

STATEMENT OF ENVIRONMENTAL EFFECTS

IN SUPPORT OF DEVELOPMENT APPLICATION FOR
PROPOSED NEW DWELLING, HOME OFFICE & ON-SITE
WASTEWATER DISPOSAL SYSTEM

AT

17 Thompson Street, SCOTLAND ISLAND

LOT 242 IN DEPOSITED PLAN 12749



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1. INTRODUCTION – EXISTING SITE

This document comprises the Statement of Environmental Effects to accompany a Development Application for the proposed dwelling, home office and on-site wastewater disposal system on the vacant block at 17 Thompson Street, Scotland Island.

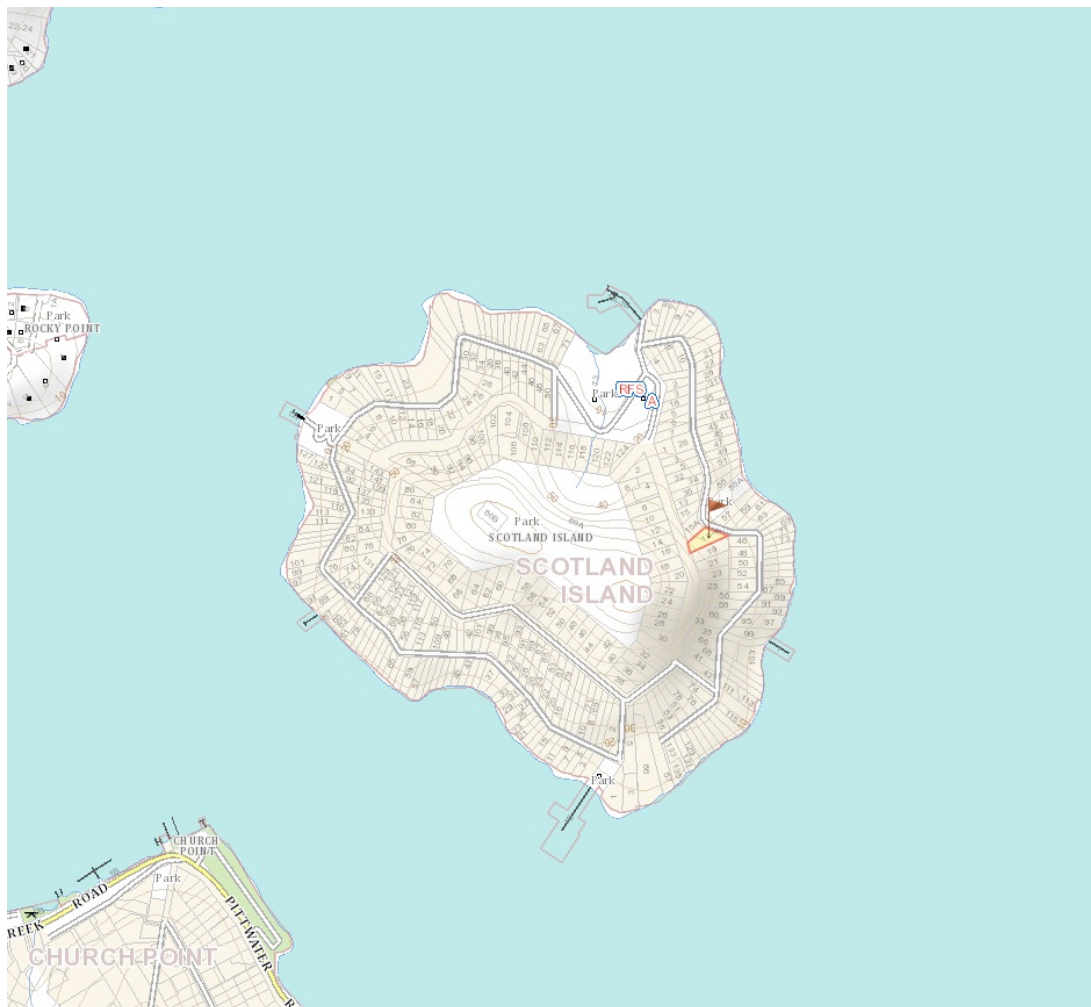


Figure 1 – Site location plan
Source: sixmaps

2. THE SITE

2.1 Location

The site is located at 17 Thompson St, Scotland Island.

