

Sustainability Assessment



Gap Bluff

Alterations and additions to existing buildings

Prepared for Office of Environment & Heritage

July 2015 ■ 14270

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1.0 Introduction

The purpose of this part of the assessment process is to consider the sustainability issues associated with proposals involving built facilities and structures, including modifications to existing places. Information provided will inform decision-making on whether to grant a lease or licence under section 151 of the National Parks and Wildlife Act 1974 (NPW Act), including whether the requirements of s.151B(1) and the sustainability assessment criteria adopted by the Director General of the Office of Environment & Heritage (OEH) under s.151B(3) have been met.

The approach below is consistent with the intent of the NSW Government Sustainability Policy and OEH's Sustainability Action Plan. These commit the Government and OEH to leading by example in sustainable water and energy use, reducing greenhouse gas emissions and waste, and increasing sustainable procurement. It also builds on the key and supporting design principles from the OEH Park Facilities Manual.

This part of the assessment process also demonstrates how the project will contribute to the achievement of park management objectives, including those related to conservation and public use and enjoyment. This recognises the desire for projects that go beyond just the provision of tourism and visitor facilities, and looks to establish active partnerships that provide both conservation and public enjoyment returns.

2.0 Project description

2.1 Location

The site is located within the suburb of Watsons Bay, within the Sydney Harbour National Park.

The location of the site, in relation to the Sydney CBD, is shown in **Figure 1** below. The locations of the six buildings relevant to this assessment are shown in **Figures 2 and 3**.

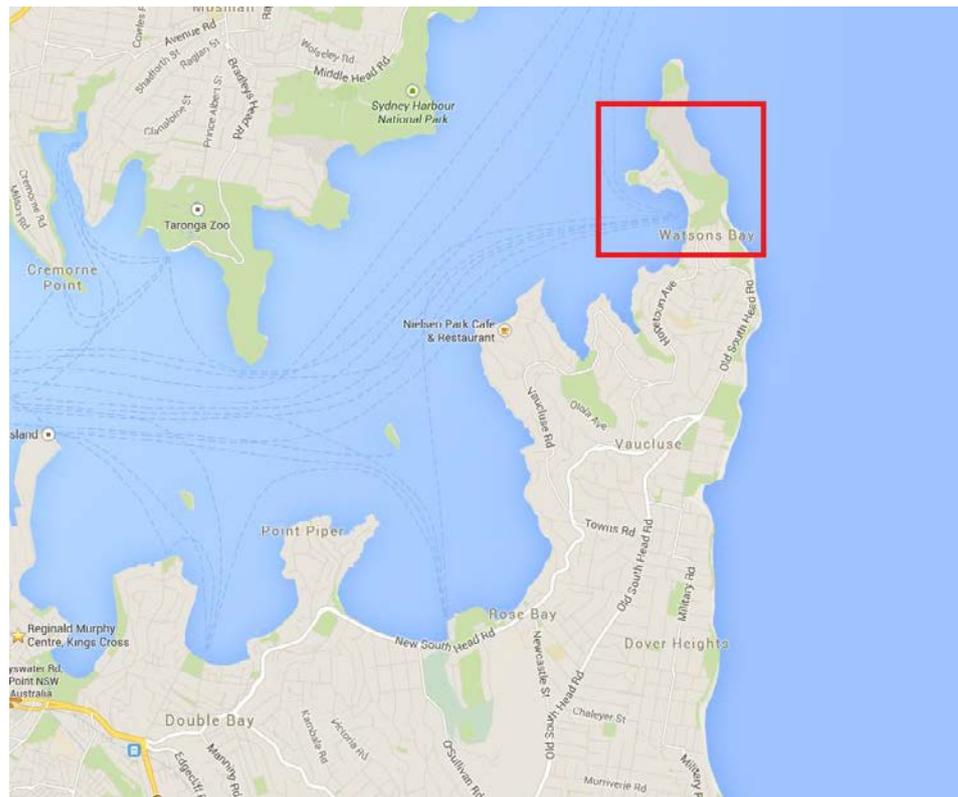


Figure 1 – Site context (general location of site highlighted in red)
Source: Google Maps



Figure 2 – Locations of buildings within the South Head, Camp Cove and Green Point Precinct
Source: Johnson Pilton Walker



Figure 3 – Locations of buildings within the Gap Bluff Precinct
Source: Johnson Pilton Walker

Refer to the accompanying Review of Environmental Factors for detailed information on the existing environment.

2.2 Proposed activity

The proposed activity is briefly summarised as follows.

Gap Bluff Precinct

- **Officers Mess**
 - although this building is currently vacant, its most recent use was as a function/reception centre. this use is proposed to be continued;
 - refurbishment, internal alterations, replacement of roof and external landscaping; and
 - including reception areas, kitchen, office and store, chapel, bridal rooms and amenities and a lift.

- Capacity for 115 for banquet-type functions, or 140 for cocktail functions.

■ **Armoury**

- Although this building is currently vacant, its most recent use was as a function/reception centre. This use is proposed to be continued;
- Refurbishment, internal alterations, addition of a second storey and side wing, and external landscaping;
- Including reception areas, bar, external lounge and terrace, kitchen, storage, amenities and a lift; and
- Capacity for 140 persons for banquet-type functions, or 160 for cocktail functions on the ground floor and 110 persons for banquet-type functions, or 120 for cocktail functions on the first floor.

■ **Gap Cottage**

- Although this building is currently vacant, its most recent use was as staff accommodation. This use is proposed to be changed to short-term holiday accommodation; and
- Refurbishment, minor alterations and reconfiguration, and external landscaping

South Head, Camp Cove and Green Point Precinct

■ **Constables Cottage**

- Although this building is currently vacant, its most recent use was as short-term holiday accommodation. This use is proposed to be changed to a café/restaurant use;
- Refurbishment, internal alterations, addition of an external dining area and rear extension, and external landscaping; and
- Including dining areas, reception and bar, kitchen and amenities.
- Capacity for 72 diners, including 37 internal and 35 external seats.

■ **33 Cliff Street**

- Although this building is currently vacant, its most recent use was as staff accommodation. This use is proposed to be changed to short-term holiday accommodation; and
- Refurbishment, minor alterations and reconfiguration, including excavation for new garage, and external landscaping.

■ **Green Point Cottage**

- Although this building is currently vacant, its most recent use was as short-term accommodation. This use is proposed to be continued; and
- Refurbishment, minor alterations and reconfiguration, and external landscaping

Refer to the accompanying Review of Environmental Factors for a more detailed explanation of the proposed activity.

3.0 Built structures and facilities assessment

3.1 Scale and mass

3.1.1 Height and siting

Guiding principle

Manage building height and locations to avoid prominence.

Considerations or benchmarks

New facilities or alterations to existing structures should generally aim to be limited to a single storey unless there is a detailed justification based on consideration of the existing park setting, any identified future desired character for the park, site constraints and design opportunities.

Avoid:

- locating facilities on ridgelines or hill-tops and in drainage flow-paths;
- significant overshadowing of adjoining publicly accessible areas or vegetation; and
- reducing existing public access to natural features such as foreshores, beaches, waterways and headlands, recreational facilities and places of social or cultural significance.

Assessment

The proposed activity involves alterations and additions to existing buildings – no new buildings are proposed. As such, the buildings are sited as they currently exist within the park setting. Their location is not proposed to be changed. Further, public access to both precincts is proposed to be maintained, and access to the existing buildings will be improved as a result of the proposal, given the buildings are currently have limited accessibility to the public.

Similarly, with the exception of the Armoury, the height of the buildings is not proposed to be changed. Gap Bluff Cottage, 33 Cliff Street, Constables Cottage and Green Point Cottage will all remain as single storey buildings. The Officers Mess will remain a two storey building, as currently exists; this is not proposed to be changed due to the heritage significance of the building.

An additional storey is proposed to be added to the Armoury. This additional storey has been designed to be as recessive as possible, by incorporating:

- a low-profile skillion roof, in order to ensure that the building sits below the ridgeline above;
- the use of zinc as a roof material, to allow this element to weather and further blend into the colours of the headland when viewed from the harbour; and
- a recessing of the second floor addition, through the use of a setback, lightweight materials, and extensive use of glass to reduce the visual impact of the addition.

A photomontage showing the massing of the proposed Armoury is shown at **Figure 4** below.



Figure 4 – Proposed Armory massing
Source: Johnson Pilton Walker

Before and after photomontages of the Armory, as seen from the harbour, are shown below at **Figure 5**.



Figure 5 – Before (above) and after (below) photomontages of proposed armory (building location highlighted in red)
Source: Johnson Pilton Walker

As shown, vegetation still remains visible above the proposed building when viewed from a close distance. When viewed from afar, the addition is well below the overall ridgeline and would have a negligible visual impact.

A photomontage of the Armoury at night is provided at **Figure 6**. Whilst the proposal would be visible at night time from the Harbour, most views would be very distant, and the amount of light emitted will not be stronger or more expansive than any of the other light sources visible in the area.

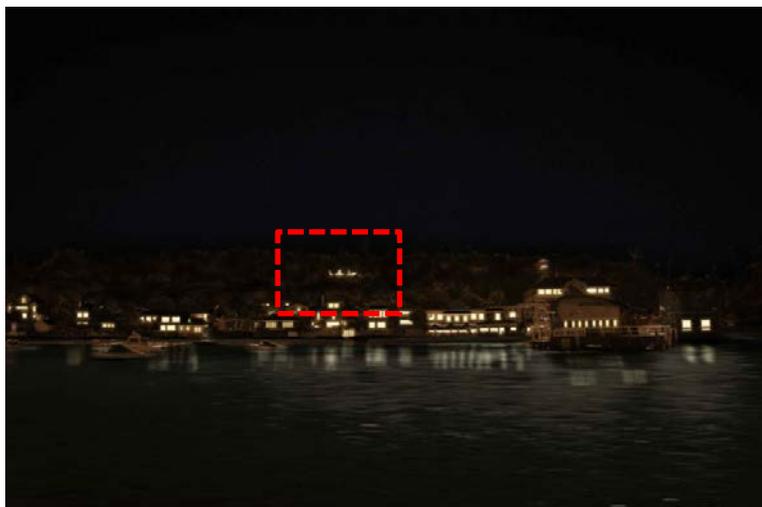


Figure 6 – The proposed Armoury at night (building location highlighted in red)
Source: Johnson Pilton Walker

The proposal would result in some additional overshadowing of the surrounding lawn and road. However, additional overshadowing is minimised through the use of the low-profile skillion roof and the setting back of the upper storey, and is expected to be minimal. Further, the areas that would be overshadowed comprise a lawn area and roads – no private property, or high-value public spaces or areas of vegetation would be overshadowed.

