

APPENDIX 28

Plan for a Community Plan

...plan of the

BARANGAROO COMMUNITY PLAN

BARANGAROO HEADLAND PARK

MAIN WORKS PROJECT APPLICATION



Date	Version	Purpose
4 August 2010	Version 1	Concept Plan Modification (No 4)
18 August 2010	Version 2	Headland Park Main Works Application
15 October 2010	Version 3	Revised Headland Park Main Works Application

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The work product informing this document has been derived from best practice research and existing desk-top data, pending further primary and secondary research that will be undertaken during the preparation of the *Barangaroo Community Plan*.

PURPOSE OF THIS DOCUMENT

This report outlines the proposed approach and methodology that will be used to develop the *Barangaroo Community Plan* and has been prepared to support The Barangaroo Delivery Authority's Main Works Application for the Headland Park.

In responding to this early phase of the project, the *Barangaroo Community Plan* is being submitted as a 'plan of the *Community Plan*' outlining the recommended wellbeing approach, overarching principles (*One Planet Living* and *Social Return on Investment*), the proposed methodology and contents page for the resultant report, and identifies that the plan will respond (at minimum) to the required delivery of the *Community & Social Plan* and facilities outlined in Points 18 and 19 of the Statement of Commitments (MP06_0162MOD3 [11 November 2009]).

Whilst this document has been prepared to specifically support The Barangaroo Delivery Authority's Main Works Application for the Headland Park, an integrated and coordinated approach and methodology to community planning has been developed, addressing the following three precincts that comprise the overall Barangaroo site, including:

- The Headland Park - *for the community to enjoy*: A new public waterfront parkland at Millers Point. Design overseen by Barangaroo Delivery Authority working with Peter Walker Partners and Johnson Pilton Walker.
- Barangaroo Central - *large civic space with a variety of uses for the community*: Six hectares of public domain, plus medium-rise civic, residential and commercial buildings. Overseen by the Barangaroo Delivery Authority, guided by principles developed by the Barangaroo Design Excellence Review Panel. Between 2010 and 2012, the area will host the temporary cruise passenger terminal.
- Barangaroo South: Stage 1 of Barangaroo, comprising Blocks 1 to 4 and associated public recreation area. On 20 December 2009, Lend Lease (Millers Point) Pty Limited was appointed as the preferred proponent to develop this area. Stage 1 is currently subject to a Concept Plan Amendment (Modification No. 4). See **Figure 1**

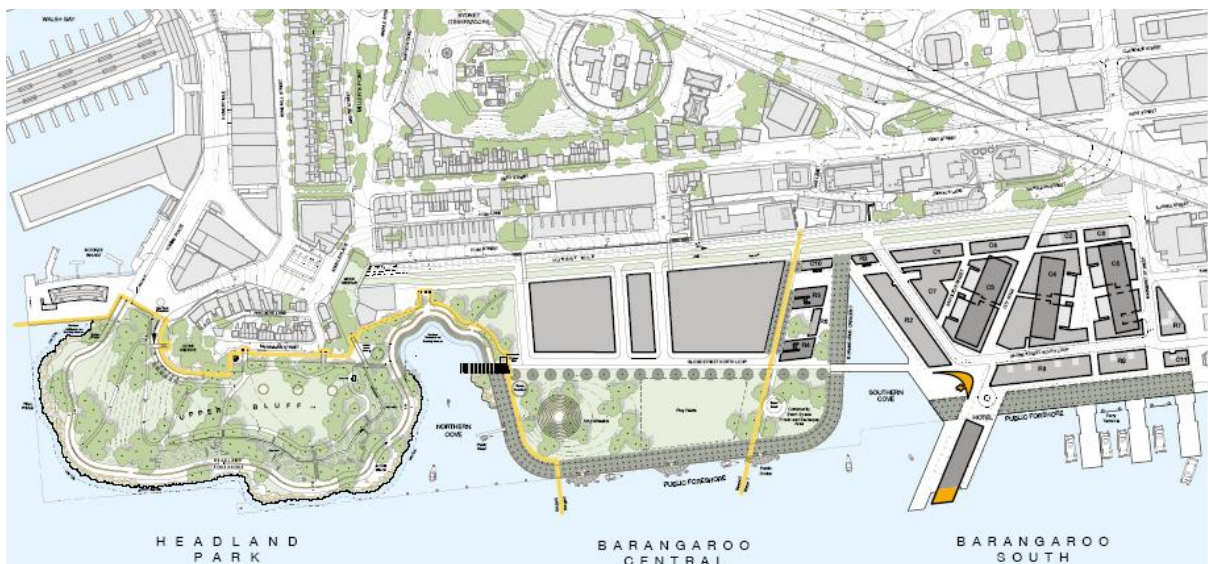


Figure 1: Barangaroo including Barangaroo South, Barangaroo Central and Headland Park

In addition, this document includes an early example of some of the specific actions and strategies relating to Headland Park in **Appendix C**.

Contemporary cities seek a waterfront that is a place of public enjoyment. They want a waterfront where there is ample visual and physical public access – all day and all year – to both water and land. They want a place to work and live as well as a place to play; in other words they want a place that contributes to their quality of life in all its aspects – economic, social and cultural.

***Remaking the Waterfront:
Urban Development Institute***

INTRODUCTION

Contemporary thinking about the successful regeneration of inner city neighbourhoods acknowledges the critical importance of the human dimension; recognising that an integrated approach to planning for place is fundamental to community wellbeing and quality of life.

In the past decade, there has been increasing recognition that community wellbeing is based on more than just economics. This has stimulated research to define fulfilment and quality of life through measures related to social, cultural, spiritual, economic and environmental dimensions.

Wellbeing can most simply be defined in terms of the integrated concepts of health, comfort, happiness and prosperity – ‘quality of life’. Community wellbeing includes the aspirations that people have not only for themselves, but for the community in which they live and work. Strong communities are places where people feel safe in their local neighbourhood, are able to access the services they require and participate in all facets of life, have active and healthy lifestyles, and are resilient to change.

Our approach is predicated on the understanding that every community is unique and shaped by different social, cultural, environmental, political and economic aspects. Therefore, a wellbeing approach needs to respond to the unique characteristics of the particular place and community and how it functions within the local, regional and global context.

Therefore the development of the *Barangaroo Community Plan* will be driven by the goals of:

1. Promoting social equity and inclusion;
2. Enhancing liveability; and
3. Increasing destination vitality.

The benefits of using a wellbeing approach

Applying a wellbeing approach at Barangaroo acknowledges the ability of major projects to act as a catalyst for change in their host communities.

Developing and applying a wellbeing framework for a community provides a means of measuring the wellbeing of communities over time as they experience significant change. It can supplement and support existing planning and service delivery processes in communities by all levels of government, non-government organisations and the private sector.

A wellbeing framework can be used to:

- focus community discussion around their aspirations and desires for the future
- provide opportunity for community members to actively participate in improving their personal and the community’s wellbeing
- establish an evidence base for developing actions and strategies to affect a community’s wellbeing
- establish an integrated and consolidated list of priorities for the local community
- report, monitor, and communicate a community’s progress towards the agreed wellbeing goals and outcomes over time.

