

Waterfront Lighting Strategy

Making Lambton Harbour a nighttime destination



Table of contents

1.0 INTRODUCTION	3
1.1 MAIN OBJECTIVE	3
1.2 SCOPE	4
2.0 BACKGROUND	5
2.1 EXISTING LIGHTING	5
2.2 A NEW APPROACH	7
3.0 LIGHTING PRINCIPLES	9
3.1 VITALITY AND SAFETY	10
3.2 CONNECTIONS	12
3.3 A SENSE OF PLACE	13
3.4 THE VIEW OVER THE WATER	15
3.5 THE GREEN PRINCIPLE	15
4.0 IMPLEMENTATION	18
4.1 THE NEXT STEP	19
4.2 FUTURE PLANNING	19
4.3 REQUIRED MINOR WORKS	20
4.4 RESOURCES	20
5.0 PRECINCT PRINCIPLE GUIDE	22
5.1 THE PROMENADE	24
5.1.1 VITALITY AND SAFETY	25
5.1.2 A SENSE OF PLACE	27
5.1.3 THE VIEW OVER THE WATER	28
5.1.4 THE GREEN PRINCIPLE	29
5.2 NORTH QUEEN'S WHARF	32
5.2.1 VITALITY AND SAFETY	33
5.2.2 CITY CONNECTIONS	35
5.2.3 A SENSE OF PLACE	37
5.2.4 THE GREEN PRINCIPLE	38
5.3 QUEENS WHARF	40
5.3.1 VITALITY AND SAFETY	41
5.3.2 CITY CONNECTIONS	43
5.3.3 A SENSE OF PLACE	44
5.3.4 THE VIEW OVER THE WATER	47
5.3.5 THE GREEN PRINCIPLE	48
5.4 FRANK KITTS PARK AND THE LAGOON	51
5.4.1 VITALITY AND SAFETY	52
5.4.2 CITY CONNECTIONS	54
5.4.3 A SENSE OF PLACE	55
5.4.4 THE VIEW OVER THE WATER	56
5.4.5 THE GREEN PRINCIPLE	57
5.5 TARANAKI STREET WHARF	59
5.5.1 VITALITY AND SAFETY	60
5.5.2 CITY CONNECTIONS	61
5.5.3 A SENSE OF PLACE	62
5.5.4 THE GREEN PRINCIPLE	63
5.6 WAITANGI PARK	65
5.6.1 VITALITY AND SAFETY	66
5.6.2 CITY CONNECTIONS	69
5.6.3 A SENSE OF PLACE	70
5.6.4 THE VIEW OVER THE WATER	72
5.6.5 THE GREEN PRINCIPLE	74
ACKNOWLEDGEMENTS	75

1.0

INTRODUCTION

1.1 MAIN OBJECTIVE

The main objective of this strategy is to define a high quality of nighttime lighting that is appropriate for each precinct of the waterfront. It does this by providing a lighting framework to enable designers to provide appropriate lighting for the buildings and public places they develop.

If the strategy is successful it will both allow local variation and broad consistency in its execution. It will strike a balance between foreground and background lighting. Not everything can be in the foreground - or different - as you get no character other than an impression of ad-hoc competition. Often lighting is most effective when it builds up a common background and is hardly noticed. In that way a local lighting character for each area can be developed and then layered over a consistent background lighting which links the different areas together.

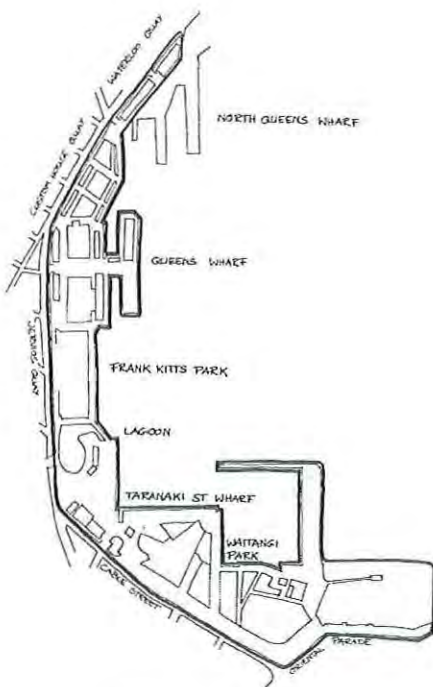
1.2

SCOPE

From this objective the strategy will develop an appropriate set of design principles and apply them across all 6 precincts of the waterfront - North Queens Wharf, Queens Wharf, Frank Kitts Park, Taranaki Street, Waitangi Park and a 6th common area, The Promenade. The boundary of these precincts are the road edge formed by the Quays, Cable Street and Oriental Parade, the water's edge including the Overseas Passenger Terminal, Shed 21 and the Freyberg Pool end of the marina boatsheds.

For each of these precincts the Waterfront Lighting Strategy is a lighting brief for designers rather than a prescribed and set solution. It defines minimum lighting standards to be achieved and focuses on providing a coordinated response to lighting public spaces on the waterfront. However it does not deal with the many technical and financial requirements of a successful lighting solution. Whilst not part of this document, these matters should be addressed elsewhere.

This document has a 3-year life span, at which time it should be reviewed and updated. At the end of three years a good deal of development will have taken place that can be evaluated after occupation. Such post occupation evaluation will provide useful feedback for updating the strategy.



Strategy precincts

2.0

BACKGROUND

2.1 EXISTING LIGHTING

Currently the Waterfront is lit in an ad-hoc industrial manner reflecting its recent past uses. The current lighting system has been installed over time where each development was lit individually without regard for the wider waterfront environment. Generally, the light levels are sufficient for safe passage. Some less trafficked areas feel less safe due to localised gaps in the lighting.

North Queens Wharf has high lighting masts with high wattage floodlights atop. These are suitable for large, open area port and carpark use. Spot tests show the light levels in this area to be approximately 3 lux¹. Though this level is low it does feel safe as the whole, open expanse of the precinct is lit. Interesting “heritage” light fixtures are present on the gateposts and on the Eastbourne Ferry building. Shed 21, that has recently been refurbished, has in ground uplighting along 3 sides.

Queens Wharf is lit mostly off building mounted lights. These vary greatly from “mean”, industrial bulkheads on shed 1 and 6 to old style lanterns on shed 5. Augmenting this are bollard and recent accent lighting to the QW sails area. The lighting in this area is very uncoordinated and accordingly light levels vary greatly from approximately 1 to 4 lux. A good example of service area lighting exists between the Queens Wharf Centre and Shed 5.

Frank Kitts Park is very brightly lit. The promenade in this area varies from 8 to 16 lux under the ball lanterns. The glare, or direct lamp brightness of these fixtures, obscures the view of the neighbouring waterfront precincts. The bright lighting within the park is a response to an undesirable nighttime use rather than to encourage nighttime activity.

Taranaki St Wharf and the lagoon bridge have recently been relit as part of the new development in this area. Light levels at the new custom designed and built mast lights are 4 to 8 lux on the West wharf and 6 to 11 lux on the East wharf. Where the masts are being relied on for all the lighting the wharfs are marginally under lit. It is understood these “holes” have come about because other lighting features were removed for replacement. Interpretive coloured lighting has also been introduced under the wharf and within port architecture, for example the bridge and the lifting bridge. This is very effective from a distance, however at close range direct glare is a problem.

As the Chaffers precinct is currently under redevelopment into Waitangi Park its existing lighting was not reviewed.

¹ Light level readings were taken by the author along the promenade on a random basis to give an overall impression of the light levels only. If the reader wishes accurate information a separate light survey will be required.

2.2

A NEW APPROACH

The Waterfront Lighting Strategy, commissioned by Wellington Waterfront, is written to facilitate the co-ordination of this ad-hoc approach to lighting in each precinct and to define a lighting framework that is consistent with the wider objectives of Wellington's inner city lighting.

It takes the Wellington Waterfront Framework (April 2001) and the draft WCC Inner City Lighting Strategy as starting points² and develops the values, principles and objectives identified in these documents as its own lighting specific, core principles. These principles are universal in nature and strongly inter-connected - for example no one principle talks about safety, but taken all together they will create a sense of well being and vitality. For this reason no one principle can be developed to the exclusion of others, each must receive expression.

Though these principles are site relevant to the Lambton Harbour Development Project they remain broad and universal in nature. So within the section "Precinct Principle Guide" the Waterfront Lighting Strategy further expresses each principle as a lighting framework to enable designers to provide appropriate lighting for the buildings and public places they develop. It develops this framework on a precinct-by-precinct basis. In this way each precinct can have different expressions of the same universal principle and allow local variation and broad consistency in its execution.

Overall, this strategy document is placed to sit in parallel with other design documents such as the street furniture and signage briefs for the Waterfront. For success each of these documents must work together and compliment each other. To this end this Lighting Strategy needs to be issued to designers working in all aspects of design for the Waterfront's urban space.

² Other documents reviewed are: North Queens Wharf Brief (August 2002), Proposed hotel for Queens Wharf outer-T document, The Chaffers Park Competition Stage Two – Chaffers Area Project Design Report and the Athfield Architects design "Water front promenade – from Frank Kitts Park to Taranaki Street.

3.0

LIGHTING PRINCIPLES

Light has the extraordinary ability of ensuring functional visibility on one hand, while on the other, making it possible to imbue a place with energy. At its best lighting will encourage use.

From the Wellington Waterfront Framework (April 2001) and the draft WCC Inner City Lighting Strategy the following core lighting principles are identified.

3.1

VITALITY AND SAFETY

A sense of well being is a combination of many factors. Paramount to this is a perception of safety and vitality that will promote use. The role of lighting is to kick-start and support initiatives that lead to greater vitality. Greater vitality and better lighting create safer places.

It is important to note this is not just about amounts of light (light levels). The amount of illumination is unrelated to vitality; other factors such as contrast have a greater effect on visibility. Rather luminosity can highlight events, tell stories and bring public space to life. Good lighting arouses interest and curiosity; it generates a feeling of comfort and well being.