Overall, the proposed addition to the Armoury is considered to be acceptable, given:

- the building design is recessive and has been designed to respect the building's parkland setting;
- overshadowing caused by the building is expected to be minimal and will not fall on high-value public spaces or vegetation; and
- the visual impact from Sydney Harbour and the building's prominence against the ridgeline would be minor.

3.1.2 Separation and setbacks

Guiding principle

Design and layout facilities to achieve integration and promote the park experience.

Considerations or benchmarks

- Provide sufficient separation between facilities to support visual and acoustic privacy, control overshadowing and allow provision for landscaping and other measures to assist blending into the surroundings.
- Use setbacks to define the development edge, create good quality and well-managed entrances, and support integration with the landscape.
- Provide clear on-ground delineation of the boundary of the area occupied by the facility (for example, using landscaping, signage or low-key fencing).

- Locate facilities to encourage engagement and experience of natural sights and sounds.

Assessment

As noted previously, the proposed activity involves alterations and additions to existing buildings. The location of the buildings is not proposed to be changed; therefore building separation and setbacks must remain as currently exists. Any impacts caused by the proximity of the buildings to each other or to surrounding development would therefore need to be managed through design solutions or landscaping included in the proposed works.

A detailed acoustic assessment of Constables Cottage, the Armoury, and the Officers Mess has been undertaken as part of the Review of Environmental Factors, and is detailed more fully within the Acoustic Report prepared by PKA Consulting, included at **Appendix C**. The report details a number of design elements that have been implemented to manage noise egress from the proposed buildings, as well as management measures that will be implemented during the operation of the sites. With the incorporation of these design and management measures, the proposed activity's acoustic impacts can be appropriately managed.

It is also noted that noise levels due to the operation of the short stay accommodation at 33 Cliff Street are unlikely to vary greatly from a typical residential use. Whilst the use of the new terrace may lead to some additional noise, any offensive noise would be governed by the sanctions and penalties in the Holiday and Short Term Rental Code of Conduct. The proposed adaptation works, including the terrace, would not extend beyond the existing building envelope and would not have a visual or heritage impact on the neighbouring Constables Cottage.

In terms of the Gap Bluff Precinct, delineation of the boundary will not be necessary as full public access to the area is proposed to be maintained. Buildings will be secured as necessary outside operating hours. In this way, the proposal will encourage public appreciation of the natural sights and sounds of the precinct.

In terms of the South Head, Camp Cove and Green Point Precinct, public access may be restricted in line with the existing situation. 33 Cliff Street and Green Point Cottage will be used as temporary visitor accommodation, and will effectively be private property. The boundaries of these properties are defined by existing fencing.

Constables Cottage will be publically accessible, being a café / restaurant, but will incorporate landscaping and fencing to clearly define its boundaries and entrance. The public will be free to enter the site whilst the café / restaurant is open, however fencing will preclude afterhours access. Acoustic screening will be incorporated into the design to control noise egress, but will also be designed to be retractable in parts so as to encourage enjoyment of the sights and sounds of the area during appropriate times.

In relation to lighting, it is noted that the outdoor dining area at Constables Cottage and the external terraces of the Armoury are both proposed to be lit at night. However, lights will face downwards, not outwards, and will be as focused as possible to ensure that light spill is kept to a minimum. External lighting at night would not result in any significant adverse impacts on surrounding residences.

Regarding signage, the existing gate sign to the Gap Bluff Precinct would be retained as existing. There would be some wayfinding signage within the precinct, and building identification signage would be provided on the Armoury and Officers Mess buildings. These signs would be lit and would feature lettering between 100 and 250 mm high; however, it is unlikely these signs would be visible from any location outside the precinct.

A building identification sign at the main entrance to the Constables Cottage site is also proposed. The signage would read "Constables Cottage" and would be made of simple bronze pin-fixed lettering. The approximate size would be 110 mm high, with the length subject to final font selection. The sign would be face lit using spotlights. Given the size

and focused nature of the lighting, the proposed signage would not result in any significant adverse visual impacts on surrounding residences.

3.1.3 Density and footprint

Guiding principle

Use the minimal area necessary to support the planned use.

Considerations or benchmarks

- Ensure that the overall number of facilities does not dominate the park setting or exceed the capacity of the area such that there are adverse impacts on environmental quality or the enjoyment of other park users.
- Use the minimum area that is absolutely necessary and avoid expansion of the footprint to include extraneous and unnecessary design elements, such as landscaped areas and water features, unless these are essential to the effective management and operation of the facility.
- Favour building designs that require minimal ground or soil disturbance, such as lightweight, modular, prefabricated or raised off-ground options.
- For multiple buildings or structures (including camping areas) consider the relative merits of dispersed or concentrated layouts.
- Aim to locate supporting infrastructure (such as toilets and parking) in accessible and contained nodes avoiding unnecessary duplication.

Assessment

Officers Mess

No extensions are proposed to be added to the Officers Mess building. Works are generally confined to the existing building footprint. Some minor landscaping works are proposed in the gardens surrounding the building.

Armoury

A comparison between the existing and proposed ground floor plans is shown below.

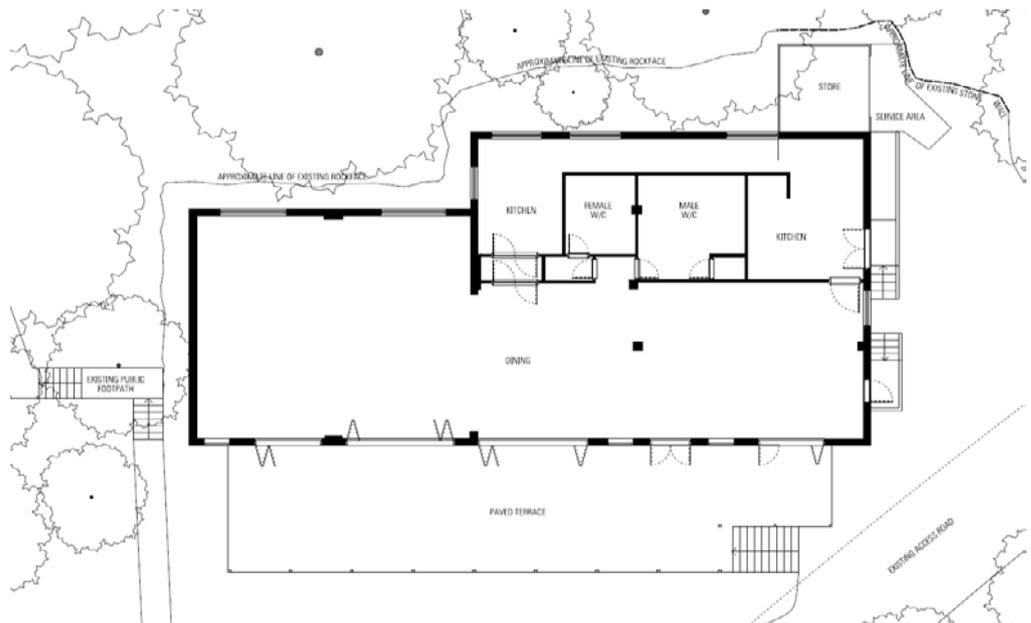


Figure 7 – Existing Armoury ground floor
 Source: Johnson Pilton Walker

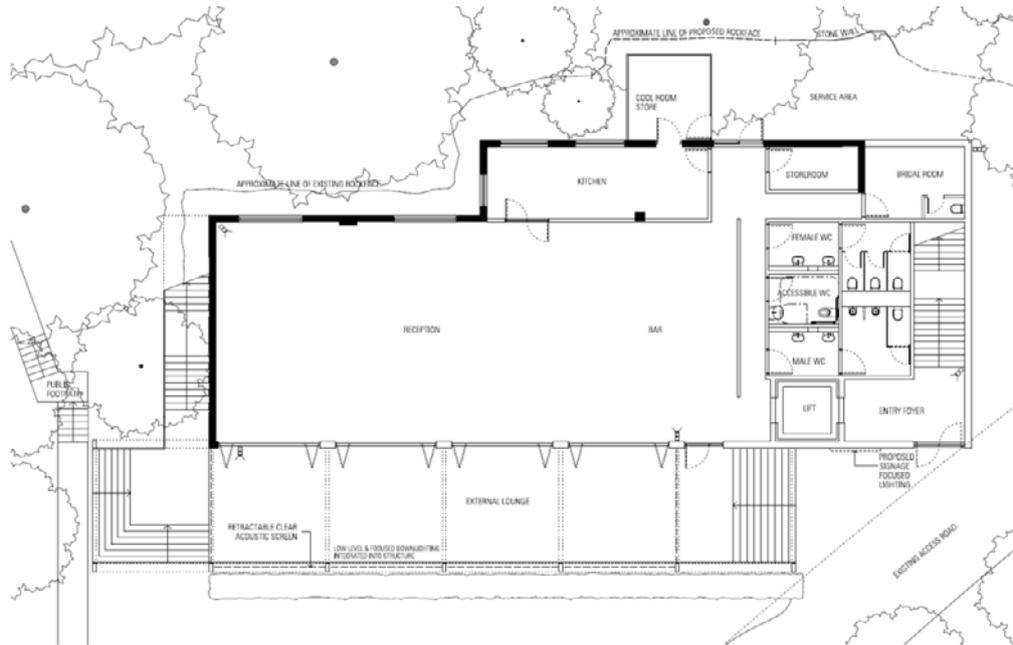


Figure 8 – Proposed Armoury ground floor
 Source: Johnson Pilton Walker

As shown, the building is proposed to be extended to the rear (north-east) and to the side (south-east). As discussed at Section 31.1, a second storey addition is also proposed. Some excavation will be undertaken to accommodate the cool room store and building footings.

As such, the activity footprint would be larger than that of the existing building, but will generally be extended across areas that have previously been cleared. Some minor landscaping works are proposed in the gardens surrounding the building.

Gap Bluff Cottage

As only minor works are proposed, the activity footprint will generally be confined to the existing building footprint, notwithstanding minor landscaping works around the building.

Constables Cottage

The existing and proposed building footprints are compared below.