OUR APPROACH TO DEVELOPING THE *Barangaroo Community Plan*

The plan will present an evidence based, holistic approach to community development across the complete 22 hectares of Barangaroo which recognises the project's critical role in delivering:

- **A dynamic Sydney waterfront** – *a place for people, integrated, connected to adjacent Millers Point, Walsh Bay and the CBD*
- **Design Excellence** - a global benchmark in architecture and public domain
- **A sustainable climate positive world benchmark** - *What Barangaroo can do for Sydney – water positive, waste zero, carbon neutral*
- **A new financial headquarters for Sydney** - including a mixed use precinct, retail and public domain, waterfront promenade
- **Financially viable, not costing taxpayers** - *paying its way*

The *Barangaroo Community Plan* will be developed to support and promote overall wellbeing and the evolution of a flourishing and diverse community at Barangaroo (which includes the precincts of Headland Park, Barangaroo Central and Barangaroo South) while building positive connections with neighbouring communities at Millers Point, Walsh Bay and the balance of the Sydney CBD.

An integrated and coordinated approach to community planning and wellbeing is proposed at Barangaroo and its key catchments beyond the site, resulting in the development of an overarching Community Wellbeing Framework and associated Strategies and Actions. In addition, specific strategies and actions will be developed in response to the particular needs, drivers and aspirations of the emerging community and stakeholders particular to Headland Park, Barangaroo Central and Barangaroo South.

The following **Figure** illustrates the proposed components of the *Barangaroo Community Plan*:



Figure 2: The proposed components of the *Barangaroo Community Plan*

The *Community Plan* will be developed through an inclusive process that engages all relevant stakeholders; this exercise can also facilitate discussions about the future of the community, enabling local people (and those that represent them) to consider and define their needs and priorities. As a project of local, metropolitan, State and National significance Barangaroo presents a multilayered stakeholder environment including:

- Surrounding residents
- Groups with known links to Barangaroo such as Unions, Indigenous peoples, NSW Housing tenants
- Other diverse communities of interest
- Potential partners involved in the creation of facilities and amenities and the delivery of services and programs including (but not limited to) City of Sydney, relevant State and Federal Government agencies, the Sydney Harbour Foreshore Authority and relevant non-government organisations.

In addition to existing stakeholders, the *Community Plan* will also aim to address the evolving needs of the emerging community who will make Barangaroo ‘their place’.

The *Barangaroo Community Plan* will be developed through an iterative and incremental process, consistent with best practice community development principles. This will result in the Plan being a ‘living document’ which will be continually reviewed as the wellbeing of the community is monitored and measured over time – responding to their changing needs, drivers and aspirations.

Frameworks informing the development of the *Barangaroo Community Plan*

It is proposed that the community planning approach at Barangaroo may reflect the One Planet Living framework which will contribute to Barangaroo’s unique sense of place and distinctiveness, whilst at the same time contributing to community wellbeing and local business equity and diversity. The framework provides an internationally recognised and independently verified platform to demonstrate Barangaroo’s exemplary environmental, economic and social sustainability goals. Importantly it will provide a platform to enable residents, workers, visitors and investors to easily understand and to play an active part of Barangaroo’s exemplary sustainability solutions. **Appendix A** includes additional information regarding One Planet Living framework.

The *One Planet Living* principles include:



Figure 3: *One Planet Living Principles*

The wellbeing approach also aligns closely with the seven principles of Social Return on Investment (SROI) which are designed to capture and quantify the social, economic and environmental outcomes achieved by a specific investment.

Ongoing SROI analysis will be critical to quantifying the dividend yielded by social, cultural and community investment at Barangaroo and that programs are not only achieving their identified aims but providing tangible returns for the target community. **Appendix B** includes additional information regarding SROI at Barangaroo.

In addition to being informed by these frameworks the *Barangaroo Community Plan* will have due regard to relevant NSW Government, Commonwealth and City of Sydney policies and studies including, but not limited to:

- The NSW State Plan
- The NSW Department of Local Government Integrated Planning and Reporting Framework
- NSW Health – Healthy Urban Development Checklist
- State Housing Policies
- Aboriginal Participation in Construction Guidelines
- The City of Sydney Social Policy and Plan
- Sustainable Sydney 2030
- Affordable Rental Housing Strategy
- Asset Assessment and Development Plan for Community Facilities in Harbour Village Centre (*when released*)
- The draft City of Sydney Social Indicator Framework (*when released*)
- National Urban Strategy (*when released*)
- National Accessibility Standards
- Australian Government Social Inclusion Agenda
- Community Indicators Victoria



DELIVERING THE COMMUNITY PLAN

The following table identifies the key overarching Barangaroo project milestones as defined by the Barangaroo Delivery Authority and the corresponding milestone specifically related to the development and delivery of the *Barangaroo Community Plan*.

The overarching project milestones are a working timeframe for the ongoing planning and development of Barangaroo and will therefore be subject to amendment and refinement as ongoing planning and development is undertaken throughout the project lifecycle.

Year	Indicative project milestones (defined by Barangaroo Delivery Authority)	<i>Barangaroo Community Plan</i> milestones
2010	<ul style="list-style-type: none"> Headland Park commences Barangaroo South commences Initial planning applications for Barangaroo works exhibited by Department of Planning Remediation activities commence 	<ul style="list-style-type: none"> July 2010 submit plan of the <i>Barangaroo Community Plan</i> to NSW Department of Planning as part of: <ul style="list-style-type: none"> Lend Lease's Concept Plan Amendment (Modification 4) for Barangaroo South Barangaroo Delivery Authority Headland Park Main Works Application July – November 2010 commence consultation around cultural and community needs to inform the <i>Barangaroo Community Plan</i> and detailed design of subsequent project applications.
2011	<ul style="list-style-type: none"> Construction commences at Barangaroo South Construction commences at Headland Park Ongoing project applications submitted to the Department of Planning 	<ul style="list-style-type: none"> Mid to late 2011 first version of <i>Barangaroo Community Plan</i> including wellbeing framework and preliminary strategies and actions Commence delivery of Strategies and Actions identified in the <i>Barangaroo Community Plan</i> in alignment with the needs, drivers and aspirations of the existing and emerging community at Barangaroo and within its key catchments beyond the site. It is anticipated that early actions and strategies will primarily leverage construction related opportunities, while later in the project lifecycle there will be the ability to deliver actions and strategies which align with the emerging operational stage of the project.
2013	<ul style="list-style-type: none"> Headland Park continues Barangaroo South continues Skilling and Employment programs underway 	<ul style="list-style-type: none"> Measure community wellbeing, disseminate report card, review and amend <i>Community Plan</i> annually, commencing July 2013. In the first instance measurement and reporting will focus primarily on the catchments beyond the site and construction activities including skilling and training initiatives and outcomes. Over time the process of measuring and reporting on community wellbeing will (most importantly) include the Barangaroo community (including residents, workers and
2014	<ul style="list-style-type: none"> Headland Park complete Barangaroo Central commences First building at Barangaroo South complete and associated public domain and services infrastructure Target Barangaroo Wynyard pedestrian linkages complete 	

2015	<ul style="list-style-type: none"> Community Learning and Skilling programs commenced 	visitors) as construction is completed and the precinct becomes a place to live, work and play.
2017	<ul style="list-style-type: none"> Barangaroo Central public domain complete Target 140,000 m² of buildings at Barangaroo South complete including public domain and associated services infrastructure Globe Harbour (Southern Cove) at Barangaroo South complete 	
2019	<ul style="list-style-type: none"> All community learning and skilling programs underway Target 240,000 m² of buildings at Barangaroo South complete including associated public domain and services infrastructure 	
2021	<ul style="list-style-type: none"> Target 290,000 m² of buildings at Barangaroo South complete including associated public domain and service infrastructure 	
2023	<ul style="list-style-type: none"> Target 340,000m² of buildings at Barangaroo South complete including associated public domain and services infrastructure 	
2025	<ul style="list-style-type: none"> Project complete 	

The resultant *Barangaroo Community Plan* will:

- provide an overarching philosophy and framework for promoting wellbeing at Barangaroo
- analyse the current statutory and community context
- identify the needs of the emerging and existing communities of interest at Barangaroo
- recommend measures and indicators to determine the efficacy of various projects and the success of the plan in responding to the diverse needs of:
 - new and existing residents
 - the onsite working community
 - the many visitors to Barangaroo
- detail strategies that encompass a range of initiatives to be delivered by the Barangaroo Delivery Authority (The Authority) and Lend Lease for Barangaroo South.
- outline opportunities for cooperation with other agencies active within the area including, but not limited to, the City of Sydney, SHFA and NSW Housing
- identify implementation and governance arrangements for the various social initiatives and strategies
- outline processes for ongoing monitoring, review and reporting against the stated goals of each strategy.