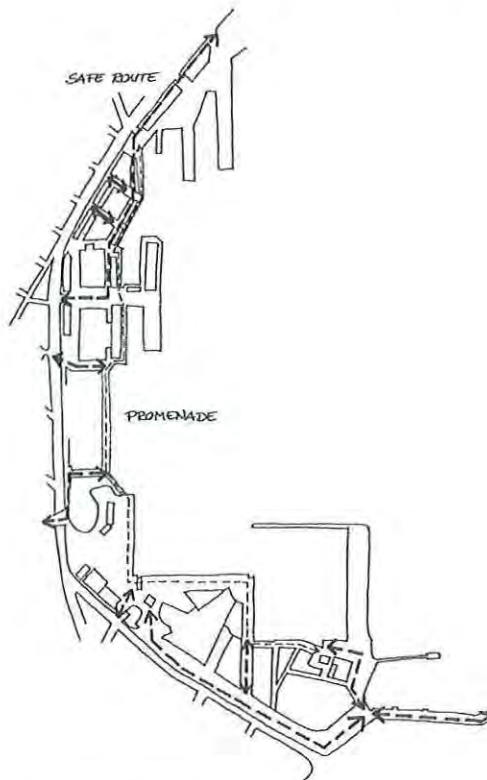
Use light to reinforce human experiences for a wide range of people irrespective of age, culture or how they use the Waterfront.

- Use lighting appropriate for each different activity and experience.
- Combine different types of lighting systems; ensure that light is projected in more than one direction. A combination of overhead diffuse and peripheral lighting is best.
- Locate lighting at a low level as required to give human scale and keep the sky free from glare.
- Use warm light colour tones as these are more conducive to promoting human interaction and activity.
- Never over light as this will mask the dark harbour views.

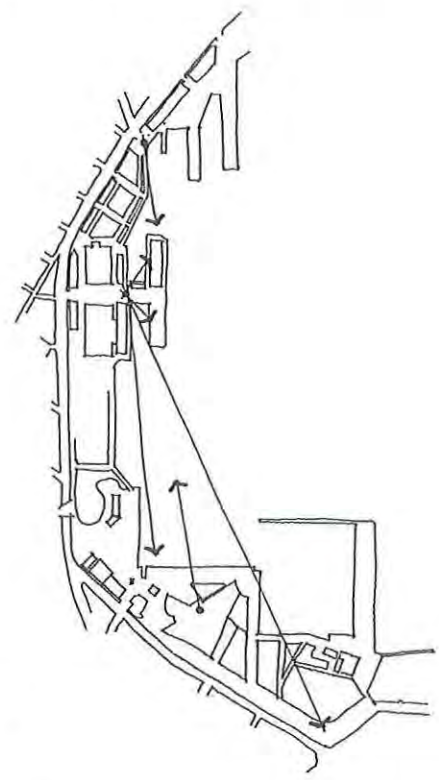
Use light to create a clearly legible nighttime environment so that a first time visitor can see, read and understand the physical environment while moving through it.

- Identify safe routes through the waterfront. The route should be the path with the most natural surveillance. Preferably it should have the most protection from the weather.

- Where the lighting requirements for a safe route are at odds with maintaining the integrity of harbour views from the waterfront edge, then take the safe route inland.
- From the main routes provide multiple well lit entry/exit points back to the city or other routes. In this way people have the choice of alternative routes.
- Provide strong pools of light at approx 15m spacing to pull people along these routes³.



Identify a Safe Route



Orientation points facilitate wayfinding

- Light objects that are visible from a distance to facilitate way finding. Light the key structures or points that provides orientation by day so they can be recognised by night.
- Reduce visual clutter and create simple open pathways by placing lights carefully and select a means of support that does not add to the visual confusion.
- Light all recesses in the natural or built environment adjacent to all circulation routes to minimise places of

³ The 15m spacing rule is based on practical observation developed by Mr. Frank Stoks.

concealment. In particular light under verandah overhangs.

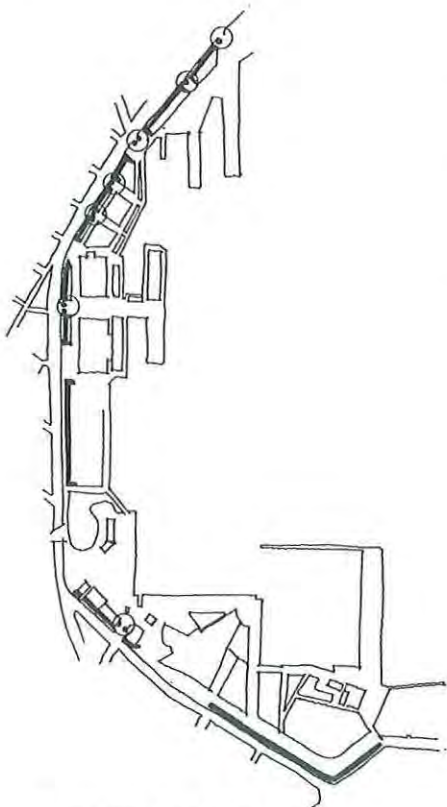
Use the absence of light as a design tool. There are situations where lack of light can be used to guide behaviour or to protect the natural environment.

- Don't light paths where natural surveillance is restricted, intermittent or non-existent.
- Don't fill parks with light. Rather light their edges to facilitate clear recognition to the edges of all major pedestrian routes.
- Identify any areas important to native flora and fauna and allow them access to natural day/night lighting rhythms.

3.2

CONNECTIONS

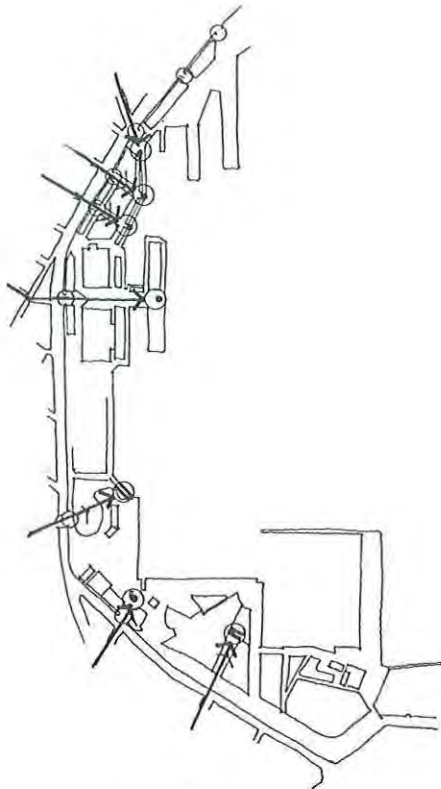
Currently the city is poorly linked to the waterfront. To promote use of the waterfront it must be an extension of the city. At night the lighting must make an environment that encourages the trip from the City to the water's edge.



The Waterfront's City edge

Use light to enliven the road edge of the Waterfront by giving it a human face. This edge is highly visible and is an effective way to promote recognition of the Waterfront.

- Light the historic building facades along the Quays. Use lighting that enhances the mouldings and modulation of the historic and industrial facades.
- Continue the illuminated edge condition where parks exist by lighting them as "green edges".
- Place light around the lagoon and its surrounds to create reflections in the surface of the water. Investigate the relighting of the Rowing Club façade.
- Work with WCC to ensure that their Quay's upgrade project will ensure a consistent and appropriate lighting condition to the city edge of the Waterfront.



City to Waterfront view shafts

Use light to mark points of entry to the waterfront clearly by night. Light them as destinations, clearly visible from the city to reduce apparent travel distances.

- Highlight the historic gates and gateposts as clear marker points of entry.
- Where entry points have no clear maker consider ways of making one. Light it by night.
- Light the whole entry zone in a way that it stands out from its surroundings.

Use light to reinforce the existing City to Waterfront view shafts.

- Light along the edges of the shafts to continue an unbroken line of sight.
- Create a brighter light focal point at the end of the shaft as a termination of the view. Do this in such a way that it does not mask the view out to the harbour.
- At all times minimise glare as this will mask the view beyond.

3.3

A SENSE OF PLACE

“Heritage and the history of the waterfront are important parts of the identity of the Waterfront.”⁴

Use light to make the water’s edge a destination, a special place like no other in the city. It will be seen as an attractive place that draws both Wellingtonians and visitors if the water remains the primary focus.

- At night the water view is very dark. Light direction must be kept downward focused to eliminate glare and reflected glow adjacent to the water’s edge.
- Light the edges of land where it meets the sea. Where possible light the edge so that the translucent moving nature of water is revealed.

⁴ The Wellington Waterfront Framework section 3.1 “Values and principles”.

- Place lit objects in the near distance of the harbour so the sense of scale and the depth of view are retained by night.



Use light to enhance special features

Use light to enhance the expression of the waterfront’s heritage and history. This principle has strong links with the principle of creating a vital and safe Waterfront.

- Lambton Harbour has been a working port for 160 years. Light the remaining artefacts as a memory of this mercantile history, for example buoys, wharfs, cranes and operating sheds.
- Light the historic buildings in a way that highlights their use and uniqueness. Also refer to the principle of connecting City and Waterfront.
- Reuse all existing heritage lighting hardware.
- New lighting equipment should suit the “working” context of the Waterfront, both in terms of durability and aesthetics.

In the redevelopment of the Waterfront new recreational and cultural areas of significance will be added. For the ongoing quality of place it is equally important that this contemporary culture is visible by night.

- Light all artworks within the Waterfront.
- Light the “shopfronts” of the new retail and hospitality uses added to the waterfront.
- Develop an appropriate signage programme that encourages the use of light in advertising. This light can both generate a sense of vitality and effectively illuminate the perimeters of public space.

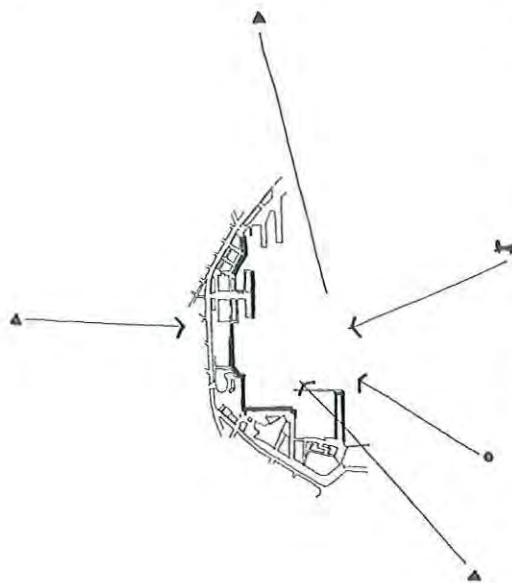
Use light to play a key role in special events. Often these occur at night which makes good lighting of critical importance. Light is an evocative tool that when used artistically can generate great impact. It is at its richest when working on many levels, both on the grand scale and at an intimate level coordinated together. Use

light to mark the special occasions that occur in Wellington's calendar.