2.2 Legal Description of Site

The site comprises one parcel of land as Lot 242 in Deposited Plan 12749.

2.3 Description of Site

The site sits on the Eastern side of Scotland Island, bounded by Florence Terrace to the East, Thompson Street to the West and Pathilda reserve to the North. To the South stands the residence on Lot 241 D.P. 12749, addressed 19 Thompson Street, with a set back from the common boundary of approximately 2600mm from the existing main dwelling.

The site is approximately 1378sqm in area with a North-Easterly aspect and an overall slope around 40%. It is an irregular shape with a street frontage of 41.6m on Florence Terrace, 18.3m on Thompson Street, while the depth of the site ranges from 40m at Pathilda Reserve up to 70.9m with the boundary at 19 Thompson Street.

The site is a vacant block, however the central portion was previously cut for construction and some undeveloped strip brick footings put in place. Mostly these are loose brick or in poor condition and will be removed and recycled/disposed of correctly prior to construction.

The adjacent house at 19 Thompson st is constructed from brick and lite weight timber framed construction. It consists of 2 floors with a prominent timber deck off the main upper living floor. The surrounding dwellings mostly consist of timber framed 2 story dwellings with prominent decks and varying front/rear setbacks from Florence Terrace to the East and Thompson Road to the West.

The vegetation on site consists of some native ground covers and shrubs as well as a number of small to large trees. There is also considerable weed invasion that spreads across the site.

There is currently an existing bush track entrance from Thompson Street, as well as another bush track entrance from Florence Terrace. Both of these tracks are to be retained and utilized. There is currently no power service connected to the site and Scotland Island does not have any sewer or water mains.

Please refer to detailed survey, arborist impact statement and biodiversity impact assessment accompanying this application for details.



Figure 2 – Looking NE across site from Thompson Street



Figure 3 – Looking SE towards 19 Thompson Street from top of bush track entrance on Thompson Street



Figure 4 – Looking North across site towards 15 Thompson Street beyond Pathilda Reserve



Figure 5 – Looking West up site from Florence Terrace

3. OUTLINE OF THE DEVELOPMENT PROPOSAL

3.1 Proposed Development

The Owners of the land seek permission for the following: -

2. Construction of a one/two storey dwelling house with a footprint of 155sqm including decks.
3. Construction of an effluent management system including an irrigation dispersion area of 172sqm.
4. New rainwater tanks.
5. Removal of two trees for development, and a further 7 trees recommended for removal due to poor health or dead. Please refer to arborist and BDAR ecology report for details of trees, impact on the ecology and offsetting recommendations.
6. Power service connection to the proposed dwelling.
7. Landscaping – generally to consist of weed management and native bush regeneration of the below benchmark PWSGF ECC. To be in accordance with recommended bushfire inner protection area (APZ).
8. **AS A SECOND STAGE TO DEVELOPMENT** – Construction of a one storey ancillary studio/home office with a footprint of 43sqm including deck (33sqm GFA)

3.2 Supporting Documents to this application

This application seeks development approval for the above works and is supported by the following documents:

9. Master Plans (including shadows) prepared by Design by Waves:
 - 2001-01-DA-Cover Page
 - 2001-02-DA-Site Analysis Plan (roof plan)
 - 2001-03-DA-Construction Management Plan
 - 2001-10-DA-Upper Level Plan
 - 2001-11-DA-Lower Level Plan
 - 2001-12-DA-Floor Plans
 - 2001-15-DA-Stormwater Concept Plan
 - 2001-16-DA-Landscape Plan
 - 2001-17-DA-Shadow Diagram 0900
 - 2001-18-DA-Shadow Diagram 1200
 - 2001-19-DA-Shadow Diagram 1500
 - 2001-20-DA-North Elevation
 - 2001-21-DA-East Elevation
 - 2001-22-DA-South Elevation
 - 2001-23-DA-West Elevation
 - 2001-24-DA-Long Section
 - 2001-25-DA-Cross Section
 - 2001-26-DA-Office Elevations/Section
 - 2001-30-DA-Schedule of Finishes
10. Stormwater Concept Plan prepared by Design by Waves
11. Landscape Plan prepared by Design by Waves
12. Survey drawing prepared by Waterview Surveying Services
13. Geotechnical Assessment prepared by Martens Consulting Engineers
14. Onsite Wastewater Assessment prepared by Martens Consulting Engineers
15. Arborist Impact Statement prepared by Arborsaw
16. Bushfire Assessment prepared by Building Code & Bushfire Hazard Solutions Pty Ltd
17. Biodiversity Development Assessment prepared by Ecological Consultants Australia
18. BASIX certificate no. 1276058S