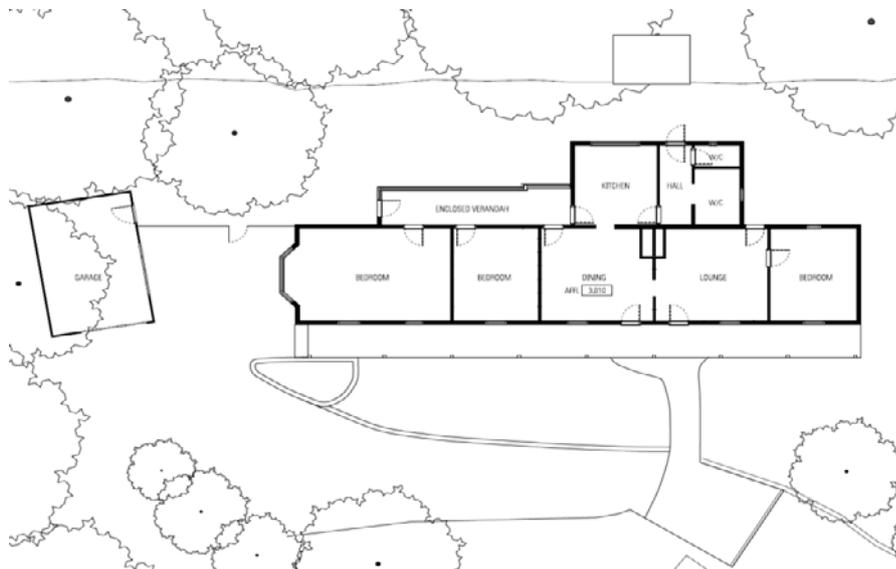


Figure 9 – Existing Constables Cottage ground floor
 Source: Johnson Pilton Walker

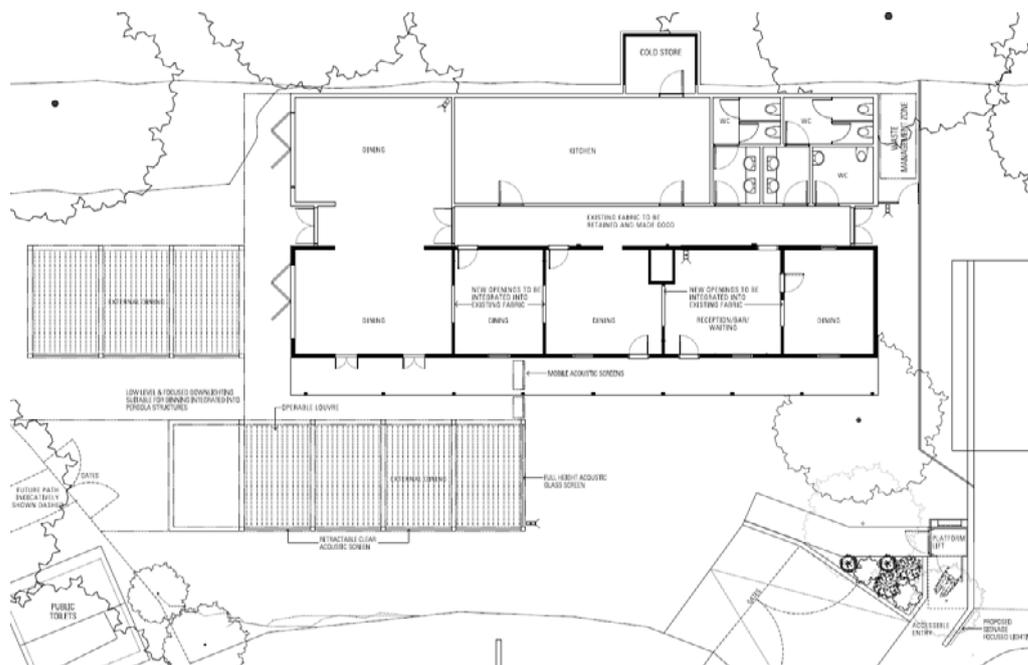


Figure 10 – Proposed Constables Cottage ground floor
 Source: Johnson Pilton Walker

As shown, the proposed activity footprint would expand, both to the front and rear of the building. A rear extension is proposed to be constructed, which would allow expanded dining areas, kitchen and amenities. To the front of the building, a covered external dining area is proposed to be constructed. Landscaping works, including new planting and paved areas, would be undertaken.

33 Cliff Street

As only minor works are proposed, the activity footprint will generally be confined to the existing building footprint, notwithstanding minor landscaping works around the building. A new terrace area is proposed on the north-western side of the building. However, this terrace area will be built over the location of the existing car port, with the car port itself being lowered to create a garage below. The footprint of the works will therefore be the same or very similar to that of the existing building, and will not result in any significant increase in the bulk or scale of the building.

Green Point Cottage

As only minor works are proposed, the activity footprint will generally be confined to the existing building footprint, notwithstanding minor landscaping works around the building. A new terrace area is proposed on the south-western side of the building. Although this terrace would marginally increase the footprint of the existing building, the location and orientation of the terrace, as well as the small scale of the addition, would not result in any significant impacts or any significant increase to the bulk and scale of the building.

3.2 Design and appearance

3.2.1 Form and style

Guiding principle

- Design facilities to fit with and respond to the landscape.
- Build facilities that suit the local environment.

Considerations or benchmarks

Facilities should:

- be simple, robust and recognisable;
- seek to blend with the park setting and landscape, rather than reflect design trends;
- be contemporary and reflective of the times; and
- clearly of an Australian vernacular.

Facilities should not:

- dominate the park setting
- seek to imitate historic or international building design styles.

Materials and colours should:

- be appropriate to the location, function, climatic condition and intended use
- be guided by environmental constraints, for example snow loads, insect attack, bushfire hazard, corrosion in marine environments
- visually integrate with the setting, with a preference for locally sourced materials and colour palettes
- be vandal resistant and easy to clean
- be genuine and not disguised as alternative materials (unless this assists in blending in or results in demonstrated sustainability benefits).

Assessment

The buildings have been designed to retain heritage fabric where possible. Where new additions have been incorporated, the intent is for the design to:

- be respectful and appropriate to the location and the parkland setting;
- be contemporary and elegant, without being imitative or false in its intentions; and
- incorporate high quality materiality and a subdued and complementary colour palette.

Further explanation of how this has been achieved in the design of each individual building is detailed below.

The Armoury

The Armoury, currently used as a function centre has been extensively altered, leaving little of the original building fabric and reducing the building's significance.

The proposed upgrades to the Armoury are to reinvigorate its current adapted reuse as a function centre to premium standards for a destination facility. This is achieved through significant upgrades to the existing building; and, a second function space as an upper level addition that takes advantage of the harbour views while maintaining the overall function space within the existing building footprint.

Whilst recognising the original building has been significantly modified over the years; the proposed design approach to the upgrades is to reinforce and reinstate the simple, robust character and scale of the original Armoury building. Subsequent additions such as the lightweight pergola structure are replaced with horizontal masonry and concrete elements on the ground floor to provide a solid base. The second floor addition is recessed through set back, lightweight materials and extensive areas of glass to reduce its visual impact.

The overall height of the development is not significantly increased due to the use of a simple skillion roof profile. The use of zinc as a roof material will allow this element to weather and further blend into the colours of the headland when viewed from the harbour.

Constables Cottage

The current cottage is used for short term holiday rental of very basic standards; this proposal is to restore, extend and adapt Constables Cottage as a restaurant.

Although the current building incorporates a range of additions and alterations, the extent of the original Constables Cottage is still evident and has historical significance.

The current building is in good condition however requires general maintenance and repair. This proposal is to sensitively restore the original cottage with a new wing that is sympathetic in scale and articulate as an addition.

New elements will consist of materials complementing the existing fabric - metal roofing, timber framing and weatherboard cladding, completed in a contemporary style.

External elements will be constructed with simple robust timber frames with glass and retractable screen elements allowing for acoustic treatment during the evening. Louvre style elements will be incorporated within the frame for sun protection and acoustic measures where needed.

The creation of a new entrance sequence allows for pedestrian accessibility and visual connection, reconnecting Constables Cottage with site.

The works to Constables Cottage have been designed in close consultation with GML Heritage, and several alternatives have been explored before arriving at the proposed scheme. The works to Constables Cottage have been designed to achieve the following principles:

- Respecting the form and fabric of the original structure, and retaining the significant front elevation and form of the original building;
- Eliminating services and reinforcement required for a commercial kitchen within the original structure, thereby enabling the building to be returned to a residence in the future, with the least damage to the original form;
- Locating and concealing the back of house (BOH) functions behind the original structure in order to minimise visual intrusion and noise from these activities. This approach also allows free flowing access from Cliff Street to the National Park, through the western grounds of Constables Cottage. This will enable the public to enjoy this valuable representation of early Sydney, which has been behind locked gates for many years;
- Consolidating all deliveries and waste removal around the external southern end of the original structure, closest to the entrance;
- Positioning all infrastructure behind the original structure allows the northern and western public areas to offer maximum benefit for all National Park visitors traversing through Constables Cottage; and
- Maintaining vehicular access to the National Park for accessing the services and infrastructure.

Consistent with these principles, the resulting proposal:

- Opens up views to Constables Cottage, and enable the southern frontage to be read.
- Provides a BOH area of an appropriate size, and to conceal this structure behind the original building to enable the main part of the Cottage to be free of services so that it can be returned to its original state.
- Provides an outdoor dining area which provides protection from sun and light rain, but will not dominate the original building.
- Allows greater numbers of people to visit the Cottage (during the café / restaurant's opening hours) and understand its history and significance.

- Provides a café / restaurant with capacity to ensure a viable development that will allow for the preservation and ongoing use of the building.

GML Heritage concludes that the proposed adaptation of Constables Cottage for use as a café / restaurant would result in heritage impacts. However, given the sensitive design of the adaptation - which would retain qualities and fabric essential to the significance of the place, including the Cottage's interior spatial qualities, significant interior and exterior joinery and fabric and the hipped roof form and front verandah, and would see the original Cottage remain the dominant element in public views from Cliff Street - these impacts would be acceptable

Gap Bluff Cottage

The proposal for Gap Bluff Cottage is to maintain the current cottage aesthetic with refurbishment of the existing external fabric and details.