- Identify opportunities for the creative use of light in Wellington's special event calendar.
- Install a permanent infrastructure to allow temporary event lighting to be connected and controlled.
- Look for opportunities to install temporary lighting within the developed structure of the waterfront.

3.4

THE VIEW OVER THE WATER



External views into the Waterfront

A visitor's expectation of what the Waterfront is will be generated before they arrive. Lambton Harbour's position in the geography of Wellington provides views into the Waterfront from many vantage points before arrival. From low elevation across the water, from high vantage points in the surrounding hills, from a landing aircraft or from ferry boats on the water, much of the attraction of the waterfront comes in anticipation.

Use light to form a dynamic, moving relationship with the water. Together they amplify each other.

- Develop a repetitive consistency of lighting treatment at the water's edge that frames the whole area when viewed from afar.
- Enhance the opportunity for reflections when lighting objects near the water.
- Introduce coloured light as a theme on the Waterfront.

3.5

THE GREEN PRINCIPLE

The bright lights of a big city are an attraction in their own right. However, it is possible to have too much of a good thing. The advantages of outdoor lighting need to be balanced against possible damage to the environment.

Undertake redevelopment of each precinct in a manner to maximise the principles of ecological sustainability. Public area lighting is both an obvious form of energy use and will represent an increasing part of WWL operating budget. Lighting with ecological principles is good for everybody.

Not only does it use less of our resources, it costs less to run.

Use light responsibly on the waterfront.

- Do not over light, provide only as much light is as required to each area mindful of its context.
- Do not light areas that do not need lighting, for example large park areas.
- Install control systems to manage the lighting use (see below).
- Where possible use long life, low energy light sources. Use short life lamps or lamps sensitive to voltage fluctuation as a last resort and where possible protect them with high quality control gear and control systems.

Minimise stray or wasted light, all installations to conform to AS/NZS 4282 (1997): Control Over Obtrusive Effects of Outdoor Lighting.

- Minimise wasted stray light lost to the atmosphere. Not only is this wasted energy but also the cause of the sky glow that blocks out the stars.
- Do not overlight natural living environments for the local plant and animal life. Disruption of their natural day/night rhythms will place the environment out of balance.

Introduce simple control methods for the lighting that allow lighting levels to be altered as use drops off.

- Install separate control systems for amenity lighting, accent lighting and special effect lighting.
- Install photoelectric cells and timer controls independent from the WCC controls.
- Turn off lighting of non-essential items by stages as use of the precinct drops off with time.
- Use movement sensor controlled lighting where applicable.

4.0

IMPLEMENTATION

Wellington's harbour is recognized to be the City's finest asset and an integral part of its living history. As such it is paramount that it can be all it can be both by day and by night. To this end enacting a coordinated lighting approach governed by a strategy is an important start. This document defines a *lighting framework* that will guide designers in the right direction to provide appropriate lighting for the buildings and public places they develop. It is a major step towards an integrated and effective lighting solution.

4.1

THE NEXT STEP

The important first step is that the document be augmented by more detailed, implementation designs to ensure that complying lighting systems are proposed and built.

We recommend that this is achieved by preparing specific *lighting designs* for each precinct as upgrades occur. These designs should be prepared by a specialist in lighting and be reviewed by and coordinated with the project designer for each precinct. Another option is to write specific *performance briefs* for each precinct. These briefs closely define the technical requirements for each project and provide a point of measurement and review for design prior to construction. However this option relies on a review process and so lacks the direct application of special knowledge that occurs with the recommended approach.

These lighting designs should be prepared for all capital expenditure projects. In the near future this will include:

- Waitangi Park
- Installation of the Len Lye Sculpture “Waterwhirler” and other sculpture
- North Queens Wharf
- Waka House and adjacent upgrade at the lagoon
- Outer T of Queens Wharf

4.2

FUTURE PLANNING

The strategy identifies key projects that will have a major impact on the nighttime lighting of the Waterfront. Their impact is larger than other, perhaps bigger, projects in because their location makes them highly visible to users of the Waterfront.

As a priority begin planning work on the following projects:

- Begin design work and allocate funding for the upgrade the promenade as one complete capital expenditure project to ensure consistency along its length.

- Undertake negotiations with WCC about lighting to the proposed Quay's upgrade. Within this work any new lighting should improve the city "face" of the waterfront by lighting the historic structures, gateways and water edges at the lagoon.
- Write tenancy guidelines to control the lighting and any illuminated signage for all tenants within the Waterfront. Key issues for tenants have been identified in the strategy and include: lighting under verandahs, illuminated ground floor tenancies and the lighting for security of building recesses and service lanes.
- Resolution of the future for the Overseas Passenger Terminal and planning for its external lighting.

4.3

REQUIRED MINOR WORKS

The strategy identifies additional important minor projects that require attention in the near future

Execute the following projects in the near future:

- Complete small lighting works around the edge of Frank Kitts Park to improve safety.
- Upgrade works to the Taranaki Street Wharf precinct to increase impact and eliminate glare. The strategy identifies the new lighting in this area as being successful and influential. The fine-tuning of its implementation as identified within the strategy is important, as it will form the model for much of the proposed new work along the Promenade.

4.4

RESOURCES

It is beyond the scope of this strategy to define the resources required for these recommendations. However their effective execution will require for this work to be done.

5.0

PRECINCT PRINCIPLE GUIDE

In this section a lighting framework is developed. This framework is written to guide designers to provide appropriate lighting for the buildings and public places they develop. It develops this framework on a precinct-by-precinct basis. Not all principles apply equally to all precincts. Each precinct will have different expressions of the same universal principle that allows both local variation and broad consistency in its execution.

The lighting framework is defined for each precinct separately. This leads to some repetition, however it most effectively lists the entire lighting requirement for one precinct in one location.

Having determined the broad principles required for a high quality, Waterfront specific, lighting system in section 3 of *The Waterfront Lighting Strategy* we can now define appropriate and specific lighting opportunities for each precinct.

5.1 The Promenade

The Promenade is the continuous strip of space that is dedicated to pedestrian use. It is sometimes on reclaimed land, sometimes on wharf structure and at the Tug wharf in NQW precinct it splits in two. It connects all the precincts and at the boatsheds near Freyberg pool it is most visible to passing traffic. For the majority of its length it is adjacent to the water.

This promenade will be the major lighting statement of the Waterfront. Consider completing its full length as a separate capital expenditure project so that a uniform water's edge condition can be established.

5.1.1

VITALITY AND SAFETY



Taranaki St lightmasts

At all times this promenade must be accessible to people. It will achieve this when people feel safe spending time at the waters edge after dark. However care must be taken in ensuring that lighting does not mask the dark views out over the harbour, maintaining these is of the highest priority.

Develop a common lighting system along the full length of the promenade.

- Remove all existing lighting systems with the exception of Taranaki Street Wharf.
- Use the Taranaki St Wharf light pole as a standard fitting along the length of the promenade.
- One exception is along the Queens Wharf Inner T. Here refer to notes in the Queens Wharf precinct.
- At all times maintain the lighting of the pole shaft to create a rhythm along the promenade.
- At the Tug Wharf run the lighting along the inside line of the wharf that sits over the water.
- Incorporate light into other new furniture elements such as benches and wind screens to light the periphery of the promenade.

Develop a common light mast and fitting along the Promenade.

- Use the Taranaki Street Wharf mast and fitting as a model. Maintain its integrity by limiting variations.
- Upgrade the reflector finish and fitting optics to generate a higher output of light.
- Investigate use of alternative shaft lighting luminaires that use long life lamps.
- Where possible, standardise parts and connections to simplify future maintenance needs.

Break down the lineal run of the promenade and introduce recognition of alternative exit/entry routes to the City.

- At intersections with view shafts or with other circulation routes change the lighting condition.
- Change the pattern on the ground to signify a crossing and increase intensity of light to P7⁵.
- If possible identify a vertical element at this intersection and light it strongly so it is visible from the City.



Use a pattern of light to mark an intersection

Use light to facilitate legibility.

- Repeat common elements along the promenade to clearly identify its route.
- Place poles and other lighting elements to the side of the promenade to facilitate a maximum of open space.
- Light all recesses in the natural or built environment adjacent to the promenade to minimise places of concealment. In particular light seating benches well, for example Frank Kitts Park seating bench wall recesses.
- Limit glare from lights that are positioned at a low level. Mask lamps from direct view.
- Retrofit masks or re-orientate fittings to the lagoon bridge to reduce glare.

⁵ Pedestrian (hence "P") lighting qualities as defined in AS/NZS 1158.3.1:1999 Road Lighting – Pedestrian Area Lighting. Further "P" references are made in following text also come from this standard. See Appendix 1.

Do not overlight.

- Position lighting at the land side of the promenade to ensure all light is directed from land toward the sea.
- Light to P8 standard, measure the recommended light levels along the line of the lighting poles.
- Allow the light levels to diminish to 1/3rd the recommended value at the water's edge.

5.1.2

A SENSE OF PLACE

Make the waterfront a destination, a special place where people want to go.

Enliven the view out. Place lit objects in the near distance of the harbour so the sense of scale and the depth of view are retained by night.

- Install illuminated buoys in the inner harbour out of ship and boat lanes
- Place beacons on the breakwaters at the marina.
- Promote opportunities to use light sculptures on the harbour as part of Wellington's event programme



Illuminated buoys mark distance



Create pools of light in the water

Light the marine artefacts along the promenade. Reactivate their traditional marine lighting plus add effect lighting to give them prominence.

- Uplight the North Queens Wharf buoy and reactivate its lantern.
- Light inside the cabs of cranes at Queens Wharf and add light within their skeletal structures
- Light inside the Linkspan building and the floating crane at Taranaki St Wharf

Boost the essence of the location by adding modern interpretive marine elements.

- Develop new thematic lighting elements developed along the themes of “planks, balls, plates and masts”.⁶
- Install a trail of LED marker lights as a nighttime interpretative device to identify previous water front positions over successive reclamations. If a heritage trail is to be installed, use this device to identify the trail by night.
- Consider use of different colours to aid interpretive understanding (for example identifying each successive reclamation).