4. RESPONSE TO MATTERS TO BE ADDRESSED

4.1 Suitability of the land for development:

The site is zoned E3 Environmental Management and the proposed development is permitted and attempts to achieve all objectives of the zone. The proposed development does not alter the suitability of the land for its existing use.

4.2 Compliance with development controls

4.2.1 Pittwater Local Environment Plan 2014

Reference:	Proposed	Complies
Land Use Table	The proposed development is permissible with development consent in E3 Environmental Management Zone	Yes
4.3 – Height of Buildings	The proposal achieves the 8.5m for the majority of the main dwelling. - A minor portion of the NE eave projects above this limit but remains under 10m. - The slope of the site is approximately 40% overall with parts sloping up to 55% (>30%) - Cut and fill is kept to a minimum by stepping the building down the site.	Yes
4.4 – Floor Space Ratio	Not Applicable	N/A
7.2 - Earthworks	There currently exists an excavation cut, located centrally on the site, from a previous owner. Geotechnical advice proposes for it to be retained safely. The development proposal seeks to soften its impact by stepping the retainment in two tiers to reduce the appearance. This will then be softened with native vegetation (see landscape plan for details). No bulk earthworks are proposed.	Yes
7.6 - Biodiversity	The proposal attempts to:- - Protect native fauna and flora - Protect the ecological processes necessary for their continued existence - Encourage the conservation and recovery of native fauna and flora and their habitat. Please refer to the Biodiversity Development Assessment report and Section 4.5 of this report for details.	Yes
7.7 – Geotechnical Hazards	The land is mapped Geotechnical Hazard H1. A Geotechnical assessment was undertaken and showed that:- - The development matched the underlying geotechnical conditions - The land was suitable for development - There was no danger to life or property - Please refer to Geotechnical report and <u>Section 4.7</u> of this report for details.	Yes
7.10 – Essential Services	The development has been designed to provide adequate essential services:- - Water through rain collection and adequate water storage - Electricity to be connected - Sewage through onsite management - On-site stormwater conservation - Vehicular access – The proposal does not include on-site vehicle parking. Restricted use of private vehicles on the Island prevents the need for this. Owners park vehicles at church point and arrive via ferry or private vessel.	Yes