Internally, the cottage will be converted to a single bedroom accommodation with an open living area. Materials and details will complement the cottage aesthetic, utilising timber flooring and trim details.

Green Point Cottage

The proposal for Green Point Cottage is to maintain the cottage aesthetic with refurbishment of the existing external fabric and elements, many of which are original to this simple federation style cottage. Refurbishment of the enclosed verandah will include replacement of the external windows and cladding.

Internally, the cottage's living areas will be expanded to open up to the verandah and external spaces to the south-west. Materials and details will complement the cottage aesthetic in order to maintain its original character and style, utilising materials such as timber flooring and trim details.

Officers Mess

The proposal for the Officers Mess is to reinstate the original roof line and adapt the 1990 extension to accommodate a commercial kitchen and reception area. Internally, the original details will be partially retained and refurbished with key areas such as the first floor reception room refurbished to remove the introduced internal walls.

33 Cliff Street

The proposed upgrade will re-configure the planning, allowing for greater connection from the living areas to a new terrace area overlooking Camp Cove. The aesthetic will convey a modern clean interior with use of timber and glass throughout the living and terrace areas in order to enhance the connection with a premier vista.

3.2.2 Orientation, solar access and ventilation

Guiding principle

Maximise use of natural light and air.

Considerations or benchmarks

- Development should be oriented to optimise a northern aspect, daylight access to habitable rooms, use of prevailing breezes and natural ventilation.
- Building occupants should be able to adjust the quantity of daylight to suit their needs.
- Shading and glare control features, especially for summer use (high performance glass, eaves, awnings, louvres, plantings) should be incorporated.

Assessment

Given the proposal is for alterations and additions to existing buildings, the existing orientation of the building has been retained. However, where possible, buildings have been designed to take advantage of prevailing breezes for natural ventilation. The intention is to naturally ventilate as many spaces as possible for the majority of the year. Where spaces are required to be enclosed for acoustic reasons, a manually controlled air conditioning system will be used.

Shading to windows will be used to encourage sun penetration in the winter and to shade spaces in the summer. Further, the Armoury and Officers Mess are thermally massive – as a result, internal temperatures will be stabilised. Passive design strategies will be used to minimise the amount of heat lost in the winter, and to maximise heat gain in the winter.

Figures 11 to 15 indicate the proposed passive design strategy for each building. Further detail as to solar access and cross ventilation strategies for each building are contained within the ESD Report at **Appendix J**.

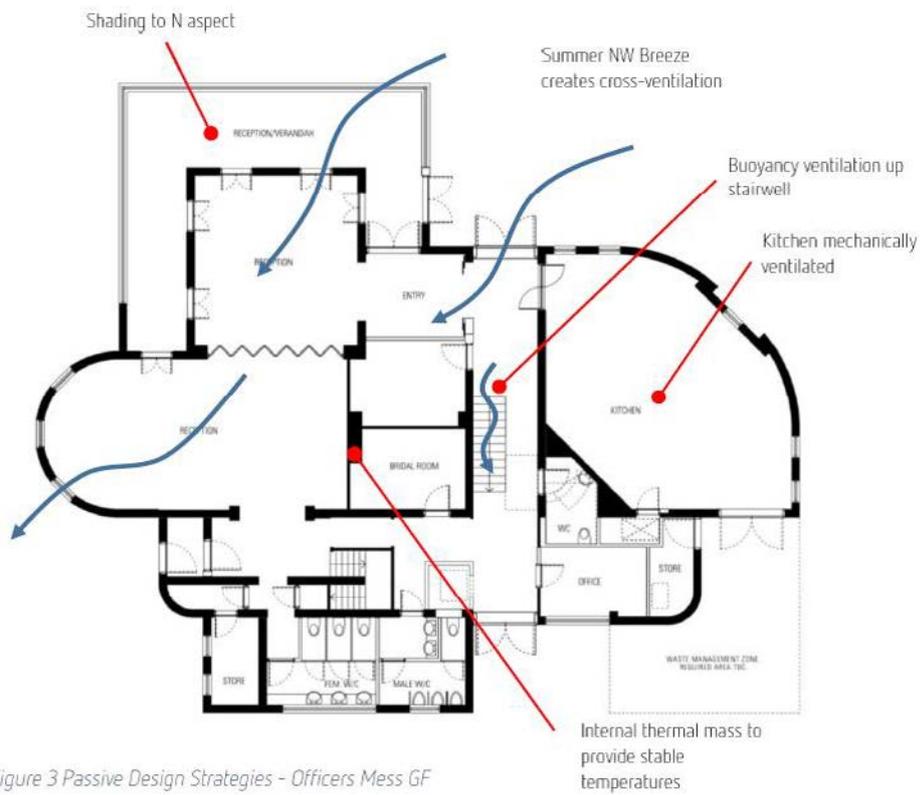


Figure 3 Passive Design Strategies - Officers Mess GF

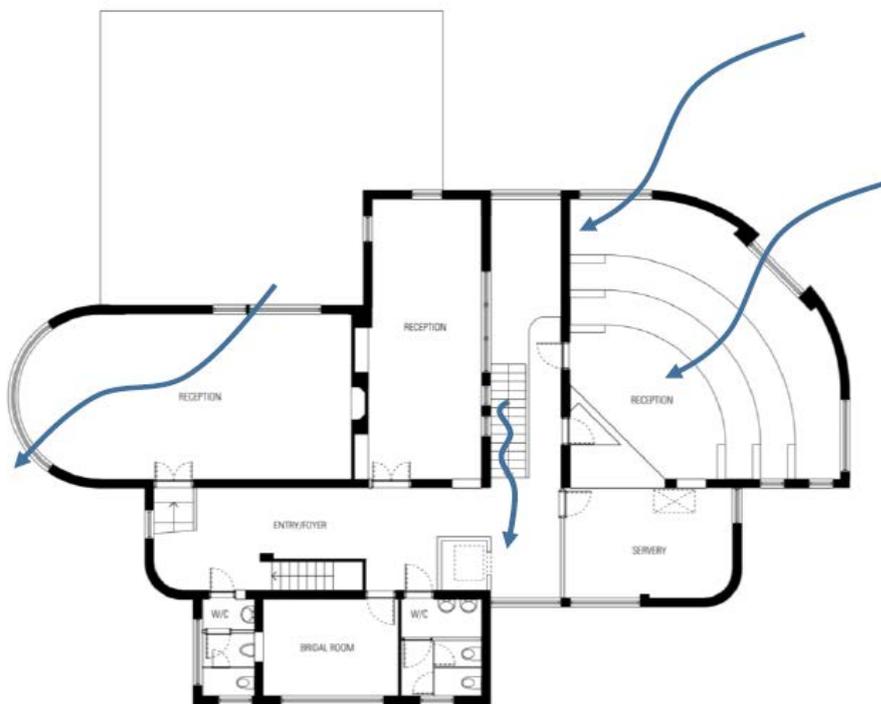


Figure 11 – Passive design strategy – Officers Mess
Source: Flux Consultants



Figure 12 – Passive design strategy - Armoury
Source: Flux Consultants

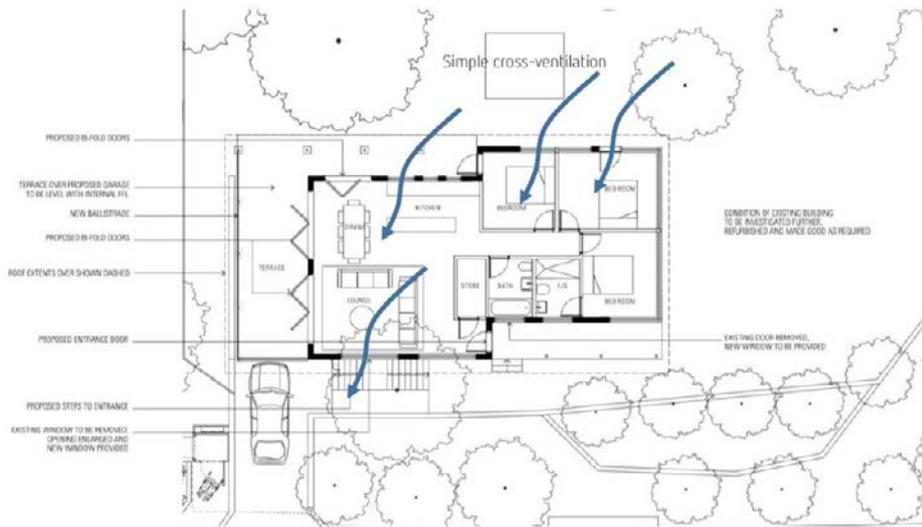


Figure 13 – Passive design strategy – 33 Cliff Street
 Source: Flux Consultants

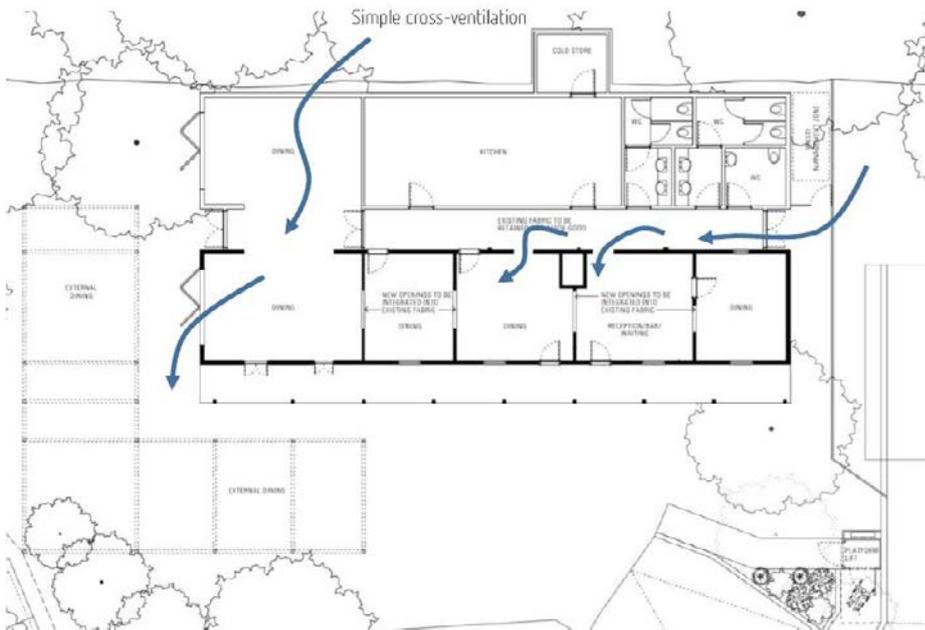


Figure 14 – Passive design strategy – Constables Cottage
 Source: Flux Consultants