5.1.3



Add light to make reflections in the water

THE VIEW OVER THE WATER

The promenade is the most visible face of the Waterfront, it can be seen from many vantage points. The water's edge will be the marketable image of the Waterfront and of the City as a whole. The right lighting effect here will drive the perception of the Lambton Harbour.

Install a consistent lighting approach along the water's edge (refer vitality).

- Light vertical elements that can reflect in the water. Place lights on top of masts cranes and building corners to create further points of light to reflect in the water.

⁶ “Planks, Balls, Plates and Masts” originates from Athfield Architects concept for Taranaki St Wharf.

Extend the use of coloured light already started at Taranaki St Wharf to light marine objects.

- Use colour to add interpretation to the lit elements rather than applying an ad-hoc choice. For example use colour to signify commonality in age, use or position.
- Upgrade Taranaki Street Wharf object lighting colours as required to match this strategy.

Incorporate strong special effects in lighting as accent points visible from a distance.

- At Queens Wharf Outer T install dynamic lighting to provide a changing scenographic element (see Queens Wharf section).
- On the Inner T/Outer T place under wharf lighting to create reflections in the water without glare when viewed from other parts of the waterfront.
- Utilise sky lasers or similar powerful effect to create a power lighting accent (see Queens Wharf section).

5.1.4

THE GREEN PRINCIPLE

Restrict lighting to minimise light pollution and energy waste.

- Test alternative options of reflector optics on the promenade uplights to minimise waste light missing the reflector.
- Control all low level lighting so none escapes above the horizontal.
- Limit the wattage and control the beam angles of upward facing accent lighting so that what light is used generates its maximum impact.
- Protect fish environments by aiming the light up into, or along, the wharf structure rather than directly down into the water.

Control the accent lighting on a timer to minimise its impact on the environment.

- Use one master timer to trigger synchronised events across the waterfront.
- Turn on the lighting via a photoelectric cell located on the waterfront. Control this via a timer so it does not come on intermittently, for example during a storm.
- Turn off all accent and effect lighting at 1am.
- Limit special effects to occasional events; say marking the hour on 2 to 3 nights a week.

5.2 North Queen's Wharf

With development, this is an area that will become highly built up. In this way it will continue the nature of the adjacent City. Along its edge it has multiple heritage buildings. From the City there are many view shafts across the Quay, some of them through heritage gateways. The lighting must build on this context.

5.2.1



Borrow light from the edges of the route

VITALITY AND SAFETY

Light the periphery of circulation routes as an extension of the ground floor spaces of the buildings to maximise the sense of connection and natural surveillance.

- Use private “borrowed” light to both illuminate the peripheries of the public spaces and provide an opposing direction of light to the street lanterns.
- Set tenant controls such that ground floor lighting must be of 50lux at the tenancy perimeter. Tenant lights to be wired to waterfront timer to stay alight until 1 am.
- Where verandahs overhang public space set controls to ensure lighting is installed and maintained to operate at level equal to the public area lighting levels.

Deliver light at a human scale, colour and intensity.

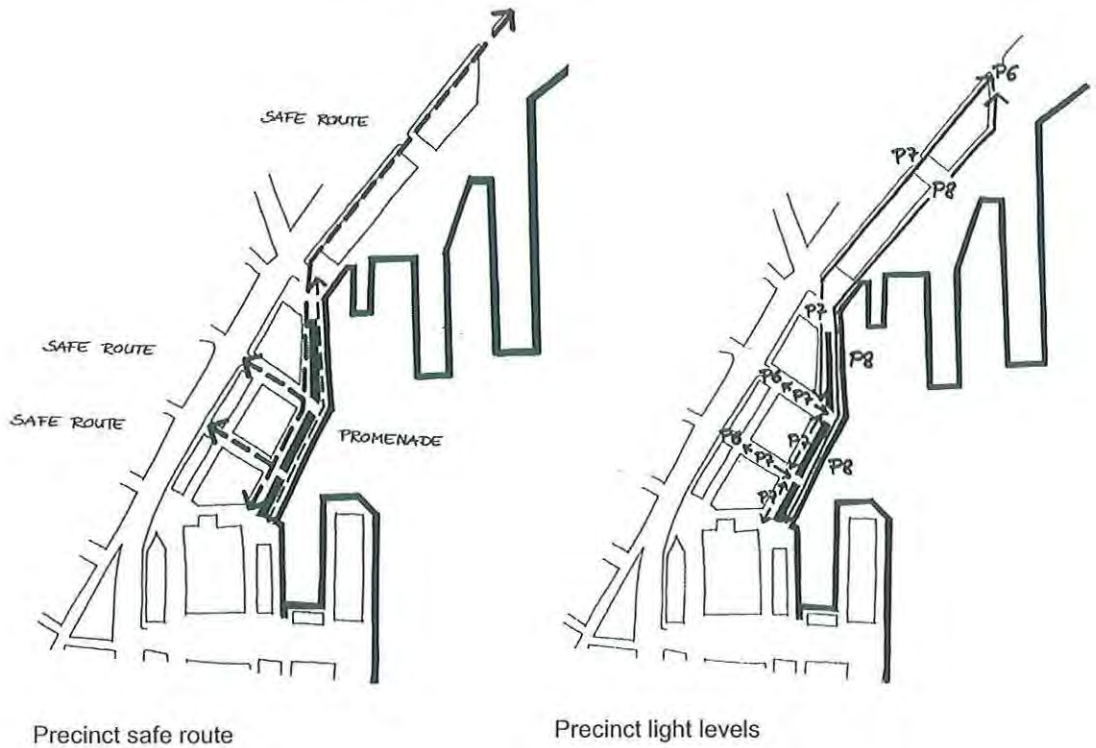
- Scale down the height of lighting and lighting hardware to approximately 5 meters (to be in scale with both the City lighting and the Promenade lighting).
- In particular emphasise an even lower scale at the boundary to the port so that a clear pedestrian priority zone is defined. Consider the interpretive “ball” lighting (Taranaki Street Wharf) or similar style lighting at approximately 0.7m high or less.
- All lighting is to be free of glare, luminaire types 3, 4 and 5⁷ acceptable. At no angle create bright spots within the cone of vision.
- All lighting is to be of a warm colour temperature⁸ and be of colour rendition class 1 or 2a only.
- Design the lighting system so that it relates to the architecture of the place; allow variation in position, angle and type of luminaires so that the lighting is appropriate to place.

⁷Light control as defined in AS/NZS 1158.3.1:1999 Road Lighting – Pedestrian Area Lighting. Further references are made in following text also come from this standard. See Appendix 2.

⁸ Warm colour temperature to mean 3000K plus or minus 200K

Do not overlight.

- Keep public area light levels to P7 on main public spaces and view shafts.
- Treat smaller spaces and lanes as tributaries to the main spaces and light them to a similar standard.
- Accent lighting should be 3 to 5 times the background level of lighting.



Light a clearly visible, primary safe route through the precinct.

- Identify a route from the Railway Station through the precinct which is most protected from the weather (refer criteria listed in the Vitality principle). In places this will be a multiple route for example along the promenade and along the Quays.
- Illuminate this route for all the hours of darkness, especially when it runs under private structures (e.g. verandahs).
- Provide multiple entry/exit points along this route back to the quays. Clearly identify these points by a change in lighting treatment with obvious change in light quality.

- Light entrance to carparks and the routes people take to access parked cars.
- Light the historical facades of the old buildings and the nautical buoy as way finding points.

Minimise clutter on pathways.

- Rationalise the amount of light poles required by making the poles multi functional.
- Position poles in coordination with other street furniture.
- In service lanes mount the lights off the buildings.

5.2.2

CITY CONNECTIONS

Use light to enliven the road edge of the Waterfront by giving it a human face. This edge is highly visible and is an effective way to promote recognition of the Waterfront.

- Light the facades of the historic wharf sheds along Customhouse Quay.
- Avoid excessive illumination, use low wattage tightly controlled lighting. Enhance form, material and decoration by grazed lighting or accent lighting effects.
- Consider the daytime appearance of the light fittings: where possible reduce visual impact and incorporate into the architecture.



Use light to enhance building form

Work closely with Wellington City Council over the upgrade of the Quays and their lighting.

- Protect the quality of the building façades from over lighting by road lighting fixtures.
- Ensure stray light does not enter into residential apartments.
- Coordinate positions and choice of lighting equipment to light the pedestrian safe route along the Quays in accordance with 5.2.1
- Ensure the quality of lighting is consistent along the whole length of the Waterfront's city edge.

Strongly light the entrance points to the precinct off Jervois Quay.

- Light the gateways to P7 standard, a brighter level than their surroundings.
- Accent light the gateposts or adjacent feature so they are visible from within the City.
- Refurbish and reactivate the gatepost lanterns.

Along the view shafts use light to allow an unobstructed view to the water's edge promenade.

- Position lights along the edges of the view shaft, not in the middle.
- Use vertical illumination such as tree trunks or illuminated shafts to set up a rhythm to lead the eye toward the water.
- Use luminaires that have full cut off lamp heads that project the light downward with no glare or spill light.

5.2.3

A SENSE OF PLACE



Light heritage items



Use of interpretative lights at Taranaki St

Light the heritage and history of the Precinct.

- Light the historic buildings within this precinct such as the Eastbourne Ferry Building. Where possible refurbish and extend the existing lanterns.
- Refurbish the gate post lanterns.
- Consider use of coloured light to aid recognition of commonality of age, use or location on the waterfront.

Boost the essence of the location by adding modern interpretive marine elements.

- Apply the principle of “Planks, Balls, Plates and Masts”.
- Identify previous locations of the water’s edge over successive reclamations. If a heritage trail is to be installed use this device to identify the trail by night.
- Install a trail of LED marker lights as the nighttime interpretive device.
- Consider the use of different colours for each successive line of reclamation.

Light all proposed insertions of contemporary culture.

- Where art is to be located provide power to allow the artist to light his/her work.
- Where trees are proposed upright directly into the canopy with cool coloured 4000K light. Do not light trees where this masks views or view shafts.
- Allow power at suitable points for public seasonal lighting.

Use a lighting delivery system that fits with the adjacent City lighting system.