The *Community Plan: Barangaroo* will at a minimum respond to delivery of the facilities and amenities outlined in Point 18 of the Statement of Commitments (MP06_0162MOD3 [11 November 2009]), as follows:

The Community and Social Plan referred to at Commitment 7 is to include provision of the following facilities within the Barangaroo Site:

Social

- *A multi-purpose facility designed to accommodate a range of community programs. The facility will have the capacity to accommodate an innovative mix of functions and tenancies, including complimentary commercial concessions, and with the potential to respond to changing social needs.*
- *A minimum of two long day-care and early learning centres.*

Health

- *A range of outdoor spaces, linkages and facilities designed to enable active recreation including walking / jogging, informal team sports, outdoor exercise, court games, and non-motorised water sports.*
- *A range of outdoor spaces, structures and / or buildings for relaxation, social interaction and passive recreation.*

Cultural

- *Consideration of floor space for cultural industries and or cultural industries development. This may be achieved in conjunction with the development of community infrastructure.*
- *A flexible outdoor venue for city scale cultural events.*

Recreation

- *A harbour foreshore walk / cycle path linking King Street Wharf with Millers Point.*
- *Active sports areas and associated toilet, change and shower facilities.*
- *A regional play space with an innovative, engaging mix of facilities and environmental features to function as a major destination for families.*
- *Public open spaces immediately adjacent to residential areas designed to allow a range of passive recreation activities attractive to residents and regional visitors.*
- *Well-designed pedestrian linkages allowing easy and safe access to recreational spaces and facilities from commercial and residential areas within East Darling Harbour and from Millers Point, Walsh Bay, Kent Street, and King St Wharf.*
- *Design requirements and details relating to the facilities noted at Commitment 18, and in particular to the health and recreation facilities are to be incorporated into the Public Domain Plan.*

The *Community Plan* will also inform and in turn be shaped by the Public Domain Plan being prepared by the Authority.

While the above excerpts from the Statement of Commitments are minimum requirements, it is envisaged that the *Community Plan* will, consistent with the focus on sustainability innovation at Barangaroo, seek to push the boundaries of conventional community and social planning methods to develop and implement a more robust and holistic wellbeing approach which aims to foster engaged, happy, healthy and resilient communities.



PROPOSED METHODOLOGY

The key stages in developing the Community Plan for Barangaroo are outlined below:

Stage 1 The Community Context Study

- (i) Determine the project catchment for Barangaroo, having regard to:
 - Core community catchment
 - Extended catchment: acknowledging the role of the project as a workplace and visitor destination within the context of the CBD
- (ii) Undertake a Community Context Analysis

Establish the socio cultural profile of the area, its economic and environmental characteristics. Identify the key prevailing issues, audit the depth of amenity and infrastructure and identify opportunities for the project to enrich the life of the community.
- (iii) Identify the Stakeholders

Undertake a stakeholder mapping exercise and determine key community organisations, agencies and peak bodies active in the area.

Stage 2 Identify the Audiences

Based on the catchments and the demographic profiles of the workforce, resident and visitor base, establish a series of lifestyle audiences and create a psychographic profile for them.

Determine who is there today and which groups are emerging as key to the future of the site. Use the profiles to recruit community participants for a cultural probe exercise to explore values, behaviours, needs and aspirations with respect to the site.

Stage 3 Undertake Consultative Scan

Based on the stakeholder mapping exercise, undertake a consultative scan, targeting interviews with key organisations and individuals. This will assist in confirming key issues and identifying opportunities or future scenarios.

Stage 4 Establish Wellbeing Goals, Indicators and Measures

Using an inclusive approach that reflects the perspectives of all stakeholders establish a set of goals for community wellbeing to which the development of Barangaroo can contribute. Create integrated indicators that reflect community priorities; establish relevant and realistic measures.

Stage 5 Commence Community Engagement (build community momentum and support)

Undertake a broader program of community engagement to test the wellbeing goals, indicators and measures. Use this exercise to develop social capital and networks that begin to integrate the project with its surrounding community.

Stage 6 Undertake Wellbeing Assessment and Produce Report Card

Supplementing the information collected in the community context study as required, undertake the wellbeing assessment and publish the report card. This provides a baseline from which to determine the incremental targets to drive the Community Plan.

Stage 7 Identify Wellbeing Priorities

To shape the development of the Community Plan and ensure it is relevant to the local area, it is important to ascertain the issues and opportunities that are identified by the community as their priorities. A series of workshops engaging across all stakeholder groups will facilitate this process and foster the development of deliberative capacity and collaboration between organisations.

Stage 8 Develop the Community Plan

In considering the most appropriate direction for the Community Plan and supporting strategies recognition will be given to the established regulatory framework together with the objectives of Sydney City Council and relevant State and Federal Government agencies and NGOs.

It is anticipated that strategies will cover elements such as community development, recreation, culture, social infrastructure, youth, housing affordability, employment and training, children's services, and local economic development.