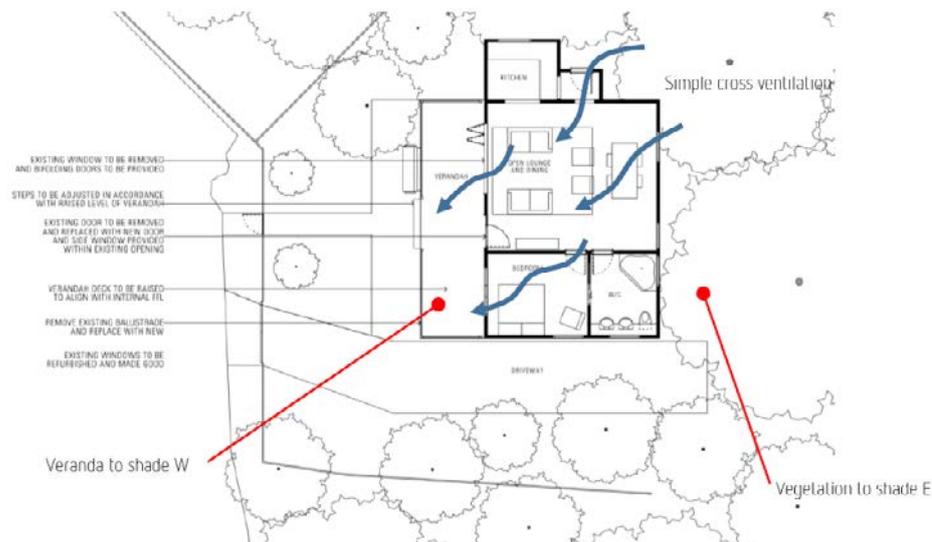


Figure 15 – Passive design strategy - Gap Bluff Cottage
Source: Flux Consultants

3.2.3 Amenity

Guiding principle

Maintain or improve local amenity.

Considerations or benchmarks

- Facilities should not have an adverse impact on significant viewpoints.
- Vegetation should not be removed for the sole purpose of improving views, unless there is clear heritage benefit.
- Facilities should not produce on-going noise, dust, odour or similar impacts that adversely affect the tranquillity of the park setting or surrounding areas.

Assessment

Significant views of Constables Cottage are available from the beach at Camp Cove. Whilst this is not identified as one of the notable views and vistas in the 2008 CMP, the proposed outdoor dining structure will have some impact on these existing views to the Cottage. However, the proposal has the potential to recover the significant view between the site and the former jetty, as well as providing new public domain views of the Cottage from Cliff Street. The proposed activity will also allow greater numbers of people to visit and view the Cottage and understand the history of the site. In light of the above, any impact on viewpoints from the beach is considered acceptable.

As discussed at Section 3.1.1, the proposed addition to the Armoury will not result in any adverse views from the harbour. The building has been designed to be recessive and subservient to the surrounding landscape and will barely be visible from Sydney Harbour.

A detailed acoustic assessment of Constables Cottage, the Armoury, and the Officers Mess has been undertaken as part of the Review of Environmental Factors, and is detailed more fully within the Acoustic Report prepared by PKA Consulting, included at **Appendix C**. The report details a number of design elements that have been implemented to manage noise egress from the proposed buildings, as well as management measures that will be implemented during the operation of the sites. With the incorporation of these design and management measures, the proposed activity's acoustic impacts can be appropriately managed.

Any potential noise or dust impacts caused by construction will be addressed via the preparation of a detailed Construction Management Plan prior to the commencement of works. This plan will outline such details as construction hours, truck movements, use of equipment and tools, waste management, and the like.

The proposal will also significantly benefit the public by conserving and improving access to historic buildings and the precincts, and by providing opportunities for education and enjoyment of the rich history of the site. Overall, it is considered that the proposal will result in a significant public benefit, without any significant adverse impacts on amenity.

3.3 Resource use, energy, materials and waste

3.3.1 Materials choice and embodied energy

Guiding principle

Use the lowest energy materials that are suitable for the type of facility and its location.

Considerations or benchmarks

- Justify materials selection for facilities taking into account embodied energy, useful life expectancy, available alternatives and lifecycle analysis; materials with high embodied energy, should only be used once all other feasible options have been exhausted.
- Aim to source local materials and labour.
- Reuse or adapt existing structures and elements wherever feasible.
- Where possible use recycled materials (including materials with recycled content) or materials that can be reused or recycled at the end of the life of the facility.
- Use flexible designs that allow for a modular approach, including use of pre-manufactured components with the ability to replace individual elements.
- New rainforest timber must not be used; hardwood should be sourced from regrowth or plantation forests, and all new timber should be certified by the Forest Stewardship Council or the Australian Forestry Standard.

Assessment

Due to the fact that the existing buildings are being adaptively reused, this will provide significant environmental impacts. Further, new materials will be prioritised to create healthy rooms and event spaces through the selection of low VOC sealants, adhesives and paints and low/zero formaldehyde composite wood products.

Low environmental impact products, including reused or FSC-certified timber and high recycled content materials will also be prioritised. Floor finishes and furnishings will be selected from GECA-certified (or similar) product lists where available.

Further detail is contained within the ESD Report at **Appendix J**.

3.3.2 Energy

Guiding principle

- Use best practice and cost-effective measures to avoid and then minimise energy use.
- Use existing energy rating systems and tools, where practicable.

Considerations or benchmarks

Incorporate design features into new buildings, or retrofitting or adaptation of existing buildings that will first avoid and then minimise energy use.

This should include, but not be limited to, consideration of:

- building orientation;
- insulation and heat ventilation;
- window glazing, thermal-backed window coverings or draught-proofing to reduce summer heat gain and winter heat loss;
- shading devices for windows, such as reversible screens or awnings, window hoods, verandahs, pergolas or landscape plantings;
- lowering water heater temperatures or installing more efficient water heating systems, such as solar hot water, instantaneous gas, or heat pumps;
- locally generated solar, wind, geothermal or other renewable energy sources;
- energy efficient lighting and appliances, with a minimum 4-star rating under the Minimum Energy Performance Standards Scheme, including use of timers and sensors;
- sourcing energy from accredited Green Power providers; and
- separate metering to enable monitoring of energy use.

Where a new or existing building is capable of being rated, use rating schemes to assist in evaluating the proposal. Proposals should aim to demonstrate that they exceed applicable ratings benchmarks and/or are consistent with stated best practice ratings.

Rating schemes include:

- BASIX;
- Nationwide House Energy Rating Scheme (NatHers); and
- Green Star.

Rating schemes may not be available or applicable to all building types. Achieving the rating benchmark or standard is only a desirable goal if it can occur without adverse impacts to the physical attributes of a site (for example, soils, hydrology or vegetation extent) or natural and cultural heritage values.

Assessment

It is noted that BASIX only applies to Development Applications and Complying Development Certificates when the works only involve alterations and additions. BASIX does not apply to development under Part 5.

BASIX affected development means any of the following development that is not BASIX excluded development: (our emphasis)

- (a) development that involves the erection (but not the relocation) of a BASIX affected building,*
- (b) development that involves a change of building use by which a building becomes a BASIX affected building,*
- (c) development that involves the alteration, enlargement or extension of a BASIX affected building, where the estimated construction cost of the development is*
 - (i) \$100,000 or more—in the case of development for which a development application or an application for a complying development certificate is made on or after 1 October 2006 and before 1 July 2007, or*
 - (ii) \$50,000 or more—in the case of development for which a development application or an application for a complying development certificate is made on or after 1 July 2007,*

- (d) *development for the purpose of a swimming pool or spa, or combination of swimming pools and spas, that services or service only one dwelling and that has a capacity, or combined capacity, of 40,000 litres or more.*

Due to the nature of the proposed use of the buildings, energy usage is expected to be significant, due to:

- permanently-installed equipment;
- heating, cooling and ventilation systems; and
- lighting.

The project aims to minimise demand for energy, select efficient equipment where possible, and then ensure strategies are in place to minimise energy use in unoccupied spaces.

Strategies involve:

- selecting star-rated equipment where possible, within 0.5 stars of the best available;
- selecting high-efficiency HVAC equipment;
- implementing occupancy controls within rooms and other temporarily occupied back of house spaces;
- use of LED lighting in lieu of halogen lights; and
- establishment of energy optimisation and targets during the design finalisation phase of the project to enable ongoing effective management of the facility.

3.3.3 Water use

Guiding principle

- Use best practice and cost-effective measures to avoid and then minimise water use.
- Use existing water rating systems and tools, where practicable.

Considerations or benchmarks

Incorporate design features into new buildings, or retrofitting or adaptation of existing buildings that will first avoid and then minimise water use.

This should include, but not be limited to, consideration of:

- composting, dual or low-flush toilets;
- rainwater capture, such as "plumbed-in" rainwater tanks;
- on-site treatment and recycling;
- improved garden management, such as low maintenance plantings, mulching, and strategic watering plans;
- swales and bio-retention basins;
- tap timers and drip irrigation;
- use of high efficiency fittings (taps and showerheads) and appliances, with a minimum 4-star rating under the Water Efficiency Labelling and Standards Scheme or Smart Approved WaterMark products (for outdoor use); and
- separate metering to enable monitoring of water use.

Where a new or existing building is capable of being rated, use rating schemes to assist in evaluating the proposal. Proposals should aim to demonstrate that they exceed applicable ratings benchmarks and/or are consistent with stated best practice ratings.

Potential rating schemes include:

- BASIX; and
- Green Star.

Rating schemes may not be available or applicable to all building types. Achieving the rating benchmark or standard is only a desirable goal if it can occur without adverse impacts to the physical attributes of a site (for example, on soils, hydrology or vegetation extent), or natural and cultural heritage values.

Assessment

In terms of water use, the main users of water are expected to be bathrooms and kitchens.

Strategies for minimising water usage include:

- selection of low flow WELS-rated fittings and fixtures;
- selection of WELS-rated appliances and equipment where available;
- use of best-practice commercial kitchen equipment;
- low-water demand plants and landscape design; and
- incorporation of WSUD design to help deliver the water requirements of the landscape and treat stormwater emissions.

Further detail is contained within the ESD Report at **Appendix J**.