- Consider use of pole mounted luminaires - see notes on heights and styles above.
- Allow the use of illuminated signage similar to the City's under awning style. Develop controls on brightness and construction to maintain quality and eliminate glare.
- Allow illuminated naming rights on the tops of the roof tops.

5.2.4

THE GREEN PRINCIPLE

Restrict lighting to minimise light pollution and energy waste.

- Light dusk to dawn on circulation routes to building entries to provide amenity to areas of habitation.
- Shield light from falling into habitable spaces within buildings.
- Use high quality full cut off luminaires and small lamps to eliminate waste upward light.
- Sensors can control service areas so that after 1am movement activates the lighting.

Control the accent lighting to minimise its impact on the environment.

- Turn on the lighting via a photoelectric cell located on the waterfront. Control this via a timer so it does not come on intermittently, for example during a storm.
- Turn off accent and effect lighting at 1am.
- Do not position lighting shining into the water.

5.3

Queens Wharf

Queens Wharf is already built up with new projects to sit within the footprint of the existing sheds. This precinct is located at the centre of the Lambton Harbour, has the most identifiable feature in the “T” shaped wharf and is the major entry point for the waterfront.

Current lighting is not coordinated and diminishes the importance of the precinct. Bright foreground lighting, the absence of a lit focal point and cluttered elements have masked the “link” through to the water from Post Office Square. The primary focus of any new lighting is to rectify this problem.

5.3.1



Light paths with borrowed light

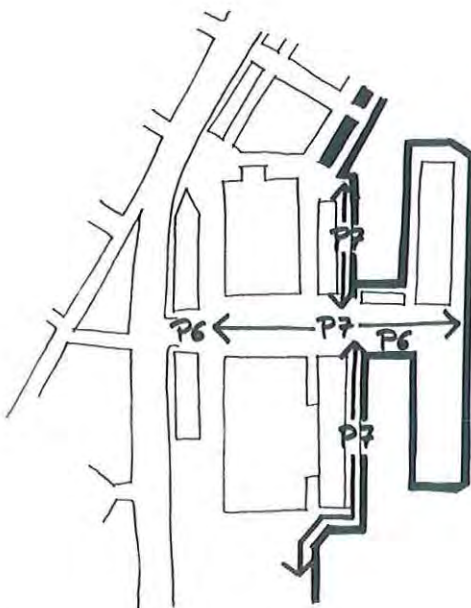
VITALITY AND SAFETY

Promote vitality through by increasing in the openness of ground floor spaces and using private borrowed light to illuminate the peripheries of public spaces.

- Use peripheral tenant light to provide an opposing direction of light.
- Set tenant controls such that ground floor lighting must be 50lux at the tenancy perimeter and be wired on a timer to stay on until 1am.
- Where verandahs overhang public space, set controls to ensure lighting is installed and maintained to operate at a level equal to the public lighting levels.

Deliver light at an appropriate scale colour and intensity to its location within the precinct.

- At the central “Square” use lights at higher mounting to give a more civic scale - minimum 5m.
- All *area* lighting is to be free of glare: luminaire types 3, 4 and 5 acceptable. Do not create bright spots within the cone of vision.
- Design building and tenancy lighting systems to create points of brilliance (as opposed to glare) to add to the vitality of the area. Where possible mount lights off buildings.
- All lighting is to be of a warm colour temperature and be of colour accuracy class 1 or 2a only.



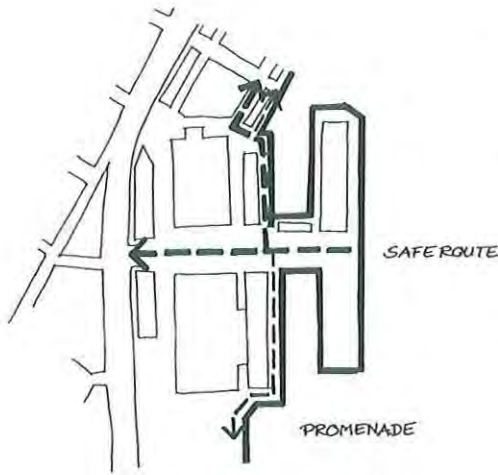
Precinct light levels

Do not overlight.

- On the “Square” keep public *area* light levels to P7 standard, boosted by high level of accent lighting. Elsewhere light levels should be P7 standard without the accents.
- Treat smaller spaces and lanes as tributaries to the main spaces and light them to a similar standard.
- Given the location, accent lighting in the “Square” should be higher than elsewhere at 5 to 10 times the

background level of lighting. Else where it should be 3 to 5 times the background level.

Light a clearly visible primary safe route through the precinct.



Precinct safe route

- Identify a route from the railway station through the precinct which is most protected from the weather (refer criteria listed in the “principles defined” text).
- Illuminate this route for all the hours of darkness, especially when it runs under private structures (e.g. verandahs).
- Provide entry/exit points at the “Square” back to the quays. Clearly identify the crossing point of the “Square” and the promenade by a change in lighting treatment and obvious change in light quality.
- Light the cranes at this point as way finding beacons (see “The View Looking In” below).

Do not light the open areas of the Outer “T” beyond the Dockside and proposed hotel.

- This is not a designated safe route as it has little natural surveillance.
- Strong lighting and/or mast style fixtures will reduce the view from the InnerT.
- Install minimum low level lights to facilitate movement only.

Minimise clutter on pathways.

- Reduce the need for poles down the “Square” by utilizing the sail lighting and lighting reflected off building facades. If possible eliminate the need for poles.
- Reduce the clutter of low level bollard lighting where this interrupts the flow of the eye out to the harbour
- Position lighting in coordination with other street furniture to ensure the widest width of walkway.

- In service lanes mount the lights off the buildings and consider use of sensor controlled lighting in less frequented areas.

5.3.2

CITY CONNECTIONS

A high level of foreground lighting has masked the link through from City to water. It needs redefining. Use lighting to pull people as far as the “Sails”, from there define a clear link to the sea.

Use light to enliven the road edge of the Waterfront by giving it a human face. This edge is highly visible and is an effective way to promote recognition of the Waterfront.

- Light the facades of the Wharf Office Apartments and Bond Store along Jervois Quay.
- Avoid excessive illumination, use low wattage tightly controlled lighting. Enhance form, material and decoration by lighting grazed across surfaces or accent lighting effects.
- Consider the daytime appearance of the light fittings, where possible reduce visual impact and incorporate into the architecture.

Work closely with Wellington City Council over the upgrade of the Quays and their lighting.

- Protect the quality of the building façades from over lighting by road lighting fixtures.
- Ensure stray light does not enter into residential apartments.
- Coordinate positions and choice of lighting equipment to light the pedestrian safe route along the quays in accordance with 5.2.1
- Ensure the quality of lighting is consistent along the whole length of the Waterfront’s city edge.

Strongly light the entrance points to the precinct off Jervois Quay.

- Light the Queens Wharf gateways to a brighter level than their surroundings.
- Accent light the gateposts and adjacent facades so they are visible from within the City.
- Refurbish and reactivate the gatepost lanterns.
- Improve the current sail uplighting by replacing fittings as required and re-aiming them for more even effect and better glare control.
- Consider uplighting the sails using coloured light so that it acts as a beacon from the City.
- Illuminate the backside of the Wharf Office Apartments and Bond Store so that the link to the City operates in both directions.

Along the view shafts use light to allow an unobstructed view to the water's edge promenade

- Remove the current bollard lighting.
- Minimise the impact of all lighting hardware on the "Square" to minimise the already busy visual environment.
- Light the facades along the Square to emphasise this connection to the City and use the reflected light to define the periphery of the space without over lighting it in relation to the sea views.

5.3.3

A SENSE OF PLACE

Queens Wharf is the heart of the Waterfront with an identity of a working port with a recent mercantile history. This sense of place has been diminished by recent commercial developments.

Insert a lighting style interpretive of the working wharf use. Replace lighting that is retail or "strip commercial" in nature.

- Remove the generic-styled, prosaic industrial fittings on Shed 6.
- The promenade bisects Queens Wharf. Stop the promenade lighting either side of the inner T and design new building mounted lights to illuminate the promenade.

- New lighting on the Outer “T” to use interpretive elements as lighting. Consider low level lighting to facilitate movement such as the “ball” lighting at Taranaki Street Wharf.
- On Shed 1 replace luminaires with a more appropriate style that facilitates safe working movement only.



Boost the essence of the location by adding modern interpretive marine elements.

- Apply the principle of “Planks, Balls, Plates and Masts.”
- Identify previous locations of the water’s edge over successive reclamations. If a heritage trail is to be installed use this device to identify the trail by night.
- Install a trail of LED marker lights as the nighttime interpretative device.
- Consider use of different colours for each successive line of reclamation.
- Limit expressions of commercial advertising and signage on the mall, but allow rooftop lighting under strict controls on brightness and construction.

When the new building is constructed on the Outer T it will require to be lit in the round.

- Do not light the perimeter of the wharf from the building. Rather use low height, marine derivative fittings such as used on Taranaki Street Wharf.
- Fitting selection needs to reflect the working nature of the wharf. Do not use commercial derivatives of nautical fittings. Consider fittings compliant with “Planks, Balls, Plates and Masts”.
- Fittings must be low (less than 0.7m) and push all light below the horizontal plane.
- Light the perimeter walkway on all sides so that the view of the Inner T is consistent with the view of the Outer T.
- Add light to the corners of the building structure to create further points of light to reflect in the water.

Provide the infrastructure of power and control wiring suitable for public seasonal lighting.

- Provide points at the Queens Wharf gates and at the Inner T for seasonal lighting displays.

5.3.4



View over the water

THE VIEW OVER THE WATER

Queens Wharf is at the heart of Lambton Harbour. Emphasise its central position by illuminating focal points strongly so they are visible from a long distance.

- At the Outer T install dynamic lighting to provide a changing scenographic element (see Queens Wharf section). Utilise sky lasers or similar powerful effect to create a power lighting accent (see Queens Wharf section).
- Light the two cranes both inside of the cab and inside its structure (refer notes under the Promenade precinct). Light these as strong accents using coloured light.
- Create special emphasis at the Queens Wharf gates to signify the Waterfront entry. Consider use of colour changing lights.
- Place lighting under the wharf in this location. Position lighting fixtures so they are not visible to the eye but create reflections in the water when viewed from other parts of the Waterfront.