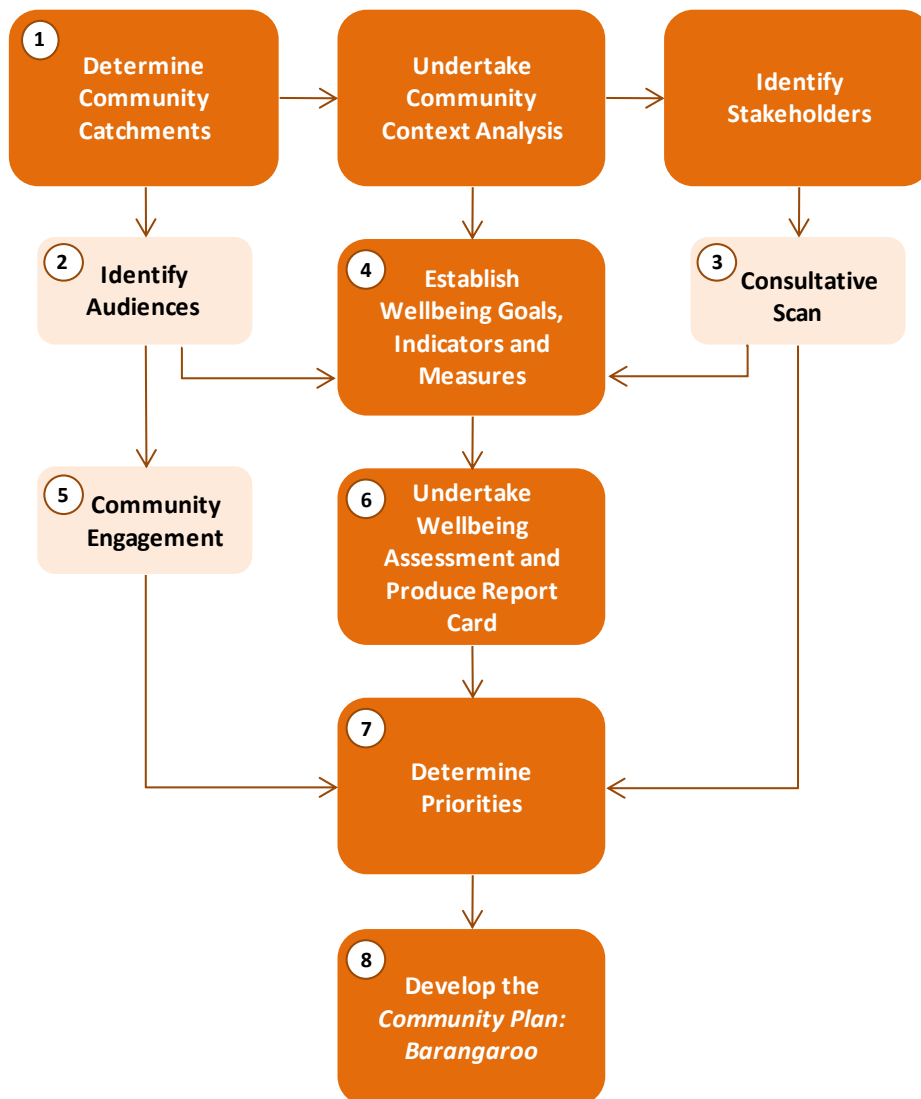


Figure 4: The proposed methodology for developing the *Barangaroo Community Plan*

PROPOSED TABLE OF CONTENTS – *Barangaroo Community Plan*

Executive Summary

1.0 Introduction: About this Plan

- 1.1 Overview of site, development and delivery arrangements
- 1.2 Purpose and objectives of Community Plan
- 1.3 Structure of Plan
- 1.4 Project methodology

2.0 Overarching framework and themes of the Plan

- 2.1 One Planet Living Principles and Barangaroo Sustainability Outcomes
- 2.2 Social Return on Investment Framework
- 2.3 Community wellbeing themes and goals:
 - 2.3.1 Promoting social equity and inclusion
 - 2.3.2 Enhanced liveability
 - 2.3.3 Increasing destinational vitality

3.0 The community context

- 3.1 Understanding the place – the site and its context
 - 3.1.1 Defining the "community" – local, city-wide and metropolitan catchments
 - 3.1.2 History and heritage
 - 3.1.3 Urban character, form and the public realm
 - 3.1.4 Accessibility
 - 3.1.5 Development context (what else is going on in the area)
- 3.2 Understanding the governance and leadership
 - 3.2.1 Overview of relevant statutory framework – policies, strategies
 - 3.2.2 Key stakeholders – government, business and community organisations
- 3.3 Understanding the economy
 - 3.3.1 The local economy and employment
- 3.4 Understanding the existing and emerging community (residential, workforce and visitors)
 - 3.4.1 Profile of existing and emerging residents, workers and visitors (key outcomes of the cultural probe exercise – behaviours, needs and aspirations)
 - 3.4.2 Key stakeholders – community organisations, agencies and peak bodies active in the area
 - 3.4.3 Key issues and opportunities from the consultative scan
- 3.5 Understanding the existing social and community infrastructure
 - 3.5.1 Map of existing social and community infrastructure
 - 3.5.2 Gaps in existing social and community infrastructure provision
 - 3.5.3 Future social and community infrastructure requirements and opportunities
- 3.6 Summary of key issues and opportunities

4.0 Wellbeing goals, indicators and measures

- 4.1 Methodology to develop and test wellbeing goals, indicators and measures
- 4.2 Preliminary wellbeing goals, indicators and measures
- 4.3 Testing the wellbeing goals, indicators and measures (community engagement)
- 4.4 Assessment and reporting of community wellbeing using measures
- 4.5 Defining the wellbeing targets and priorities requiring actions and strategies

5.0 The community plan and supporting strategies to enhance community wellbeing

The community plan will include a range of strategies and actions developed in response to the needs, drivers and aspirations of the community and relevant statutory requirements. In all likelihood this will cover elements such as community development, social infrastructure, housing strategy, children's services, local economic development and employment and cultural planning and development

For example -

- 5.1 Healthy living and healthy lifestyle strategy
(repeat for each strategy)
 - 5.1.1 Principles
 - 5.1.2 Overview of commitments
 - 5.1.3 Partnerships
 - 5.1.4 Funding and delivery responsibilities
 - 5.1.5 Governance arrangements

6.0 Implementation and co-ordination

7.0 Monitoring, review, evaluation and reporting

Appendix A: One Planet Living

Appendix B: Social Return on Investment

Appendix C: Detailed strategies: Barangaroo South

Appendix D: Detailed strategies: Barangaroo Central

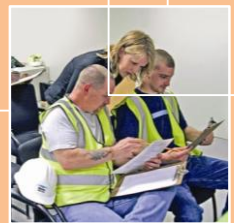
(proposed for inclusion in the Community Plan specifically focused on Barangaroo Central)

Appendix E: Detailed Strategies: Headland Park

(proposed for inclusion in the Community Plan specifically focused on Headland Park)



Appendices A - C



...plan of the
BARANGAROO COMMUNITY PLAN

Appendix A

ONE PLANET LIVING PRINCIPLES AND BARANGAROO SUSTAINABILITY OUTCOMES

Globally we are consuming natural resources at a faster rate than the planet can replenish them. Ecological footprinting shows that if everyone on the planet consumed as much as the average person in Australia we would need 4 planets to support us. *Humanity is no longer living off nature's interest, but drawing down its capital.*

The One Planet Living framework has been developed by BioRegional and World Wildlife Fund (WWF) to help people and organisations to live within their fair share of our planet's resources. Barangaroo is currently progressing an action plan to become a One Planet Living Community, based on the ten guiding principles below:

GLOBAL CHALLENGE	OP PRINCIPLE	LOCAL OPPORTUNITY
Climate change due to human-induced build up of carbon dioxide (CO ₂) in the atmosphere	Zero Carbon	Create a renewable energy economy Promote energy efficiency in buildings and infrastructure; supply energy from renewable sources.
Waste from discarded products and packaging create a huge disposal challenge while squandering valuable resources	Zero Waste	Generate local employment & eliminate the need for landfill sites Reduce waste by improving product design; encourage recycling and composting
Travel by car and airplane can cause climate change, air & noise pollution, and congestion	Sustainable Transport	Improve air quality, improve public transport, reduce congestion, promote low emissions vehicles Promote walking and cycling. Provide transport systems to reduce car dependence
Destructive patterns of resource exploitation and use of non-local materials in construction and manufacture increase environmental harm and reduce gains to the local economy	Sustainable Materials	Create an economy where products have a positive impact on the environment Where possible, use local, reclaimed, renewable and recycled materials in construction and products, which minimises transport emissions, to boost the local economy.
Many forms of current agriculture do not support local ecosystems, while over-dependence on imported food contributes to global warming	Local & Sustainable Food	Support the local rural economy, maintain traditional rural landscapes, improve health Support local environment friendly food production that provides healthy, quality food while boosting the local economy.
Local supplies of freshwater are facing increasing pressure, often resulting in depletion of existing stocks	Sustainable Water	Maintain good water supplies into the future Conserve water and promote recycling; restore natural water cycles.
Loss of biodiversity and habitats due to development in natural areas and overexploitation of natural resources	Land Use & Wildlife	Increase biodiversity, restore and create beautiful landscapes Protect or regenerate existing natural environments and the habitats they provide to fauna and flora; create new habitats.
Local cultural heritage is being lost throughout the world due to globalisation, resulting in a loss of local identity and wisdom	Culture & Heritage	Build on local cultural heritage to create a sense of place and belonging Celebrate and revive cultural heritage and the sense of local and regional identity; choose structures and systems that build on this heritage; foster a new culture of sustainability.
Some in the industrialised world live in relative poverty, while many in the developing world cannot meet their basic needs from what they produce or sell	Equity & Local Economy	Promote positive impacts on other communities , Promote equity and fair trading relationships to ensure the One Planet community has a beneficial impact on other communities both locally and globally.
Ever increasing consumption is not leading to greater health and happiness, but is causing environmental damage.	Health & Happiness	Promote healthy lifestyles and increase quality of life Promote healthy lifestyles and physical, mental & spiritual wellbeing through well-designed communities and community engagement, as well as by delivering on social and environmental targets.