3.3.4 Miscellaneous materials

Guiding principle

Use materials with minimal environmental risk.

Considerations or benchmarks

Avoid the use of the following materials, or products containing such materials, unless there is no feasible or available alternative:

- PVC;
- volatile organic compounds;
- copper chrome arsenate; and
- herbicides and pesticides.

Assessment

As noted previously, new materials will be prioritised to create healthy rooms and event spaces through the selection of low VOC sealants, adhesives and paints and low/zero formaldehyde composite wood products. Materials containing PVC, volatile organic compounds, copper chrome arsenate and herbicides and pesticides will also be avoided where possible.

3.3.5 Waste management and recycling

Guiding principle

Avoid generating waste as the first priority, then reuse or recycle unavoidable waste.

Considerations or benchmarks

Prioritise the minimisation of waste, supported by systems to collect, store, reuse and recycle unavoidable waste.

Provide details of planned waste management systems, including food and sewage wastes.

Innovative collection and treatment technologies may be considered, but preference must be given to systems that have been proven to be fit for the intended purpose and with least risk to the environment.

Assessment

As part of the Review of Environmental Factors, a Waste Management Plan has been prepared by Gap Bluff Hospitality, and is included at **Appendix K**. It is noted that the Officers Mess, the Armoury, and Constables Cottage will be the primary waste producers. The primary waste management area will be located at the Officers Mess, within the Gap Bluff Precinct. Waste from both the Armoury and Constables Cottage will be consolidated in this one area, providing for efficient storage and collection.

Waste will be split into recyclable, non-recyclable, organics and special waste streams. The lessee will also be required to achieve an 80% minimum recycling target. Gap Bluff Hospitality will undertake ongoing education programs for staff, which will:

- explain the programs;
- provide education on what can go into each bin; and
- provide positive reinforcement of the recycling program's success through reporting volumes, reductions in emissions, number of trees saved, and so on.

Further information is provided within the Waste Management Plan at **Appendix K** or the ESD Report at **Appendix J**.

3.4 Optimising existing building or place performance

3.4.1 Thermal mass

Guiding principle

Use and improve building mass to manage building temperature.

Considerations or benchmarks

- Ensure the structural stability and on-going performance of masonry and stone buildings, including the relationship between heavy mass inner and outer walls and internal building temperatures.
- Identify opportunities to install insulating materials that will supplement or improve thermal performance (but also consider moisture implications – see below).
- Locate uses within the planned adaptation to take best advantage of existing thermal mass, minimising the need for artificial heating and cooling.

Assessment

Due to the fact that existing buildings are being retained, there is little opportunity to further increase the thermal mass of the buildings. However, it is noted that the Armoury and Officers Mess are already thermally massive, which will significantly stabilise temperatures, making the spaces cooler during the day and warmer at night.

Passive design strategies will be implemented to maximise the benefit of this. Specifically, the design will focus on ensuring spaces do not lose heat during winter and become cold for extended periods of time. Systems used may include hydronic radiators or in slab heating.

Constables Cottage, Gap Bluff Cottage, 33 Cliff Street and Green Point Cottage are all lightweight structures that do not have the necessary thermal mass to effectively regulate heat gain and loss. However, these buildings do feature natural cross-ventilation, which will help to control heat gain. Further, window and door seals will be improved to ensure that heat loss is kept to a minimum during winter.

3.4.2 Controlling moisture

Guiding principle

Improve the functioning of the building envelope.

Considerations or benchmarks

- Ensure the proper functioning of natural ventilation systems, allowing the building to „breathe“.
- Where feasible, and necessary to reduce dampness and promote ventilation, identify opportunities for new approaches and systems.
- Avoid measures that may be counter-productive to the building envelope and fabric. Where new insulation is proposed, demonstrate that this will not prevent the necessary evaporation of moisture.

Assessment

As noted previously, the buildings will maximise cross-ventilation where possible, which will allow the building to „breathe“, thereby reducing dampness and encouraging the evaporation of moisture.

Generally, all of the buildings are currently capable of being cross-ventilated, as shown in **Figures 11 - 15** above. Notwithstanding this, all existing systems will be replaced with low emission, low consumption, high efficiency air conditioning systems which will enable internal temperatures to be controlled. A side-effect of air conditioning systems is that they remove moist air and introduce dry air, thereby encouraging evaporation of moisture.

No significant new insulation that would prevent the evaporation of moisture is proposed.

3.4.3 Passive heating and cooling

Guiding principle

Improve passive thermal performance to minimise heating and cooling needs.

Considerations or benchmarks

Identify opportunities to maintain or improve thermal comfort without the need for mechanical heating or cooling. Potential measures for improving passive thermal performance include:

- repairing damaged windows, doors and seals (to avoid air infiltration);
- unblocking boarded over window openings, ceiling vents and flues, and re-opening blocked doorways; and
- removing introduced glazing over openable windows.

Assessment

Where damage to windows, doors and seals is evident, these components of the building will either be replaced or repaired consistent with the architectural drawings and any heritage constraints.

Similarly, if blocked openings are found, these will be opened up where possible and desirable. If glazing over openable windows exists within any building, the glazing will be removed.

3.4.4 Existing heating systems

Guiding principle

Improve and adapt existing systems where cost-effective.

Considerations or benchmarks

Identify opportunities to reuse and improve the efficiency of existing (including historic) heating systems, including consideration of whether the projected performance of an overhauled existing system will outweigh the costs and impacts of installing a new system.

Assessment

Due to the age of the existing systems and the nature of the proposed activity, they are unable to be retained and reused. All existing systems will be replaced with low emission, low consumption, high efficiency heating systems.

3.5 Sustainability during construction and operation

3.5.1 During construction

Guiding principle

Facilities meet existing standards.

Considerations or benchmarks

Provide details of systems to be used during construction to ensure development is in accordance with approved plans, the Building Code of Australia (BCA) and Australian Standards, occupational health and safety requirements and manufacturer's instructions (for example for sustainable technologies).

For projects involving building and infrastructure, works will be required to obtain certification to demonstrate compliance with the BCA and relevant Australian standards.

Use construction equipment that meets best-practice emission standards.

Assessment

A BCA Statement has been prepared as part of the Review of Environmental Factors, and is included at **Appendix G**. The statement confirms that the proposed activity is capable of compliance with the provisions of the BCA.

A Construction Management Plan has been prepared as part of the Review of Environmental Factors, and is included at **Appendix I**. The Principal Certifying Authority will ensure that development is in accordance with the approved plans, Building Code of Australia and Australian Standards. Systems will also be implemented to ensure that occupational health and safety requirements will be adhered to.

It is also expected that construction equipment will meet best-practice emission standards where possible.

A number of management plans will be prepared and implemented during construction, including:

- a detailed Construction Management Plan;
- a Stormwater and Sediment Control Plan;
- a Construction Noise and Vibration Management Plan; and

- an Earthworks Plan for excavation.

3.5.2 During operation, on-going use and deconstruction

Guiding principle

- Assess performance and support continual improvement.
- Use existing rating systems and tools, where practicable.

Considerations or benchmarks

Provide details of systems to be used to monitor environmental performance, adapt to address any short-falls in expected performance, and improve performance over time. Provide an overview of planned maintenance requirements during the life cycle of the facility.

For temporary structures outline how the deconstruction phase will occur, including planned reuse or recycling of materials.

Where a new or existing building is capable of being rated, use rating schemes to assist in evaluating the on-going environmental performance of the facility. Proposals should aim to demonstrate that they exceed applicable ratings benchmarks and/or are consistent with stated best practice ratings.

Potential ratings schemes for on-going performance include:

- Green Star; and
- National Australian Built Environment Rating Scheme (NABERS).

Rating schemes may not be available or applicable to all building types.

Achieving the rating benchmark or standard is only a desirable goal if there are no adverse impacts to the physical attributes of a site (for example, on soils, hydrology or vegetation extent), or natural and cultural heritage values.

Assessment

During the operation of the facilities, energy and water use and waste generation will be monitored and reviewed periodically to ensure that the buildings are performing optimally and in-line with best practice, although concessions may need to be made, given the fact that the buildings are existing and are of significant heritage value.

The maintenance requirements of the buildings have not been specifically documented as yet. Environmental monitoring standards will be agreed as part of lease negotiations.

Generally, maintenance will occur as needed to ensure that the buildings remain in good condition and are conserved in line with the relevant Conservation Management Plan and any other requirements. If necessary, an Ongoing Maintenance Plan will be prepared. This will outline the specific maintenance requirements of each building and the frequency at which the maintenance will be undertaken. All maintenance will be undertaken by Gap Bluff Hospitality.

3.6 Sustainable park management partnerships

3.6.1 Contribution to park management objectives

Guiding principle

Facilities provide a unique experience for visitors, and support park management and sustainability outcomes.

Considerations or benchmarks

Proposals should indicate how they will contribute to or undertake actions that support conservation and public use and enjoyment of the park, such as:

- conservation services such as weed and pest control, habitat restoration, Aboriginal site protection, building conservation, scientific survey and monitoring;
- visitor experiences such as educational opportunities, volunteering, wildlife watching tours;
- visitor management and services such as marketing, products, interpretation, cleaning and waste management, maintenance, parking;
- park infrastructure such as power, water, roads, trails and tracks; and
- opportunities for employment of Aboriginal people.

Identify opportunities and approaches to provide park visitors with improved understanding of:

- low-impact nature-based tourism; and
- the particular sustainability features of the facility.

Assessment

The proposal provides the opportunity for ongoing public access to the Gap Bluff Precinct. It also provides increased opportunities for public access to the historic Armoury, Officers Mess and Constables Cottage buildings.

In terms of the Gap Bluff Precinct, access to this precinct will be maintained at all times for walking or other recreational activities. Access to the specific buildings within the precinct will be only during operating hours and will be limited to staff or function guests.

Whilst limited public access was available to Constables Cottage when it was previously used for short-term accommodation, the site will now be accessible to all members of the public – even those not specifically visiting the café / restaurant. Access will be maintained during the opening hours of the café / restaurant, but will be closed after hours. The proposed activity will allow the public to enjoy and experience this historic building, and understand its significance. The proposed alterations and additions to Constables Cottage have been designed in close consultation with GML Heritage to ensure that key fabric which is essential to the significance of the place is retained. As part of the proposed works, views to Constables Cottage will be opened up for the first time, enabling the southern frontage to be read and enjoyed.