The Outer T of the wharf is highly visible and prominent. Continue the consistent edge lighting treatment used at other water's edges.

- Develop a consistent line of light along the Waterfront wharfs.
- Position light under the wharfs to show the movement of the water. This lighting to give a continuous even effect for the best reflections in the water.
- Light vertical elements that can reflect in the water: place lights on top of masts, cranes and building corners to create further points of light to reflect in the water.

Extend the use of coloured light already started at Taranaki Street Wharf to light marine objects.

- Use colour to add interpretation to the lit elements rather than applying an ad-hoc choice. For example use colour to signify commonality in age, use or position.
- Upgrade Taranaki Street Wharf lighting colours if required to match.

5.3.5

THE GREEN PRINCIPLE

Control the special effect lighting to minimise its impact on the natural environment.

- For skyward shining light, limit the beam angles on the sail uplighting so that what light is used generates its maximum impact.
- As with the Promenade, when lighting the water aim the light up into or along the wharf structure rather than directly down into the water.

Restrict lighting to minimise light pollution and energy waste.

- Light all the hours of darkness on circulation routes to building entries to provide amenity to areas of habitation.
- Shield light from falling into habitable spaces within buildings.
- Use high quality full cut off luminaires and small lamps to eliminate waste upward light.
- Sensors can control service area lighting so that after 1am movement activates the lighting.

Control the accent lighting on a timer to minimise its impact on the environment.

- Turn on the lighting via a photoelectric cell located on the waterfront. Control this via a timer so it does not come on intermittently, for example during a storm.
- Turn off accent and effect lighting at 1am.
- Limit special effects to occasional events; say marking the hour 2 to 3 nights a week.

5.4 Frank Kitts Park and The Lagoon

This precinct is dominated by the open spaces of Frank Kitts Park and the Lagoon. Currently the park is the nighttime visual focus of Lambton Harbour due to its very high levels of lighting. The configuration of the park makes it City focused rather than orientated to the water. Thus its nighttime prominence does not match its position in the overall scheme of the Waterfront.

Further, focal points within the precinct do not read as points of interest as they are drowned in light. This needs particular attention if new art or sculpture is to be located in this precinct.

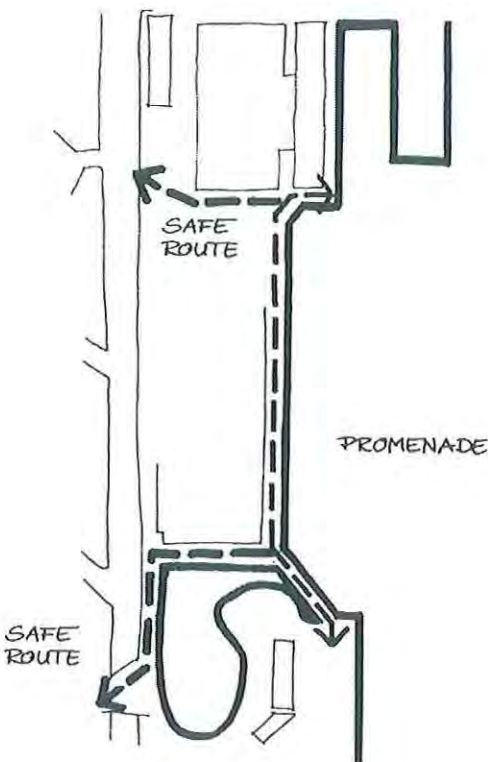
Any new work in this area must reduce and rebalance the lighting as a high priority.

5.4.1

VITALITY AND SAFETY

Do not light areas that offer no natural surveillance: intrinsically they are difficult to make safe.

- Remove the area lighting from within the park and the walkways.
- Maintain lighting to the edges so that the peripheries of adjacent pedestrian routes are illuminated.
- If some lighting is required in the park, consider use of sensor lights that are activated with movement.



Precinct safe route

Light a clearly visible, safe route as an entry/exit points to the city via the “sky bridge” to the Civic Square.

- Illuminate this route for all the hours of darkness.
- Continue the pedestrian focused lighting to the edge of the sky bridge. Provide this light at a low scale in contrast to the state highway lighting. In that way maintain an identifiable human scale and quality to the lighting.
- Along the way provide brighter accents of light at approximately 15m centres to pull people along the routes.
- Clearly identify where this route meets the promenade by a change in lighting treatment or subtle change in light quality.
- As part of this project, work with the City Council to illuminate the totems at the end of the City-to-Sea bridge as a way finding point. Light them as accents on both sides so they can orient pedestrians approaching from the Waterfront and the City.

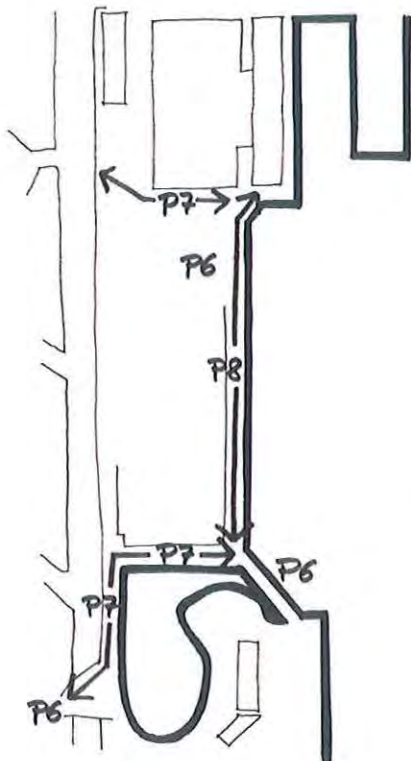
Provide an alternative safe entry/exit route to the city at the North end of the park.

- Retain the existing lighting at the rear of the convention centre.
- Add lighting positioned at low level along the walkway to make it of human scale.

- Incorporate into this route the focus of new sculpture.

Light changes in ground level with care

- Add light to the steps from the Promenade up to the park level. Don't light them to promote access, but light them to make them and other people visible.



Precinct light levels

Minimise clutter on pathways.

- Where possible light the pedestrian route from luminaires mounted off the park wall or low level lights.
- If poles are required, position them in coordination with other street furniture and hard against the park walls to maximise the width of the pedestrian route.
- If possible utilise existing poles for the mounting of new lights.

Deliver light at a human scale, colour and intensity.

- Remove and discard the existing ball lights; they offer low colour quality light with a high glare effect.
- Scale down the height of lighting and lighting hardware to 0.7m or lower. If area lighting is required position luminaires in the range of 3.5 to 5 meters high.
- All lighting is to be free of glare; luminaire types 3 4 and 5 acceptable. Do not create bright spots within the cone of vision.
- All lighting on paths is to be of a warm colour temperature and be of colour accuracy class 1 or 2a only.
- Light trees using cool 4000K coloured light.



Deliver light at low levels

Do not overlight.

- Keep path light levels to P7 standard.
- Accent lighting should be 3 to 5 times the background level of lighting.
- Replan and simplify the lighting in the environs of the proposed location for new sculpture. The nighttime presence of sculpture should be a dominant feature. If sculpture is located in the Taranaki Street Wharf precinct the same principle applies.

5.4.2



Uplight selected trees

CITY CONNECTIONS

Use light to enliven the road edge of the Waterfront by giving it a human face. This edge is highly visible and is an effective way to promote recognition of the Waterfront.

- Uplight selected tree specimens that will suit this treatment.
- Avoid excessive illumination by using low wattage tightly controlled lighting.

Work closely with Wellington City Council over the upgrade of the Quays and their lighting.

- Protect the quality of the green edge from over lighting by road lighting fixtures.
- Ensure stray light does diminish the effect of accent lighting on art and sculpture.
- Coordinate positions and choice of lighting equipment to light the pedestrian safe route along the quays in accordance with 5.2.1.
- Ensure the quality of lighting is consistent along the whole length of the Waterfront's city edge.

5.4.3

A SENSE OF PLACE

Light the elements of heritage and history in the precinct.

- Light the Wahine Mast Memorial as an important reminder of Wellington Harbour's maritime history.
- Light the slide structure in the park at night.
- Identify previous water front positions over successive reclamations. Install a trail of LED marker lights as the nighttime interpretive device.
- If a heritage trail is to be installed, use this device to identify the trail by night.
- Use different colours for each successive reclamation.

Light the insertions of contemporary culture.

- Light the Albatross sculpture. Light this as an accent part way along the City/Waterfront connection route.
- Internally illuminate the proposed Waka House so that the waka is visible inside by day and night. At the time of writing the final location of the Waka House is undecided, hence this recommendation is repeated in part 5.5 Taranaki Street Wharf.
- Any new proposed external works associated with the Waka should also be illuminated. Consider interpretive use of light to give the place appropriate cultural significance and prominence by night.
- Provide infrastructure in the park for connection of temporary lighting systems for festival events such as the "Tent Café" and the sculpture workshop exhibition.
- Allow power at suitable points for public seasonal lighting.

Use a lighting delivery system that fits with the park and lagoon setting.

- Boost the essence of the location by adding modern interpretive marine lighting elements.
- Apply the principle of “Planks, Balls, Plates and Masts”.
- Where possible use low level lighting below 0.7m in height.
- Do not allow illuminated signage or advertising.

5.4.4



Light the water's edge

THE VIEW OVER THE WATER

This precinct is a daytime recreation area. At night use is significantly reduced except during festival times. But at night the park is the brightest object in Lambton Harbour. This is out of balance with the priorities of other precincts that are more linked to the water's edge.

Light art and sculpture as the nighttime focus for the area.

- The lighting must reinforce the effect and operation of the sculpture. To this end investigate the use of a dynamic lighting system.
- The sculpture must be an accent both from the city and from the view looking into the waterfront.
- If art or sculpture is located in an alternate precinct these principles should still apply.

Remove and discard the existing ball lights. Their glare masks the views adjacent to Frank Kitts Park.

The lagoon is where the water's edge gets closest to the city and is visible to the passer-by. This is a unique condition that needs celebration.

- Install a new pedestrian lighting system around the lagoon to enable clear access to and vision of the water
- Install low level light around the trafficable edge of the lagoon to clearly light the water's edge and create reflections on the water's surface.
- Consider the use of interpretive "ball" lighting (Taranaki Street Wharf) or similar style lighting.
- Negotiate with the owners of the historic buildings that their lights are left on longer hours. This will increase the light effect of water reflections back toward the City.
- Light the City-to-Sea Bridge "totems" at the city end of this water connection (see notes above).