Barangaroo's Climate Positive outcomes, of being, Carbon Neutral, Water Positive, Zero Waste and Community Wellbeing, directly complement the One Planet Living framework and its ten guiding principles. In particular, the Zero Carbon principle directly complements Barangaroo's Climate Positive commitment with the Clinton Climate Initiative (CCI). Both BioRegional and CCI directly support each other in working towards these complementary goals. Importantly the CCI Climate Positive standard that will be used to account for carbon emissions at Barangaroo is also accepted and agreed by BioRegional, negating the potential for double up in this area.

The One Planet framework will be one of the enablers for Barangaroo that contributes to a unique sense of place and distinctiveness, whilst at the same time providing opportunity for community and local business equity and diversity. It provides the internationally recognised and independently verified platform to demonstrate Barangaroo's exemplary environmental, economic and social sustainability goals. Importantly it will provide a platform to enable the tenants, investors and visitors to easily understand and to be an active part of Barangaroo's exemplary sustainability solutions.

A One Planet outline Action Plan for Headland Park appears at Appendix C

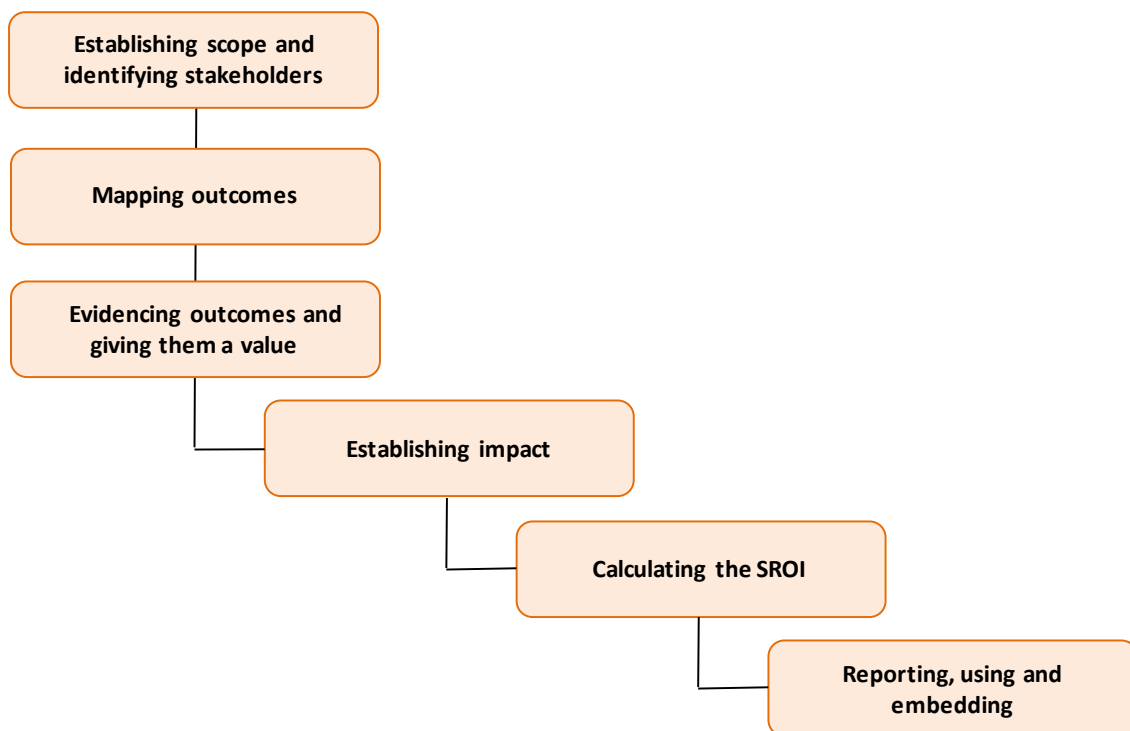
Appendix B

SOCIAL RETURN ON INVESTMENT FRAMEWORK

Social Return on Investment is a methodology designed to capture the social, economic and environmental outcomes achieved by a specific investment. It is derived from traditional cost-benefit analysis but includes (from the field of social accounting) stakeholder engagement in arriving at the values used in the analysis.

The majority of companies fail to comprehensively measure the value of social investment programs. To better understand the social sustainability outcomes likely to be achieved by the Barangaroo development, a Social Return on Investment (SROI) indicative forecast assessment was undertaken at the Barangaroo South bid stage, this will be further expanded to the *Community Plan* and importantly for evaluation, looking at the combination of infrastructure and programs/services undertaken to achieve the desired social sustainability outcomes.

The SROI methodology employed is as follows:

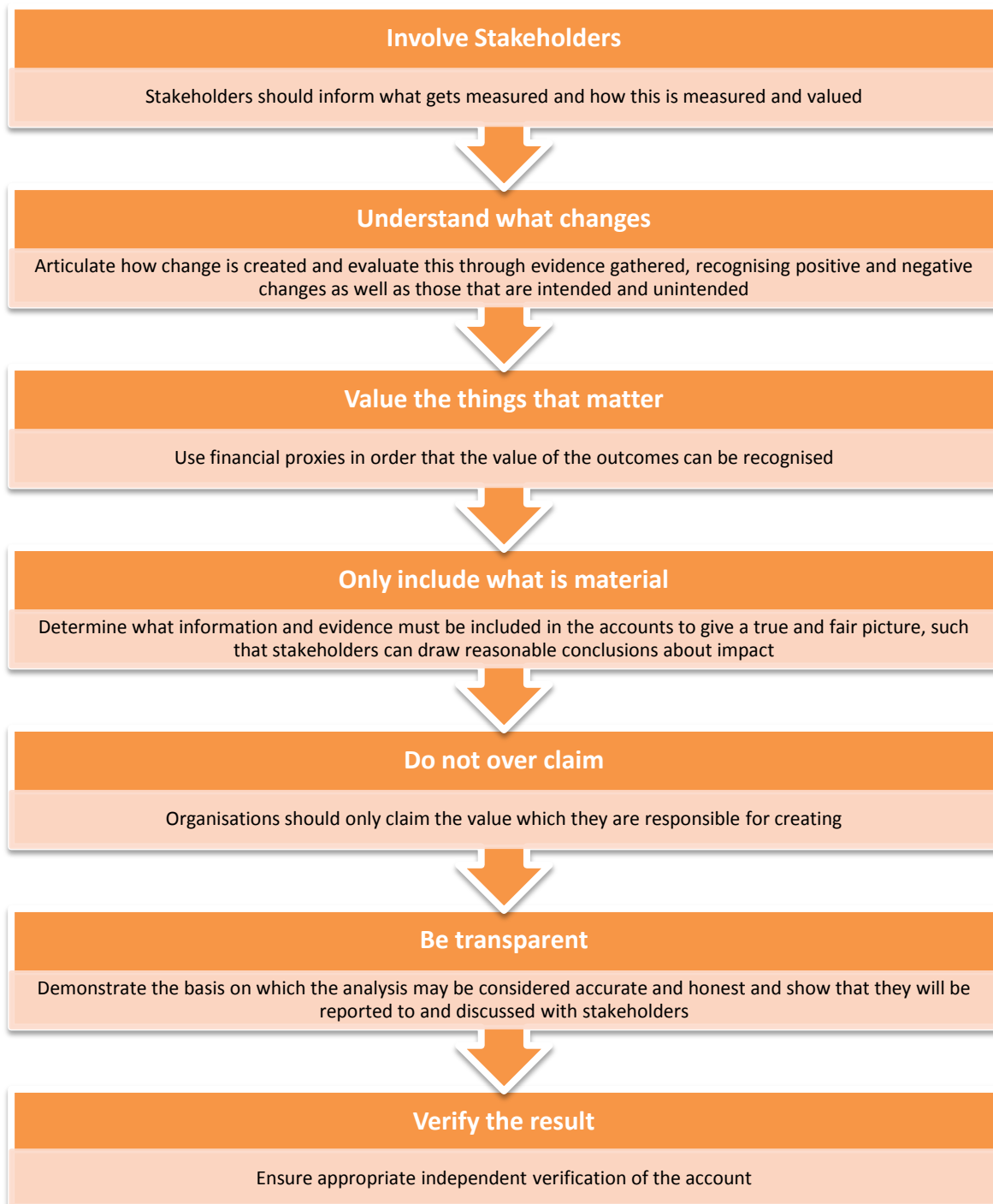


$$\text{SROI} = \frac{[\text{Value of benefits}]}{[\text{Investment}]}$$

The indicative forecast SROI assessment for sustainability outcomes for infrastructure, programs and services achieved a total social value benefit ratio in excess of 3:1.

The Community Plan will develop an SROI forecast and evaluation using the seven principles of SROI that have been established by the SROI Network. Final SROI analysis will be judged against these principles, and they should be considered at all stages of the SROI analysis.

The Principles are outlined below:



Appendix C

Headland Park

Introduction

This section of the report aims to provide an early indication of the community and social infrastructure and programs that have been previously identified to be delivered during the development of Headland Park. It is by no means a conclusive list, and is provided as an initial indication of the potential suite of projects and programs identified during early stages of project planning, based on the current understanding of the existing and emerging community and consultation undertaken to date. It should be read in conjunction with the Overview of Recreational Planning Issues report in this project application.

It is intended that all the previously identified social and community projects and programs will be further tested and verified through the proposed community and social planning process (including community engagement) outlined in the methodology in the body of this '*plan of the Barangaroo Community Plan*'.

The final *Barangaroo Community Plan* will include an initial list of the specific community and social projects and programs that have been identified in response to the needs, drivers and appetites of existing and emerging stakeholders from the site and its catchments.

While the projects and programs identified in this appendix will be delivered during the development of Barangaroo South, their impact, reach and target catchment will extend well beyond this area. Similarly projects planned and delivered in tandem with the development of Barangaroo Central and Headland Park (to be outlined in the final *Barangaroo Community Plan* in Appendices D and E, respectively) will also have a reach and target audience beyond the specific precincts.

While this approach compartmentalises the individual areas of the overall Barangaroo development site there is ongoing commitment by the Barangaroo Development Authority and their development and community partners to work collaboratively to deliver a coordinated approach to the planning and delivery of community and social infrastructure and programs across Barangaroo.

It is intended that the community and social infrastructure and programs delivered collaboratively across the whole of the Barangaroo site will work together to satisfy the Statement of Commitments.

Outline Headland Park One Planet Action Plan

The outline Headland Park One Planet Action Plan follows:

Barangaroo Headland Park

Outline One Planet Action Plan

Revision	Description	Date	Issued by	Reviewed by
V1	1 st Draft	29/07/2010	Ben Gill	Tony Watson Catherine Sweeney
V2	2 nd Draft	03/08/2010	Ben Gill	Pooran Desai Tony Watson Catherine Sweeney
V3	Outline Plan for Project Application	05/08/2010	Ben Gill	Tony Watson Arabella Scarisbrick

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solutions for sustainability

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Contents

Summary of the Action Plan.....	2
1 Introduction	3
1.1 Headland Park proposals.....	3
1.2 The One Planet challenge.....	4
1.3 The Australian Context.....	5
2 One planet living in the Headland Park	5
2.1 A day in the life of the Headland Park – a role play	7
3 One Planet Action Plan	9
Zero carbon	9
Zero waste.....	10
Sustainable transport	11
Sustainable materials	12
Local and sustainable food.....	13
Sustainable water	14
Land use and wildlife	15
Culture and heritage	16
Equity and local economy	17
Health and happiness.....	18
4 Headland Park construction targets and strategies	20
5 Summary of approach.....	21
5.1 Sustainable infrastructure	21
5.2 Sustainable lifestyles.....	22
5.3 Overall	22
Appendix A – Common International Targets.....	23
Overarching Targets.....	23
Ten One Planet Principles	23
Appendix B – About BioRegional.....	25

Summary of the Action Plan

The Headland Park at Barangaroo is an extraordinary opportunity to create a showcase of sustainable design and management in the heart of one of the most important cities in the region and prove to the world that truly sustainable lifestyles are both attractive and affordable. This document outlines how the Barangaroo Delivery Authority intends to turn this opportunity into a reality. A more detailed Action Plan is being developed to further detail strategies to meet the targets outlined in this Plan.

Ecological Footprint analysis shows that if everyone in the world lived like the average Australian we would need four planets to support us (Figure 2). By investigating where the impacts of the lifestyle arise from we can then develop strategies to enable people to live within their fair share of the earth's resources. We are using the One Planet framework to create a holistic sustainability strategy for the Headland Park, designing sustainable infrastructure and overlaying a range of services to enable sustainable living.

The framework uses ten One Planet principles to ensure all aspects of sustainability are addressed and we have developed a complete set of strategies against each of these principles, summarised in the table below. By meeting this standard the Headland Park and Barangaroo would become one of five fully endorsed One Planet Communities in the world (www.oneplanetcommunities.org).

Principle	Proposed strategies
Zero Carbon	<ul style="list-style-type: none"> 100% Public domain energy demand at Barangaroo met through onsite renewable energy generation, solar PV panel on Headland Park contribute to this target Reduction in energy demand through efficient fittings, behavioural change and sustainable design Carbon accounting of residual energy, transport and waste emissions, through the Barangaroo Community Carbon Fund. Offset through the voluntary retirement of Renewable Energy Certificates annually
Zero Waste	<ul style="list-style-type: none"> Comprehensive site wide recycling strategy Reduce waste through engaging with retailers to reduce onsite packaging etc Compost waste for reuse onsite Educational initiatives
Sustainable Transport	<ul style="list-style-type: none"> Support 'active travel' through excellent pedestrian and cycling facilities Encourage public transport by interactive signage and inclusion in event ticket price Car parking ticket to include carbon offset and incentives for low emissions cars
Sustainable Materials	<ul style="list-style-type: none"> Reuse of on site materials, such as sandstone and fill to create the park Use of recycled and low impact materials for park furniture Operational materials reduced through engaging with retailers
Local and Sustainable Food	<ul style="list-style-type: none"> Native planting scheme opportunity for visitor learning adventures with traditional food and medicinal plant uses All food and beverage outlets (retailers, temporary events and markets) provide opportunity for locally produced food, enforced by lease conditions
Sustainable Water	<ul style="list-style-type: none"> All water uses, with the exception of drinking water, to use a hierarchy of rainwater, stormwater and recycled black water All stormwater cleaned up using gross pollutant traps and bio-filtration
Land Use and Wildlife	<ul style="list-style-type: none"> 100% native plant use – 90% of which will be endemic species 100% soil manufactured 'anthroposol' from sandstone and recycled waste Habitat creation in landscape, sea walls and even in buildings through green roofs
Culture and	<ul style="list-style-type: none"> Create a new cultural identity for Sydney through the unique space and architecture Art integrated into the landscape design and heritage features retained