4.2.2 Pittwater 21 Development Control Plan

Reference:	Proposed	Complies
A4.8 - Lower Western Foreshores & Scotland Island	The form, scale and finishes of the proposal are sympathetic of the existing and future desired character of Scotland Island. The undeveloped areas of the site will remain vegetated with native species of the PWSGF EEC	Yes
A3.1 – Landslip Hazard	The land is mapped Geotechnical Hazard H1. A Geotechnical assessment was undertaken and shows that the risk level is acceptable. Please refer to Geotechnical report and <u>Section 4.7</u> of this report for details.	Yes
A3.2 – Bushfire Hazard	The design and location of the dwelling on the site has been carefully thought out to minimize the potential risk from bushfire. Please refer to the bushfire risk assessment report and certification as well as <u>Section 4.6</u> of this report for details.	Yes
B4.7 – Pittwater Spotted Gum Forest - EEC	The design and location of the dwelling on site, including ancillary building and on site wastewater treatment has been carefully thought out with every attempt to minimize impacts on the PWSGF EEC. Please refer to the Biodiversity Development Assessment report and <u>Section 4.5</u> of this report for details.	Yes
B5.15 – Stormwater	All roof water will be collected into rainwater tanks and stored on site. Please refer to <u>Section 4.4</u> for further details.	Yes
B8 – Site Works Management	Please refer to <u>Section 4.12</u> for details.	Yes
C1.3 – View Sharing	The proposal will maintain reasonable view sharing from surrounding neighbours. The proposed main dwelling has been carefully positioned down slope to allow for the highest point (ridgeline) to be situated well below the FFL of the living floor of number 19 Thompson st. Existing views to Pittwater, even those overlooking the subject site, will not be impeded by the new development. No other neighbours views will be impeded due to the elevated location of those behind.	Yes
C1.4 – Solar Access	The proposed development has been designed to achieve a minimum of 3 hours of sunlight between 9am and 3pm on 21 of June. The proposal does not affect sunlight access to the neighboring properties. Please refer to shadow diagrams.	Yes
C1.5 – Visual Privacy	The proposed development has been carefully designed to optimize visual privacy. Number 19 Thompson street will not directly overlook any of the primary private open spaces as a result of the orientation of the design. Pathilda reserve acts as natural screening from the new development and neighbouring dwellings to the North. Existing trees and canopies at both street frontages, provide screening from dwellings to the West and East.	Yes
C1.6 – Acoustic Privacy	The proposed development is designed to achieve a reasonable level of acoustic privacy.	Yes
C1.7 – Private Open Space	The proposed development achieves an abundant amount of private open space, well above the prescribed amount.	Yes
C1.23 - Eaves	The proposed development incorporates eaves on all elevations over the minimum 450mm requirement.	Yes
D8.1 – Character as viewed from a public space	The orientation of the development East/West on the site reduces the overall width and bulk visible from both street frontages. This also opens up the bush land corridor between the neighboring reserve and the undeveloped landscaped parts of the site. Located centrally on the site helps provide separation from both street frontages and allows the existing native landscape to naturally screen the development. Large eaves, deep open verandahs and articulated built form all help to reduce the overall bulk and scale of the development.	Yes

D8.2 – Scenic Protection	See above. In addition, no part of the development is visible from the waterway due to extensive tree canopy and material finishes.	Yes
D8.3 – Building Colour + Materials	External colours comply. See Schedule of finishes.	Yes
D8.5 – Front Building Line	The proposed development complies with the 6.5m set back from both street frontages. There is no consistent established building line amongst neighboring buildings. The main dwelling is centrally located to maximize setbacks from both street frontages as well as maintaining a substantial amount of existing trees at both frontages.	Yes
D8.6 – Side + Rear Building Line	A minimum setback of 2.5m on one side and 1m on the other side is achieved. No exotic plants are proposed for planting in any setbacks.	Yes
D8.8 – Building Envelope	The proposed development mostly complies with the 45° envelope, however a minor portion of the upper floor SE eave breaks the plane. See below in Section 4.2.3 for minor variation.	Mostly – See Section 4.2.3
D8.9 – Landscaped Area	The site coverage of the Main Dwelling (including decks) is 155sqm. The site coverage of the studio (including deck) is 43sqm. A total combined site coverage of 198sqm (14%) allows for 86% of the site landscaped - complies with the allowed 230sqm.	Yes
D8.10 - Fences	No fences are proposed	Yes
D8.11 – Construction, Retaining walls, terracing + undercroft areas	Post and beam construction on pier footings will be used. Open undercroft spaces remain under 3.5m high and adequately screened by landscaping. New cut/fill is kept to a minimum, with no bulk earthworks proposed. There currently exists an excavation cut, located centrally on the site, from a previous owner. Geotechnical advice proposes for it to be retained safely. The development proposal seeks to soften its impact by stepping the retaining wall to reduce the appearance. This will then be softened with native vegetation (see landscape plan for details).	Yes
D8.13 – Stormwater Overflow	All roof water will be collected and stored on site in storm water tanks. Any overflow will be discharged via a dispersion system directed onto Florence Terrace. The design prevents any infiltration to onsite wastewater treatment systems, water away from footings and from behind retaining walls.	Yes
D8.15 – Site disturbance	The overall site disturbance due to the construction of the main dwelling, ancillary studio and water tanks equates to 16% of the total site area – complies with the allowed 25%. A construction management plan is also provided.	Yes
D8.16 – Scenic Protection Category One Area	The development proposal was carefully sited in an attempt to retain as many existing significant vegetation as possible. Weed management will be ongoing to maintain and regenerate the surrounding native vegetation around the proposed new dwelling. Materials and finishes are carefully selected to coincide with the desired character of Scotland Island and blend in with its natural surroundings.	Yes