5.4.5

THE GREEN PRINCIPLE

Limit the amount of lighting, use light responsibly.

- Limit the waste of light upwards which causes sky glow.
- Sensors can control service areas so that they can be activated by movement only.
- Use high quality full cut off luminaires and small lamps to eliminate waste upward light.
- Limit the temporary lighting systems in the park to lighting the area of use only.

Consider the effects of nighttime lighting on the plants and animals that live in the area.

- Ensure the open spaces of this precinct remain natural by night.
- Ban illuminated advertising in this precinct.
- Limit the public area lighting to areas of circulation only. (Keep the park dark, see above.)

- Limit the temporary lighting systems in the park to lighting the area of use only.
- Do not position more lighting shining into the water.

Consider the use of renewable energy in powering the lighting around the park.

- As an extension of good ecological design principles, use lighting at least partially powered from renewable sources in the illumination of areas around parks.
- Consider the use of solar panels either mounted on adjacent building tops such as the Event's Centre.

5.5

Taranaki Street Wharf

Taranaki Street Wharf has recently been updated and refurbished. The design principles Athfield Architects identified in this process and their overall execution are strong and remain a valid model on which to base future work in other precincts.

Post completion, some weaknesses have been identified resulting in “band aid” work. These shortcomings need to be corrected in a coordinated manner before they become models for others areas of the Waterfront. Additional small works are also required to align the precinct with the other areas.

At the time of writing this strategy development plans for the mound and adjacent areas where undefined. As these projects become designs use the opportunity to fill in the gaps in the current lighting.

5.5.1



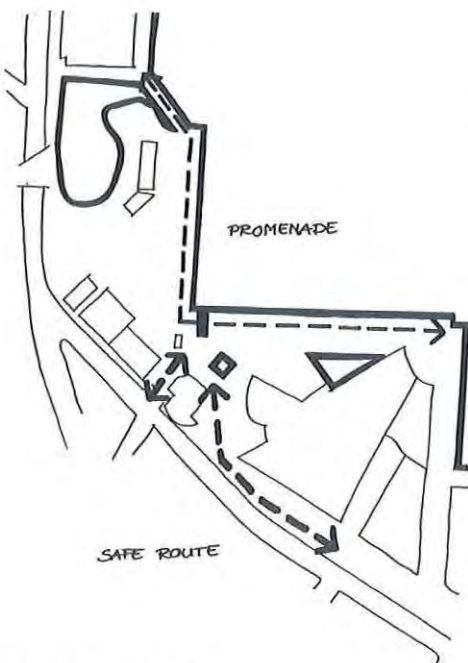
Vitality at the path's edge

VITALITY AND SAFETY

Post refurbishment the precinct still lacks some vitality. Focus has been placed on the Promenade lighting but peripheral areas are dark and sombre.

Promote vitality in this precinct by adding light coming from an alternative direction to the lighting masts (refer to the promenade section).

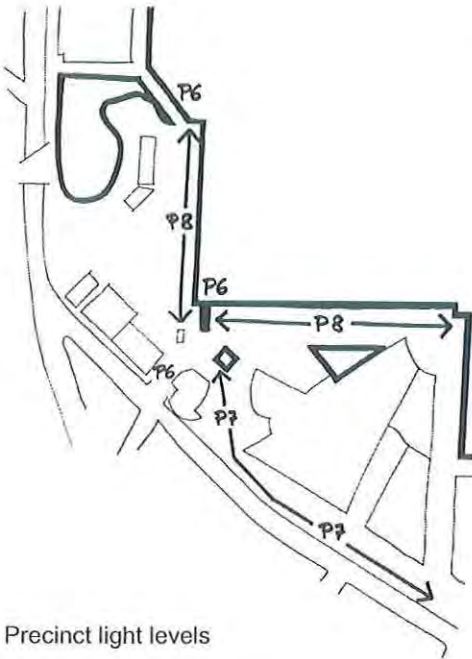
- Add back the lighting incorporated into the weather screens or similar device. Place light at a low level to add peripheral lighting along the western part of the promenade. This work could be done as part of the future upgrade of access to the lagoon along the back of Odlins building and its neighbours.
- Light the harbourside edge of the buildings to define the edge of the space and reflect light back into pedestrian areas.
- Remove the lighting in the tree grove and use the fittings elsewhere. The density of these trees does not suit the use of uplighting from the ground. Use the lighting circuit for the new peripheral lighting.
- Upgrade the ball lights to improve the luminosity. Consider painting the insides a reflective colour.



Precinct safe route

Deliver light to stimulate the eye and senses.

- Add brightness to the area leaving the promenade to Taranaki Street gates and the Te Papa Forecourt to attract the eye. This lighting must add brightness to counteract the flat flood of light in the Te Papa forecourt.
- Place light fittings at a height in scale with both the City lighting and the Promenade mast lighting.
- All lighting to be of a warm colour temperature and of a colour accuracy class 1 or 2A.



Precinct light levels

Define the entry/exit point through to Te Papa and the City clearly.

- Use hardware that is clearly distinct from the Te Papa lighting suite.
- Strongly light the gates for way finding recognition so they are clearly visible from a distance.
- Light levels in this area are to be balanced between the forecourt and the Promenade with additional highlight points of brightness up to 3 times the average lighting level.
- Keep lighting hardware away from the centreline of this link to minimise clutter.

5.5.2

CITY CONNECTIONS

Use light to enliven the road edge of the Waterfront by giving it a human face. This edge is highly visible and is an effective way to promote recognition of the Waterfront.

- Light the facades of the historic wharf sheds along Cable Street.
- Avoid excessive illumination by using low wattage tightly controlled lighting. Enhance form, material and decoration by grazed lighting or accent lighting effects. In this way light trespass into habitable spaces is minimised.
- Consider the daytime appearance of the light fittings, where possible reduce visual impact and incorporate into the architecture.

Work closely with Wellington City Council over the upgrade of the Quays and their lighting.

- Protect the quality of the building façades from over lighting by road lighting fixtures.
- Ensure stray light does not enter into residential apartments.

- Coordinate positions and choice of lighting equipment to light the pedestrian safe route along the quays in accordance with 5.2.1.
- Ensure the quality of lighting is consistent along the whole length of the Waterfront's city edge.

Strongly light the Taranaki Street entrance point.

- Light the gateways to P7 standard, so they are brighter than their surroundings to act a way finding device both from the Waterfront and from the City.
- Accent light the gateposts or adjacent feature so they are visible from within the City. Refurbish and reactivate the gatepost lanterns.
- Work with WCC to upgrade the city lighting at the dead end part of Taranaki Street to a colour and intensity to match the Promenade.

5.5.3

A SENSE OF PLACE

Taranaki Street Wharf is a working harbour facility. The recent upgrade with its philosophy of "Plank, Balls, Plates and Masts" captures this spirit well.

Enhance what has already been started.

- Add to this the lighting of the Linkspan Building. Illuminate the building to relate it to the adjacent marine structure.
- Consider internal illumination of the space and the use of coloured light.

Give more richness to the precinct by lighting the expressions of contemporary culture.

- Upgrade the lighting to the Te Papa water lagoon so that it generates more ripples and light effects on the wall of Te Papa.

- Allow the use of illuminated signage on the harbour faces of the buildings behind Taranaki Street Wharf West. Develop controls on brightness and construction to minimise glare.
- Allow illuminated naming rights on rooftops of buildings in a similar style to North Queens Wharf.
- Internally illuminate the proposed Waka House so that the Waka is visible inside by day and night. At the time of writing the final location of the Waka House is undecided, hence this recommendation is repeated in part 5.4 Frank Kitts Park.
- Any new proposed external works associated with the Waka should also be illuminated. Consider interpretive use of light to give the place appropriate cultural significance and prominence by night.

5.5.4

THE GREEN PRINCIPLE

Limit the amount of lighting, use light responsibly.

- Turn off lighting separate from the Promenade at safe exit routes at 1am via timer control.
- Shield light from trespass into habitable spaces Limit the waste of light upwards to cause sky glow.
- Sensors can control service areas so that movement can activate lighting.
- Use high quality full cut off luminaires and small lamps to eliminate waste upward light.

Consider the effects of nighttime lighting on sea life when lighting under the wharfs.

- Glance the light across the water when lighting beneath the wharf (see Promenade). Investigate more work on the existing installation to achieve more of an effect.
- Do not position more lighting shining into the water.

5.6

Waitangi Park

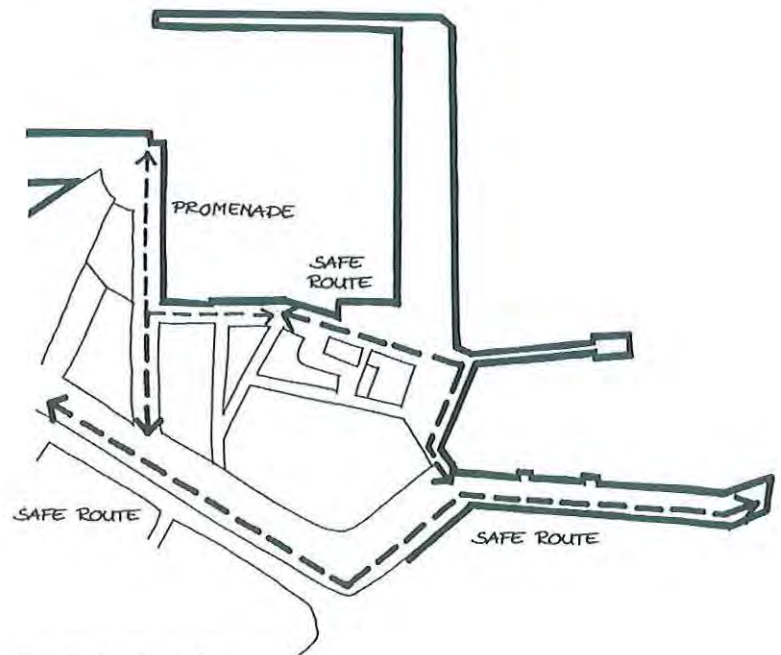
At the time of writing the design for this precinct is still under development. It is clear that the redeveloped area will contain a variety of uses. Each of these uses should have it's own lighting characteristic that is appropriate for its different activities.