Heritage	<ul style="list-style-type: none"> Original foreshore will be revealed – possible Aboriginal middens, c1820s limekiln Create a culture of sustainability through educating visitors and training everyone involved in delivery in One Planet Living and its 10 principles
Equity and Local Economy	<ul style="list-style-type: none"> Local employment and training opportunity conditional in construction and leasing contracts Barangaroo Community Plan takes a wellbeing approach to community needs and support of disadvantaged groups, including youth and aged populations
Health and Happiness	<ul style="list-style-type: none"> Visitors enjoy the Headland for respite and place of peace and contemplation Positive health outcomes from facilities for walking, cycling and passive recreation Improved well-being due to lifelong learning opportunities Opportunities for community engagement in the construction and operational activities of the Park

1 Introduction

Barangaroo is an extraordinary opportunity in the heart of Sydney, adjacent to the existing Central Business District and sandwiched in between Darling Harbour and The Rocks, the two most visited locations in Sydney. The development plans are split into three areas: The Headland Park, Barangaroo Central and Barangaroo South. This document focuses on the Headland Park. The Developer of Barangaroo South have separately developed their own Action Plan for that part of the site, and the two plans will be coordinated to give the best possible outcome.

By making the development a beacon for sustainability the site has the opportunity to educate not just the 23,000 workers of Barangaroo South's commercial district extension and residents of the 1500 units across the site, but also the millions of visitors who will come through the site and Park every year. The Headland Park itself can complement other existing headland parks in Sydney while also offering a different experience, one focused on subtle environmental education, native species and community participation.



Figure 1: Image of proposals for Barangaroo

1.1 Headland Park proposals

The proposals for the Headland Park include three key features:

1. 6.7 hectares of new Headland Park
2. A 300 space underground car park
3. A new 10,000m² - 20,000m² cultural space incorporated under the Headland Park

1.2 The One Planet challenge

One Planet Living is a vision of a sustainable world where it is easy, attractive and affordable for people to lead healthy, happy lives within a fair share of the earth's resources. Global Footprint Network and WWF's *Living Planet Report* shows how the rate at which people are consuming natural resources and polluting the environment is rising exponentially. In the last 40 years our 'Ecological Footprint' has increased about 150%. Unchecked this rise will undermine the foundations of life for hundreds of millions of people globally, compromising access to water and food, health and shelter.

The One Planet framework is a global initiative developed by BioRegional and WWF. BioRegional are leading on creating an international network of exemplary and sustainable developments in diverse contexts across the globe – what BioRegional call these One Planet Communities.



"One Planet Communities offers us a very simple choice: The next time we choose a place to live, we can choose one that invests in the sustainability of our planet. This will allow us to make a difference on a scale - and with the urgency - that all of us now know is absolutely necessary."

Achim Steiner - Executive Director, United Nations Environment Programme

One Planet

Communities use 10 principles of sustainability (below) as a framework to focus us on how we can take action for a sustainable future. The goal is straightforward: to create neighbourhoods across the world that strengthen community, provide a healthier quality of life, and restore nature, with an 80% Ecological Footprint reduction. Our aim is to have these examples around the world ready to showcase at the World Summit on Sustainable Development in 2012 and to take to the G8.

Each One Planet Community aims to achieve the Common International Targets (Appendix A) by 2020; specific targets against each of the 10 One Planet principles (see section 3) and 3 overarching targets. While a development, or in this case a park, can not guarantee that these targets are met they should deliver everything within their sphere of influence to enable these targets to be achieved.

Zero carbon	making buildings more energy efficient and delivering all energy with renewable technologies
Zero waste	reducing waste, reusing where possible, and ultimately sending zero waste to landfill
Sustainable transport	encouraging low carbon modes of transport to reduce emissions, reducing the need to travel
Sustainable materials	using sustainable and healthy products, such as those with low embodied energy, sourced locally, made from renewable or waste resources
Local and sustainable food	choosing low impact, local, seasonal and organic diets and reducing food waste
Sustainable water	using water more efficiently in buildings and in the products we buy; tackling local flooding and water course pollution
Land use and wildlife	protecting and restoring existing biodiversity and natural habitats through appropriate land use and integration into the built environment
Culture and heritage	reviving local identity and wisdom; supporting and participating in the arts
Equity and local economy	creating bioregional economies that support fair employment, inclusive communities and international fair trade
Health and happiness	encouraging active, sociable, meaningful lives to promote good health and well being

This report outlines the Barangaroo Delivery Authority's (The Authority) sustainability proposals for how the Headland Park can meet the Common International Targets for One Planet Communities. This Action Plan has not yet been endorsed by the One Planet Steering Group, but The Authority has been working closely with BioRegional to develop the Action Plan and the Headland Park is a 'candidate' One Planet Community¹.

1.3 The Australian Context

Ecological Footprint analysis shows that if everyone in the world lived like the average Australian we would need four planets to support us. By investigating where the impacts of lifestyle arise we can develop strategies to enable people to live within their fair share of the earth's resources – which can be called 'one planet living'.

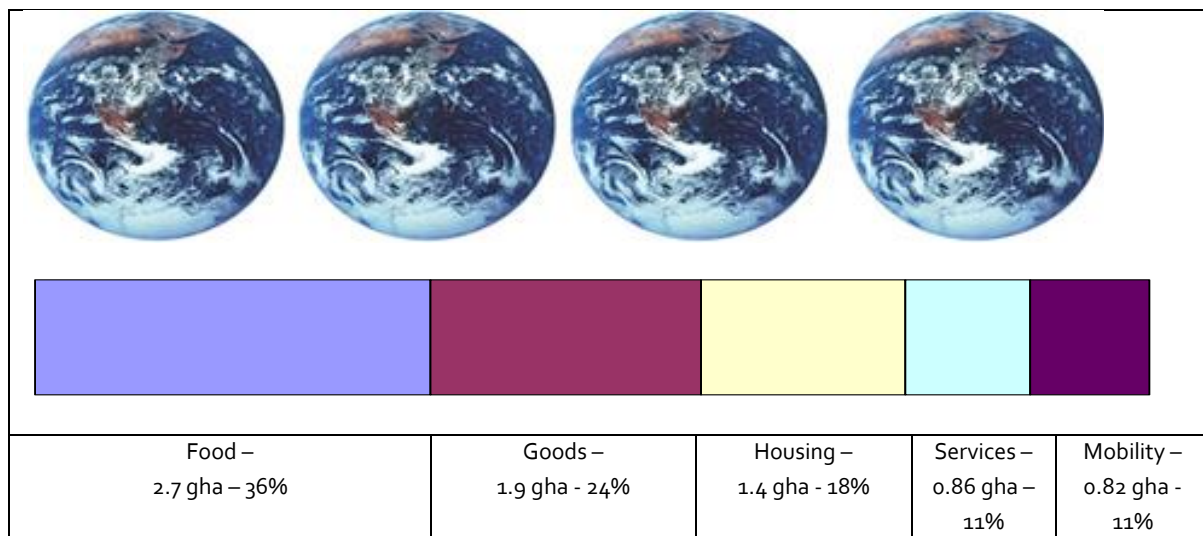


Figure 2: The Ecological Footprint of the 'average' Australian

The Ecological Footprint analysis shows that while the impact of housing is important it accounts for only 20% of our individual footprint whilst food accounts for 36%. To create communities where people can lead genuinely sustainable lifestyles we therefore need to think about sustainability more broadly. For example, to address the other substantial elements of the Footprint, we need to ensure that:

- there are sustainable transport options in place
- we encourage people to eat healthy and sustainable food
- there are services in place that enable people to use fewer private goods
- we work beyond the boundaries of the site to reduce the impact of the other services the people rely on – schools, hospitals, shops etc.