Access to 33 Cliff Street, Green Point Cottage and Gap Bluff Cottage will be made available to guests of these properties, with 33 Cliff Street and Gap Bluff Cottage being made publically accessible for the first time. Any member of the public will be able to book these properties as accommodation.

Specific sustainability strategies will include:

- A conservation partnership between Gap Bluff Hospitality and the National Parks and Wildlife Service, which will:
 - provide public benefits through greater access and enjoyment of the grounds and heritage buildings;
 - enable the conservation of heritage significant buildings that would otherwise continue to fall into disrepair;
 - facilitate upgrades to the public domain and landscape surrounding each building, and coordinated waste management and cleaning of each building and surrounding landscapes; and

- ensure the viability of Gap Bluff, enabling the uses to prosper and become an increased asset to the National Parks and Wildlife Service and NSW Government.
- Provision of a room manual, which will help guests understand the sustainability features within each room and how to best use the feature to achieve good comfort and the smallest environmental footprint.
- Preparation of a sustainable operations manual, which will be used to train staff with respect to management and operations of the sustainability features and assist in performance monitoring and communication of the design intent. The manual will deal with waste, cleaning, monitoring, system control, as well as key features to communicate to staff and visitors.

4.0 Special activities and uses assessment

4.1 Planning for sustainability prior to the activity or use

4.1.1 Defining the proposal

Guiding principle

Opportunities to incorporate sustainable practice are identified early.

Considerations or benchmarks

Proposals should include identification of all parts of the activity or use, including:

- stages (set-up, operation and pack-up);
- any permanent or temporary construction;
- size or footprint of area required;
- ancillary works (such as any works required for access);
- timing and hours of operation;
- number of participants (patrons and staff); and
- cost of participation or ticket pricing (if applicable).

Assessment

The proposed works for each building will occur over the following time periods:

- Officers Mess: January 2017 – October 2017
- The Armoury: January 2016 – October 2016
- Gap Bluff Cottage: January 2016 – July 2016
- Constables Cottage: October 2016 – June 2017
- 33 Cliff Street: October 2016 – June 2017
- Green Point Cottage: January 2016 – October 2016

All construction works will be permanent, no temporary construction or uses are proposed.

Ancillary works would include limited signage, lighting and CCTV cameras for Constables Cottage, the Armoury and the Officers Mess. To facilitate construction, there will be a series of site establishment works including construction of hoardings, crane erection and dismantling and footpath works.

The hours of operation for each building would be as follows:

- Officers Mess: Monday to Sunday, 7:00 am to 12:00 am
- Armoury: Monday to Sunday, 7:00 am to 12:00 am
- Constables Cottage: Tuesday to Saturday, 8:00 am to 11:00 pm, and Sunday 8:00 am to 3:00 pm

The number of participants would be as follows:

- Officers Mess: 115 for banquet events, 140 for cocktail events, 20 staff

- Armoury: Capacity for 140 persons for banquet-type functions, or 160 for cocktail functions on the Ground Floor and 110 persons for banquet-type functions, or 120 for cocktail functions on the First Floor. 30 staff.
- Constables Cottage: 72 persons (37 internal and 35 internal), 15 staff.

Building footprints are identified below.

Officers Mess

No extensions are proposed to be added to the Officers Mess building. Works are generally confined to the existing building footprint. Some minor landscaping works are proposed in the gardens surrounding the building.

Armoury

A comparison between the existing and proposed ground floor plans is shown at **Figures 7 and 8** at Section 3.1.3.

As shown above, the building is proposed to be extended to the rear (north east) and to the side (south east). A second storey addition is also proposed. Some excavation will be undertaken to accommodate the cool room store and building footings.

As such, the activity footprint would be larger than that of the existing building, but will generally be extended across areas that have previously been cleared. Some minor landscaping works are proposed in the gardens surrounding the building.

Gap Bluff Cottage

As only minor works are proposed, the activity footprint will generally be confined to the existing building footprint, notwithstanding minor landscaping works around the building.

Constables Cottage

The existing and proposed building footprints are compared below at **Figures 9 and 10** at Section 3.1.3.

As shown above, the proposed activity footprint would expand, both to the front and rear of the building. A rear extension is proposed to be constructed, which would allow expanded dining areas, kitchen and amenities. To the front of the building, a covered external dining area is proposed to be constructed. Landscaping works, including new planting and paved areas, would be undertaken.

33 Cliff Street

As only minor works are proposed, the activity footprint will generally be confined to the existing building footprint, notwithstanding minor landscaping works around the building. A new terrace area is proposed on the north western side of the building. However, this terrace area will be built over the location of the existing car port, with the car port itself being lowered to create a garage below. The footprint of the works will therefore be the same or very similar to that of the existing building, and will not result in any significant increase in the bulk or scale of the building.

Green Point Cottage

As only minor works are proposed, the activity footprint will generally be confined to the existing building footprint, notwithstanding minor landscaping works around the building. A new terrace area is proposed on the south western side of the building. Although this terrace would marginally increase the footprint of the existing building, the location and orientation of the terrace, as well as the small scale of the addition, would not result in any significant impacts or any significant increase to the bulk and scale of the building.

4.1.2 Activity management

Guiding principle

- Proposals are comprehensively planned and actively managed.
- Public safety and security is paramount.

Considerations or benchmarks

Identify arrangements for production, management and decision-making, including:

- the experience and expertise of the producers and the key personnel or staff to be involved with the activity in running similar activities, particularly in environmentally sensitive locations;
- arrangements for training staff regarding the constraints and sensitivities of the park;
- opportunities to use local labour;
- details of any sponsorship for the activity and any expectations or requirements (such as signage);
- details of financial arrangements, including the viability of any backers;
- insurance (including public liability and event cancellation);
- marketing and media management;
- ticketing arrangements; and
- contingencies in the event of cancellation, postponement or alteration.

Proposals should include details of:

- risk assessment, including site hazards;
- security, including details of the security provider; and
- emergency management, including first aid facilities.

Assessment

Gap Bluff Hospitality is owned by Christopher Drivas, Managing Director of Dockside Group. Mr Drivas and Dockside Group currently manage some of Sydney's prime harbour-based function centres, including the Dockside Pavilion in Darling Harbour, Campbell's Stores in The Rocks, and Orso Bayside at The Spit, Mosman.

Dockside Group has significant experience with managing function centres and restaurants, including experience with weddings, business events, special occasions and formals. Further, facilities operated by Dockside Group are located in some of the most environmentally and visually sensitive areas of the harbour, such as The Rocks, Middle Harbour and Darling Harbour. As an experienced and successful operator, Dockside Group:

- Holds the necessary insurances, including public liability insurance;
- Manages and coordinates ticketing arrangements with event organisers, as necessary, depending on the type and nature of the event;
- Has the necessary financial backing to ensure the ongoing viability of the operation;
- Has arrangements in place if events and functions are cancelled or postponed; and
- Has dedicated marketing staff to manage marketing and media enquiries.

Staff training will be comprehensive and thorough, and will include training in respecting the heritage significance of the buildings and the environmental significance of the surrounding area. All staff who will be serving alcohol will be required to

undertake the necessary Responsible Service of Alcohol training. Opportunities to use local labour will be used where possible.

Details of risk assessment, security and emergency management are detailed within the Plan of Management, prepared by Gap Bluff Hospitality, and included at **Appendix H**. Security and emergency management procedures include, but are not limited to:

- Licensed uniformed Security Officers are to be provided at a ratio of 1:100 patrons.
- From 30 minutes prior to the commencement of a function, 1 licensed uniformed Security Officer must patrol the external area of the licensed premises.
- For 30 minutes after the last patron has exited the licensed premises, 2 licensed uniformed Security Officer must patrol the external area of the licensed premises.
- Undesirable patrons will not be permitted to enter or remain in the venue.
- Responding to all alarms and duress situations as required.
- Developing a Fire and Emergency Management Plan for the Gap Bluff Centre properties and Constables Cottage.

4.2 Access and transport

4.2.1 Access and transport arrangements

Guiding principle

- Maximise opportunities for access by non-car means.
- Minimise impacts on general public access.

Considerations or benchmarks

Identify arrangements for access to and within the site, including:

- promotion of public transport use as the first preference;
- bicycle, pedestrian and disabled access;
- vehicle use, including car-parking; and
- any planned use of traffic marshals or controllers.

Limit any reductions in existing public access to natural features such as foreshores, beaches, waterways and headlands, recreational facilities and places of social or cultural significance, to those actions that are essential to the safe and efficient running of the activity or use.

Assessment

A Traffic Impact Assessment Report has been prepared by Ason Group (refer to **Appendix B**). The report addresses the relevant parking, traffic and access implications of the proposed activity.

The proposal seeks to encourage non-car transport and minimise impacts on existing traffic and parking arrangements by implementing the following measures:

- Maximising the car parking the site can currently accommodate without any unnecessary works,
- Providing a „constrained“ parking provision that discourages car driving and encourages the use of alternative transport modes. Event organisers will be recommended to offer their guest mini-bus services and promote the public transportation services of Ferry and Bus. Additionally, guest will be recommended to car pool, further promoting designated drivers and taxi services (including private

driver services such as Uber). Large Groups will be recommended to utilise larger coach transport. Presently large coach transport enters and exits via the Military Road, although if considered of interest to NPWS, exiting via Lighthouse Road will be investigated pending assessment of gradients and turning circle.

- Preparing a Parking Plan of Management prior to the commencement of works.
- Providing overflow kerbside parking on the access road to the north of the Gap Bluff precinct. Due to the 6.0 metre width of this road, on occasions that it is used for overflow parking, it is recommended that the road is managed to be temporarily one-way northbound to optimise traffic flow.
- Access to the Gap Bluff precinct will continue as currently occurs. In this regard, coaches enter via the southern primary access with Military Road, unload passengers in front of the Armoury and turn within the hardstand area adjacent to the Armoury building to exit via the main access. Accordingly, this area needs to remain clear of parked cars.
- The future operator of the function centres will provide a service whereby they would arrange with a coach/bus operator to service a function or event, promoted verbally and via their website and collateral.
- Constables Cottage will provide a shuttle bus service during peak periods to transport patrons between the café / restaurant and the Watsons Bay car parks, ferry terminal and the Military Road bus terminus. This service would also connect to additional parking opportunities elsewhere, such as the 37 space car park at the intersection of Military Road with Cliff Street.