5.6.1

VITALITY AND SAFETY

Identify and light a clearly visible, safe pedestrian route through the precinct.

- Light the street side perimeter, major interior path along the graving dock and the Waterfront promenade (see separate section) as the safe routes using pole top lights or a similar efficient delivery system.
- Illuminate these routes all night hours.
- Light focal points along the routes at a maximum spacing of 15m to pull people along the paths.



Precinct safe routes

Light the secondary connections to the buildings to provide amenity and safety for building users.

- Illuminate these paths for all the night hours.
- Light in a subservient manner to the major safe routes; do not add accent lighting along these paths.
- Ensure all natural and built recesses adjacent to paths are lit.
- Ensure shared pedestrian and vehicle zones are clearly lit without glare.
- Light routes to parking areas for safe access to cars after dark.



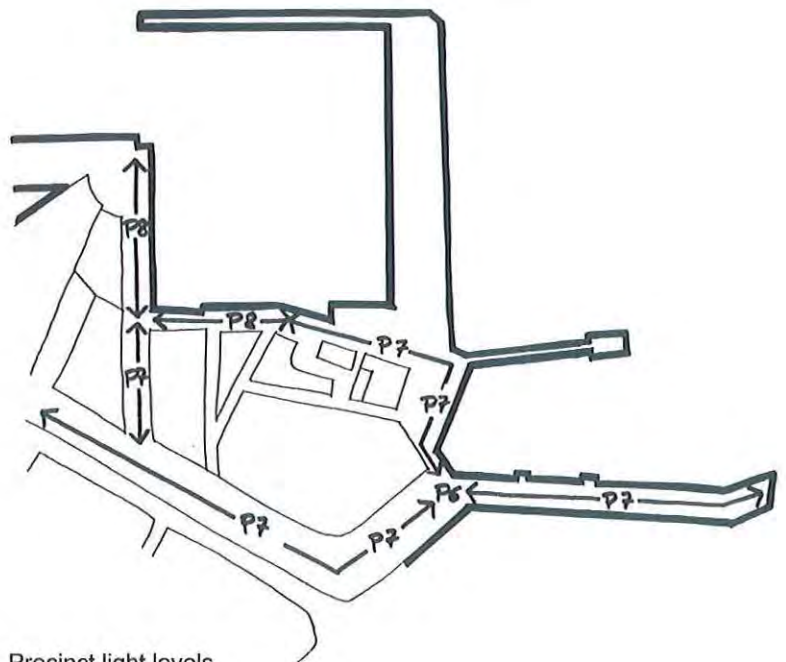
Add texture and define scale with light

Light spaces adjacent to both these routes.

- Use this “borrowed” light to both illuminate the peripheries of the pedestrian routes and provide an opposing direction of light to the path lighting.
- Set tenant controls such that ground floor lighting of buildings must be of 50lux at the tenancy perimeter and be wired on timer to stay alight until 1 am.
- Where verandas overhang public space, set controls to ensure lighting is installed and maintained to operate at a level equal to the public area lighting levels.
- Light the activity zone adjacent to the street side walkway with lighting appropriate to use route (see A Sense of Place below).
- Light the line of trees flanking the graving dock area adjacent to the cross-site safe route (see A Sense of Place below).

Do not overlight.

- Keep walkway light levels to P8 standard.
- Add accents at 2 - 3 times these levels at approximately 15 metre centres along the major designated safe routes through the precinct.



Precinct light levels



Light under park benches for human scale

Do not light areas that do not offer natural surveillance; intrinsically they are difficult to make safe.

- Do not light the field space to encourage use or activity.
- Do not light the Cultural Gardens after their closing time.

Deliver light at a human scale, colour and intensity.

- Scale down the height of lighting and lighting hardware to the range of 3.5 to 5 meters high.
- Install very low level lighting at a height of less than 0.7m adjacent to pedestrian routes. Consider tree uplighting or lighting built into the street furniture system.
- All lighting is to be free of glare; luminaire types 3 4 and 5 acceptable. Do not create bright spots within the cone of vision.
- All pedestrian lighting is to be of a warm colour temperature. All tree lighting is to be cool colour temperature 4000k light. All lighting to be of colour accuracy class 1 or 2a only.

Minimise clutter on the walkways.

- Place the lighting hardware at the perimeter of the walkways.
- Coordinate pole positions with landscape to maximise the efficiency of lamps and therefore minimise pole numbers.
- Position poles in coordination with street furniture locations.
- In service lanes mount lighting off buildings.

5.6.2



Define paths by lighting trees

CITY CONNECTIONS

On completion this precinct at night will naturally become more aligned to City than Waterfront. Therefore to retain identity, clearly define the park edge with lighting.

- Define the edge of the precinct at the green edge of the Cultural Gardens and Waitangi Park.
- Uplight selected tree specimens that will suit this treatment. Coordinate the lighting with the landscape to ensure correct lighting of appropriate specimens. Do not try to uplight small dense trees such as young Pohutukawa.

Work closely with Wellington City Council over the upgrade of the Quays and their lighting.

- Protect the quality of the green edge from over lighting by road lighting fixtures.
- Ensure stray light does not diminish the effect of the landscape design
- Coordinate positions and choice of lighting equipment to light the pedestrian safe route along the quays in accordance with 5.2.1.
- Ensure the quality of lighting is consistent along the whole length of the Waterfront's city edge.

Extend the lighting treatment to the street edge along the back of the boatsheds to Freyberg Pool.

- Continue the expression of a green edge along the street to link with the new works at Oriental Bay
- Mark the intersection of the promenade route and the street promenade with a change in lighting condition

Re-establish the view shaft down Tory Street at night by using light to draw people to the broad stair at the end of the view.

- Position pedestrian lights under the verandah, use of luminaire types 4 and 5 is acceptable. At no angle create bright spots within the cone of vision.

- Strongly light the trees to set up a rhythm to lead the eye toward the steps.
- Use light to highlight an accent or create an accent on the stairs/at the top of the stairs.
- Make a clear connection between the top of the steps and the Promenade by lighting the route from the Atea to the Promenade. Also use accent lighting to take the eye from the top of the steps to the water's edge.

5.6.3

A SENSE OF PLACE



Design light to match use

Design the lighting system so that it relates to each separate activity. Vary the position, angle and type of luminaires so that the lighting is appropriate to place.

- Light the activity zone adjacent to the street side walkway with lighting appropriate to use: overhead light game courts, light the perimeter of any structures.
- Make the generation “i” culture skate facilities a focal point of the activity zone.
- Use light interpretively on “shifting shorelines”.

Add light to the front of the boat sheds and to their access routes.

- Place new lighting to the front of the boatsheds in a regular pattern to both illuminate their forecourt and reflect in the water. For economy these lights could be placed between every second boatshed and still provide an appropriate effect.
- Light the steps and paths that lead to the boatsheds with low level amenity lighting that is shielded from view (no view of bright diffusers or lamps).
- Light fitting selection should reflect the marine use and location in both durability and aesthetics.

Use a lighting delivery system that fits with the new urban setting.

- Boost the essence of the location by adding modern interpretive lighting elements.
- Consider the principle of “Planks, Balls, Plates and Masts” and its application away from the water’s edge. If an alternative strategy is sought ensure its essence strengthens this precinct connection with the Waterfront rather than the City.
- Where possible use low level lighting below 0.7m in height in park areas rather than pole mounted fittings.
- Do not allow highly illuminated signage or advertising.

Investigate subtle ways of lighting the Herd Street Post Office building.

- Do not floodlight the building mindful of its use as residences and its proximity to a park with its flora and fauna. Investigate the use of coloured light to reduce its intensity.
- Any lighting must reveal something of its heritage or its peculiar siting. Investigate the use of internal lighting effects such as the stair corner
- Maintain the importance of the view past the building to the harbour and the Overseas Passenger Terminal behind.

Light the expressions of contemporary culture.

- Illuminate the entrance and a key structure within the Cultural Gardens to maintain their recognition even after closing.
- Light any new artwork installed with in the precinct. Install the necessary power for future connection to the artist’s direction.
- Interpretively light the “waka furrows” at the back edge of the Field.
- Provide an accent lighting system to illuminate the calling point when used after dark. This system is to be on separate controls.

Provide the infrastructure to allow special events to be held in this area.

- Install the power and control cable infrastructure into the field for programmed special events.
- Provide access points for additional temporary lighting along the activity zone for occasional special events.
- Provide facility for temporary lighting of the Atea if nighttime use of this area is possible.
- Allow power at suitable points for public seasonal lighting.

5.6.4

THE VIEW OVER THE WATER

- This precinct is distant from the perceived edge of the harbour because of the marina. The most prominent parts of the view looking in are Te Papa and the Overseas Passenger Terminal.

Allow Te Papa to retain a visually dominant nighttime presence in the area.

- Do not light the exterior of the Herd Street Post Office building.
- Keep the landscape buffer and cultural gardens to the east of Te Papa darker than Te Papa.

Light the Overseas Passenger Building.

- Illuminate its marine features. Consider internal lighting to add life to the building whilst not in use.
- Add light to the outside of the structure to generate reflections in the water.
- Remove the ball lights on poles from around its perimeter (see discussion of ball lights in FKP).
- Add marine style fixtures to allow circulation. Consider use of interpretive marine style fixtures at Taranaki Street Wharf.

5.6.5

THE GREEN PRINCIPLE

Limit the amount of lighting, use light responsibly.

- Don't light the Field and other areas where natural surveillance is low.
- Avoid excessive illumination by using low wattage tightly controlled lighting.
- Turn off accent and effect lighting via timer control at 1am.
- Use sensor controlled lights around services zones.

Consider the effects of nighttime lighting on plants and animals.

- Don't light building facades adjacent to the park areas.
- Limit uplighting in the park to appropriate species in appropriate locations (see discussion in Connections).
- Shield light from adjacent habitable spaces.

Use light interpretively to promote the green features of the design.

- Use light to explain/demonstrate the water filtering and delivery system. Consider the use of coloured lighting.
- As an extension of the urban designer's ecological design principles, use lighting at least partially powered from renewable sources. Consider the use of solar panels either on lights or on adjacent building tops.

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