 vehicles had a Church Point parking permit. A repeat of the survey in the next morning confirmed these results.

The survey also revealed that there were an additional 45 vehicles with Church Point parking permit stick that parked in McCarrs Creek Road plus an additional 17 parked vehicles with Church Point parking permit parked outside the Pasadena. There were also three other vehicles with Church Point parking permit parked on residential streets.

This brings the total of parked vehicles with Church Point parking permit to 329.

This is slightly less than the number of estimated required parking for Church Point (offshore residents) of 450 parking spaces estimated in Section 2.5.1.

Following the April 2013 survey, subsequent surveys of the Church Point Reserve Car Park was conducted by Scotland Island residents on Monday 4 August and Wednesday 6 August 2014. The surveys were conducted at midday on both survey days.

The Monday survey counted a total of 195 parked vehicles, of which 159 vehicles displayed a Church Point parking permit. The Wednesday survey counted a total of 168 parked vehicles with 131 vehicles displaying a Church Point parking permit.

The April 2013 and August 2014 surveys both revealed that the Church Point Reserve Car Park contained a vast number of parked vehicles with Church Point parking permit.

From the surveys, it can be concluded that throughout the day the Church Point Reserve Car Park has a vast number of parked vehicles displaying a Church Point parking permit suggesting that the car park is used mostly by Church Point residents. These residents are mostly likely to be offshore residents.

3. Northern Beaches Bus Rapid Transit (BRT) Proposal

It is widely acknowledged that the Northern Beaches suffers from significant transport issues with key arterial roads accommodating high volumes of traffic during peak periods. There are no rail options to Sydney CBD which benefits other areas of metropolitan Sydney in terms of relative speed and passenger volume capacity.

The northern beaches public transport network relies heavily on the bus network. A high amount of services are available in more populated areas. The operation of the bus network is constrained by the other competing demands on the road network.

There have been some improvements to the bus network including locations with peak period bus lanes and "jump start" bus lanes at signalised intersections. Still, there is high variability in travel times during peak periods.

The NSW government understand the transport issues facing the northern beaches and commissioned a pre-feasibility report for the Northern Beaches BRT in June 2012. It is assumed that this transport mode has been selected on the basis of cost and time in which it could be implemented.

The pre-feasibility report identifies and assesses a number of BRT routes and configuration options. The key north-south route option is between Mona Vale and Wynyard. Overall, while time savings are expected for bus commuters, the cost benefit ratio for all options is less than one, largely on the basis of increased congestion for private vehicle users.

Despite the negative cost/benefit ratio, the NSW government is pursuing BRT for the northern beaches based on the need to provide additional capacity, reliability and frequency of public transport to the northern beaches.

In June 2014, the NSW announced that \$125 million would be spent on delivering a kerbside BRT and \$100 million to be invested in new transport interchanges, with additional car parking to be provided for bus commuters. It is intended that the BRT will provide a turn up and go service, with frequencies regular enough that commuters will not need to review a timetable.

The BRT has the potential to increase public transport trips to Church Point for residents and visitors, but only with a suitable, convenient and frequent connection to Mona Vale.