4.3 Waste management

4.3.1 Waste management arrangements

Guiding principle

Avoid generating waste as the first priority, then reuse or recycle unavoidable waste.

Considerations or benchmarks

Prioritise the minimisation of waste, supported by systems to collect, store, reuse and recycle unavoidable waste.

Identify waste management arrangements including:

- collection, sorting, recycling, disposal and measures to prevent animal access to waste; and
- toilet facilities, with preference to water and chemical free options.

Innovative collection and treatment technologies may be considered, but preference must be given to systems that have been proven to be fit for the intended purpose and with least risk to the environment.

Assessment

The primary objective of the Gap Bluff Hospitality (GBH) Pty Ltd Waste Management Plan is to establish processes enabling waste to be collected in a manner that minimises noise, volume of traffic and cross contamination therefore maximising the potential for minimal impact on the neighbourhood and to promote recycling.

As a principle, all waste will be centralised at the waste management area at Officers Mess, Gap Bluff Precinct. Waste from the Armoury and Constables Cottage waste will be stored onsite (internally or within lockable areas) overnight and transported using GBH vehicles to the centralised waste management area in the morning for processing.

This management plan is a fluid document which will be adjusted as required to meet the changing requirements and regulations in the Waste Management Industry including:

- Changes in tipping costs;
- Changes in what is accepted at tips;
- Changes in recycling methods;
- Changes in the definition of waste;
- Usage patterns and behaviour; and
- Environmental, Presentation, Pest control etc.

For the purposes of this plan all waste is split into 4 major waste streams:

- **Recyclable** – any item that is recyclable commonly referred to in this document as “Dry” waste.
- **Non-Recyclable** - cross contaminated or non-recyclable waste streams, commonly referred to in this document as “General” waste.
- **Organic Waste** – Food waste/organic waste that can be recycled through the organics waste stream via the PulpMaster system commonly referred to “Organic” waste in this document.
- **Special Waste** – waste that must be handled in a special manner that may result in recyclable waste, items that are partially recyclable, re-usable products or non-recyclables.

Within the consolidated waste management area, the following waste management measures will be adopted for the proposed activity:

- **General Waste** - 2 General Waste 660L Bins will be provided at this location for the use of Precinct venues and cleaners. All General Waste will be transported in mobile plastic bins (green 240 litres) to the waste management area. Collection will be arranged on an as needed basis, anticipated to be twice a week in low season April to August and 4 times a week in high season September to March.
- **Organic Waste** - Organic/food waste is to be separated from other waste streams and placed in the Organic waste bins provided (Purple 120 litre mobile bins). Organic Waste will be processed in the PulpMaster system and converted to compost. The resulting compost will be used within the precinct pending approval from National Parks or collected for landfill, if not, albeit in significantly less volume.
- **Cardboard** - A cardboard compactor is located in the waste management area. All cardboard will be transported in mobile plastic bins (240 litres) to the waste management area. 1x50Kg bale is anticipated per week.
- **Glass Recycling** - Whole Bottle Glass bins (blue 240 litre bins) will be located in the BOH areas of the Officers Mess and The Armoury. All glass waste is to be transported via these bins to the waste management area. A Bottle Crusher will be located at the waste management area to crush and store all crushed glass in blue 75 litre bins. Crushing of glass will be conducted at after 9.00am and before 10.00pm at night. It is estimated that 4x75 litre bins will be sufficient for the anticipated volume of glassware per week, year round. This will ensure a minimum of collections as glass is one of the bulkiest waste requirements.
- **Cooking Oil Recycling** - A cooking oil recycling system is located within the waste management area. Oil caddies supplied by the service provider will be used to transport cooking oil for storage within the oil recycling system, ready for collection on an as needed basis. An estimated 1,000 litres of cooking oil will be consumed and recycled per year for Officers Mess, The Armoury and Constables Cottage.

See **Section 3.3.5** and the Waste Management Plan at **Appendix K** for further information on waste management measures.

4.4 Energy and water use

4.4.1 Minimising energy and water use

Guiding principle

Use best practice and cost effective measures to avoid and then minimise energy and water use.

Considerations or benchmarks

Provide details of energy and water supply and use, including measures that will first avoid and then minimise energy and water use.

This should include, but not be limited to, consideration of:

- planning the event timing to maximise use of natural daylight;
- use of energy and water efficient appliances, fittings and timers;
- waterless toilets;
- purchase or provision of bulk potable water (for example in designated drinking water tanks) to minimise the need for bottled water;
- use of temporary renewable energy systems to support load requirements;
- where generators are required, using models that run on biodiesel or meet best practice emission standards;
- sourcing accredited Green Power;
- purchase of carbon credits to offset unavoidable energy use and achieve carbon neutrality or better; and
- energy and water monitoring systems.

Assessment

Energy reduction strategies will include:

- Selecting star-rated equipment where possible within 0.5 stars of best available
- Selecting high-efficiency HVAC equipment
- Implementing occupancy controls within rooms and other temporarily occupied back of house areas
- Use of LED lighting and external spaces and in lieu of halogen lights within rooms
- Energy optimisation and targets will be established

Water use strategies will include:

- Use of low flow WELS-rated fittings and fixtures
- WELS-rated appliances and equipment where available
- Use of best practice commercial kitchen equipment
- Low water demand plants and landscape design
- WSUD design to help deliver water requirements for landscaping and treatment of stormwater emissions

See **Section 3.3** and the ESD Report at **Appendix J** for further information on energy usage.

4.5 Consumable products

4.5.1 Catering and merchandise

Guiding principle

Provide products that support the purpose of the activity, while minimising waste.

Considerations or benchmarks

Provide details of any plans to provide food, beverages or merchandise, including:

- whether alcohol will be sold and, if so, any licensing requirements and arrangements for responsible service;
- opportunities to source local produce and local labour;
- provision of tap or other potable water free of charge;
- provision of cutlery, plates, cups and food packaging that is reusable or recyclable;
- avoiding waste generation by minimising product packaging;
- catering to a range of price levels and food styles (vegetarian, vegan, gluten free); and
- any souvenirs or other merchandise.

Activities must avoid:

- promotional products, such as gifts, delegate packs and leaflets unless they are considered essential to the event and only then if they incorporate recycled or reusable materials; and
- the sale of non-essential associated products, such as showbags, toys and imported souvenirs.

Assessment

The Armoury, Officers Mess and Constables Cottage will be licensed premises and will serve alcohol in accordance with Responsible Service of Alcohol requirements.

Local produce and labour will be used where possible. Tap water will be provided free of charge upon request.

Cutlery, plates and cups will be reusable. Reusable food packaging will be used where possible.

Waste generation will be minimised by centralising food production at the Officers Mess and then transporting it to the Armoury and Constables Cottage, thereby creating economies of scale and reducing the amount of packaging used.

A range of food styles, including vegetarian, vegan and gluten-free requirements, will be catered to as part of any function.

4.5.2 Communication to participants

Guiding principle

Avoid unnecessary paper usage.

Considerations or benchmarks

Maximise the use of paper-free and electronic communications for participants, such as on-line invitations, registrations, conference papers and presentations.

Assessment

Paper usage will be minimised where possible in the Gap Bluff Hospitality offices, and paper-free and electronic communications will be prioritised in the promotion of any function or event.

4.6 Promotion and education

4.6.1 Promotion, interpretation and education

Guiding principle

Activities and uses provide a unique experience for visitors, and support park management outcomes.

Considerations or benchmarks

Detail how the activity will promote community awareness and understanding of the park and its conservation values, including:

- opportunities for patrons to experience park values, such as guided tours, presentations, interpretation materials or cultural events;
- use of event promotional material to emphasise park values, measures to protect those values during the event, and opportunities to experience the park; and
- opportunities for Aboriginal employment.

Assessment

Although guided tours and the like are not proposed, the proposal provides the opportunity for ongoing public access to the Gap Bluff Precinct. It also provides increased opportunities for public access to the historic Armoury, Officers Mess and Constables Cottage buildings.

In terms of the Gap Bluff Precinct, access to this precinct will be maintained at all times for walking or other recreational activities. Access to the specific buildings within the precinct will be only during operating hours and will be limited to staff or function guests.

Access to the Constables Cottage site will be available for the first time. This access will be available to all members of the public – even those not specifically visiting the restaurant. This will allow the public to enjoy and experience this historic building. Access will be maintained during the opening hours of the restaurant, but will be closed after hours.

4.7 Monitoring performance

4.7.1 Monitoring performance

Guiding principle

- Facilities meet existing standards.
- Assess performance and support continual improvement.

Considerations or benchmarks

Provide details of systems for monitoring the environmental performance during set-up, operation and pack-up stages. This should include identification of maximum limits and monitoring benchmarks in key areas such as:

- the number of persons on site (including patrons and staff);
- hours of operation;
- water and energy use;
- waste management;
- noise;
- vehicle traffic and parking; and
- patron satisfaction.

Assessment

The following monitoring measures will be implemented during operation of the facilities:

- Hours of operation will be managed in accordance with the Operational Plan of Management, and it will be the responsibility of on-site management to ensure these are adhered to. Operating hours will be reviewed and considered with any complaints from local residents.
- Staff and patron numbers will be managed in accordance with the Operational Plan of Management, and it will be the responsibility of on-site management to ensure these are adhered to. Patron capacity will be monitored, and will be considered if noise and or traffic and parking impacts are experienced. Staff levels will be monitored, and reviewed if staff levels are considered inappropriate to meet operational requirements.
- Energy and water use and waste generation will be monitored and reviewed periodically to ensure that the buildings are performing optimally and in-line with best practice, although concessions may need to be made, given the fact that the buildings are existing and are of significant heritage value. Whilst the maintenance requirements of the buildings have not been specifically documented as yet, environmental monitoring standards will be agreed as part of lease negotiations.
- Ongoing monitoring of noise egress and collection of any complaints from local residents will be undertaken. If necessary, additional acoustic mitigation measures will be incorporated.
- Waste management procedures will be continually monitored and optimised to reduce the amount of waste generated, and to minimise the impact of waste collection on the surrounding areas.
- The amount of vehicle traffic generation and parking usage will be monitored. If necessary, additional mitigation measures will be implemented, as detailed in the Traffic Impact Assessment.
- Patron satisfaction is a prime consideration for Gap Bluff Hospitality, and will be carefully monitored. If necessary, measures will be adopted to optimise patron satisfaction where required.