4.2.3 Variations from Controls

D8.8 Building Envelope: The proposed development predominately complies with the 45° envelope, however a very minor portion of the upper floor SE corner and eave breaks the plane due to a number of reasons:-

- Mostly due to the considerable slope of the site, in particular at the front portion of the proposed main dwelling. The overall slope grade of the site is around 40% with grades up to 55% at the area of non-compliance.
- Site constraints, in particular bushfire and existing trees, provided a limited area to situate the main dwelling. The neighbouring reserve poses the biggest threat from bushfire, which in turn pushed the development to the southern boundary to provide the greatest buffer. In an attempt to retain as many trees and vegetation as

possible, this again limited the possible area to develop.

- Raising the development on stilts in an attempt to minimize the impact on the environment and reduce as much disturbance on the ground as possible, as well as coincide with the desired character of the island.

In an attempt to address this non-compliance, the building at this point is articulated further away from the boundary, and then also stepped down to just one floor to reduce bulk. Most of the non-compliance is from the eave, which is a requirement of C1.23 of the DCP. However the proposed development still achieves all outcomes of this control. Given these limitations, it is considered the proposal should qualify for a variation to this control.

4.3 Ecology

An ecologist has assessed the site and a Biodiversity Development Assessment report was commissioned. The design and location of the dwelling on site, including ancillary building and on site wastewater treatment has been carefully thought out with every attempt to minimize impacts on the PWSGF EEC. The site surrounding the new dwelling will generally be left in its natural state with recommended bush regeneration practices used, in particular the removal of any exotic weeds.

An cost of \$4059.62 is to be made into the Biodiversity Conservation Fund to offset both ecosystem and species credits generated by this development.

Further recommendations include nest boxes, native species landscaping, delineation of works zones, weed removal, tree protection and fauna refuge zones in an attempt to mitigate any impacts of the proposal.

Future bush regeneration to the land will improve the benchmark for the current state of the vegetation on site.

4.4 Bushfire

The site is located within bush fire prone land and as such a Bushfire assessment report and certificate for the proposed development was commissioned. It concluded that the current proposal provided a satisfactory level of bushfire protection and a number of recommendations were given (see report for full details):-

- *That all grounds not built upon within the subject property be maintained as an Inner Protection Area as detailed in the NSW Rural Fire Service's document 'Standards for Asset Protection Zones' and Appendix 4 of Planning for Bush Fire Protection 2019.*
- *That all roofing and construction facing north, east and west on the proposed dwelling shall comply with Australian Standard AS3959 - 2018 "Construction of buildings in bush fire-prone areas" sections 3 & 7 (BAL 29) & section 7.5 of Planning for Bush Fire Protection 2019.*
- *That all construction facing south on the proposed dwelling shall comply with Australian Standard AS3959 - 2018 "Construction of buildings in bush fire-prone areas" sections 3 & 6 (BAL 19) & section 7.5 of Planning for Bush Fire Protection 2019.*
- *That all roofing and construction facing northeast and northwest on the proposed home office shall comply with Australian Standard AS3959 - 2018 "Construction of buildings in bush fire-prone areas" sections 3 & 8 (BAL 40) & section 7.5 of Planning for Bush Fire Protection 2019.*
- *That all construction facing southeast and southwest on the proposed home office shall comply with Australian Standard AS3959 - 2018 "Construction of buildings in bush fire-prone areas" sections 3 & 7 (BAL 29) & section 7.5 of Planning for Bush Fire Protection 2019.*
- *That any new landscaping is to comply with Section 3.7 'Landscaping' under Planning for Bush Fire Protection 2019.*
- *That any new gas services are to comply with Table 7.4a of Planning for Bush Fire Protection 2019*
- *That a 10,000 litre static water supply be provided within the subject property in proximity to the proposed dwelling*
- *That the occupants of the subject dwelling complete a Bush Fire Survival Plan.*

4.5 Geotechnical

The site is zoned as Geotechnical Hazard H1 and as such a preliminary geotechnical assessment was commissioned. The risk assessment constituted an acceptable risk to life and low risk to property providing good hillside engineering practices and the recommendations provided are adhered too (see report for full details):-

Stockpiling of excavation spoil and the vegetation removal should be limited.

The previous excavation on site should be supported by new retaining walls.

All new pile footings should be transmitted to rock. (see further details)

Drainage systems designed to divert overland flows away from excavations, foundations and from behind retaining walls.

No bulk excavations are proposed and cut and fill will be minimized. The new retaining walls will be tiered to reduce any apparent bulk.

4.6 Wastewater Management

As no current sewer system is available on site, a new onsite wastewater treatment system is proposed. An onsite wastewater assessment was commissioned and provided recommendations for a system adequate and suitable for the site and proposed development. An individual on-site wastewater treatment system will be installed. The disposal of effluent will be via an irrigation system to be located below the property and have a minimum area of 172sqm. See report for further details and recommendations.

4.7 Waste Management

4.7.1 Demolition and Construction Waste Management

A detailed Demolition and Construction Waste Management Plan, including estimated volumes, will be required from the Contractor/s as part of any Tender process. General requirements of the proposed Tender requirements are outlined below:-

Sedimentation control measures as outlined in the Construction Management Plan are to be erected prior to the commencement any works.

All construction waste materials resulting from building material off-cuts and surplus are to be separated according to type, placed in skips/ bins and periodically removed from site, either returned to the original supplier for reuse, recycle or waste according to sustainable and good building practice. All construction waste is to be removed from site promptly, and not be allowed to accumulate.

On-site storage of construction materials is to be separated from those areas where **vegetation** is to be protected. Further details will be provided by the builder at the Construction Certificate stage.

All waste and building materials are to be stored entirely within the site in area/s identified and documented by the builder with NO infringement upon public areas.

Methods taken to ensure public safety:

The site should be made safe from public access by maintaining appropriate building site fencing and signage.

4.7.2 Operation of premises

Provision for recycling bins and weekly collection from Thompson street. Garbage waste disposal will be taken to the nearest wharf for collection.

The proposed kitchen is generous and contains ample waste storage capacity for all streams of waste, the garden will contain a dedicated area for the composting of organic waste.

4.8 Erosion and sediment control

No site works (including demolition & construction) will take place until all erosion and sediment controls have been installed. Erosion and sediment controls will be checked during the works, at least weekly and immediately prior to and after a storm event. Erosion and sediment control barriers will be maintained until the works are complete.

Stormwater services shall be connected as soon as possible. Until such time as the stormwater connections are made overland stormwater should be diverted via sediment control barriers on the downward slope of the land. Vehicular movement and deliveries will be limited to the existing track off Thompson St. Wash down areas, and stockpiles of sand and soil will be within sediment controlled areas, confined to areas of the site with limited vehicular and pedestrian movement and covered in the event of rain or wind. All waste material shall be stored in covered bins for regular removal from site by a licensed contractor.

4.9 Energy efficiency

BASIX analysis and certificate accompanies the application and indicates with the documented commitments that the proposal will comply.

5. CONCLUSION

The proposed development has been reviewed in the context of current planning instruments. The impact on the character and amenity of the neighbourhood and environment is considered minimal and positive.

The proposed development does not appear to produce any adverse impacts on adjoining properties, minimizing any privacy, solar or view sharing issues. The neighbours at 19 Thompson street have been informed of the proposal, with a sit down discussion of the proposal in detail.

The siting of the buildings have been carefully thought out to minimize the removal of vegetation. Trees removed due to development have been offset and future bush regeneration for the land will improve the benchmark for the current state of the vegetation on site.

The proposal responds to the desired local character of Scotland Island through the integration of building within the natural environment. This is achieved through the utilization of colours and finishes, minimal site coverage, scale and the retention of trees and vegetation.

It is recommended that the proposed application is worthy of approval.