2 One planet living in the Headland Park

Globally there are many billions of people living below the one planet level. However, the majority of these are living in poverty. The challenge for creating a One Planet Community is to create a place where people can lead a happy and healthy life, above the poverty line, and live within their fair share of the Earth's resources. While many of the strategies outlined in these proposals will tackle physical and

¹ For more information on One Planet Communities and the endorsement process see: www.oneplanetcommunities.org.

mental health – an important question then is what makes people happy – and how can this be measured?

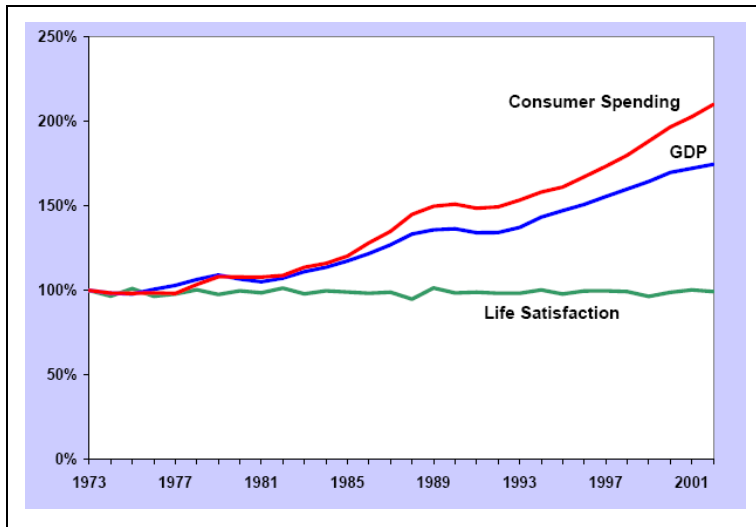


Figure 3: Change in GDP and life satisfaction since the 1973 (UK)²

There is a growing 'science of happiness' which suggests that the most accurate measure of wellbeing is simply to ask people how satisfied they are with their lives³. While there are variations between people's self assessment and obvious impacts of short term events, with a large enough sample this can be used as an accurate indicator of people's general wellbeing. This has resulted in some interesting analysis including the finding that in the developed world our happiness is no longer closely correlated with GDP. We have been getting richer and richer but, since the 1970's, as a population we have not got any happier.

This raises interesting question. What is the role of an authority in creating a new district that will actually increase the wellbeing of the community that it aims to serve? There are many causes of life satisfaction including employment and opportunities, sense of community; genes, family situation and physical environment, of which a delivery authority can only influence a few. Nonetheless at BedZED⁴ – the prototype One Planet Community in South London - the average resident knows 20 of their neighbours by name, about 4 times the national average and a good indicator of a strong sense of community⁵.

The Authority can not guarantee that the Headland Park will increase the happiness and wellbeing of the surrounding community and its visitors, but by taking a lifestyles approach to development we aim to create an environment which will help people lead happy lives while reducing their Ecological Footprint.

² Sustainable Development Research Network presentation

³ e.g. see the New Economics Foundation's methodology in the 'Happy Planet Index': www.happyplanetindex.org

⁴ www.bioregional.com/what-we-do/our-work/bedzed/

⁵ BedZED seven years on – available at <http://www.bioregional.com/news-views/publications/bedzed-seven-years-on/>

2.1 A day in the life of the Headland Park – a narrative for the year 2025

The following narrative is conceptual.

An extended three generation family decide to share a day at Barangaroo. The parents, from Balmain, take their two children on the ferry to West Quay Barangaroo and join the Eora Journey from Redfern to the Harbour. They follow their Indigenous guides across Cadigal country and enter the Headland Park from the foreshore walk, briefly stopping to refill their water bottles and stock up on local fruit at the kiosk. In the Park they explore rock formations and engravings before meandering through the Headland bushland and learning of Cadigal plant uses for food and tools – the eccentric angophora, wild currant and xanthorrhoea – where they pick up some seeds from the cultural seed bank. Through the Park they come to the Central amphitheatre where tales are told of Cadigal dreaming.



Figure 4: the angophora tree and an Aboriginal story telling in the central clearing

The grandparents, who live on their own in a new Barangaroo apartment, take a heritage tour of the Hungry Mile and hear stories of the waterside workers who laboured the docks. This is no ordinary heritage trail; they board the Hungry Mile trolley car-come-moving-theatre, a multimedia experience revealing the wharfies' stories with fun and flair. Arriving at the Munn Street bridge vault a spectacle unfolds – an awesome urban space with the wharfies mural painted like a 'cathedral of toil'. They feel great pride in the legacy of the waterside workers and their families in the old Millers Point.

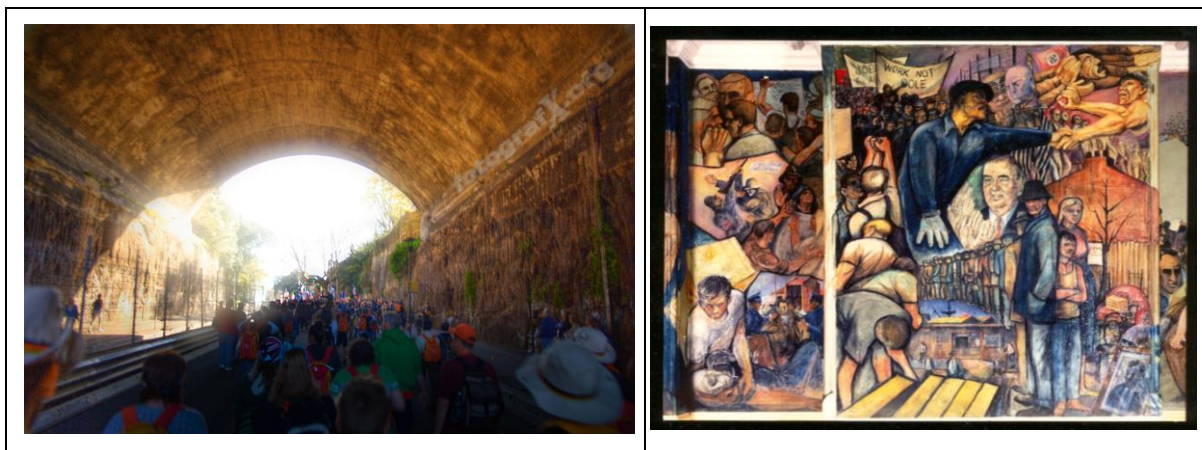


Figure 5: Munn Street Bridge Vault and the wharfies' mural

The generations meet up at the regular local produce market on Barangaroo Central. This time there is a special cultural event called 'Eating the City' - a giant model of Sydney made from foods created by various local groups. They enjoy the spectacle and buy great local organic food for their family picnic on Barangaroo Headland.

After a relaxed afternoon exploring the meandering pathways, the water trail – including the extremely popular play pump for irrigation – and rock edges full of marine life, the oldies take the children home while the young parents enjoy a night out.



Figure 6: 'Eating the City' and a family picnic in Barangaroo Headland Park

They enter the unique Headland Cultural Space - buried within the Headland – an experience in itself with soaring cliff face, concrete arched forms and shafts of light bouncing off the eerie organic forms. The space transforms before their eyes - from transcendent installation by James Turrell, to a breathtaking performance by Legs on the Wall, to a dramatic dance extravaganza by Bangarra Dance Company. They seem to have come full circle since their Indigenous stories that morning.

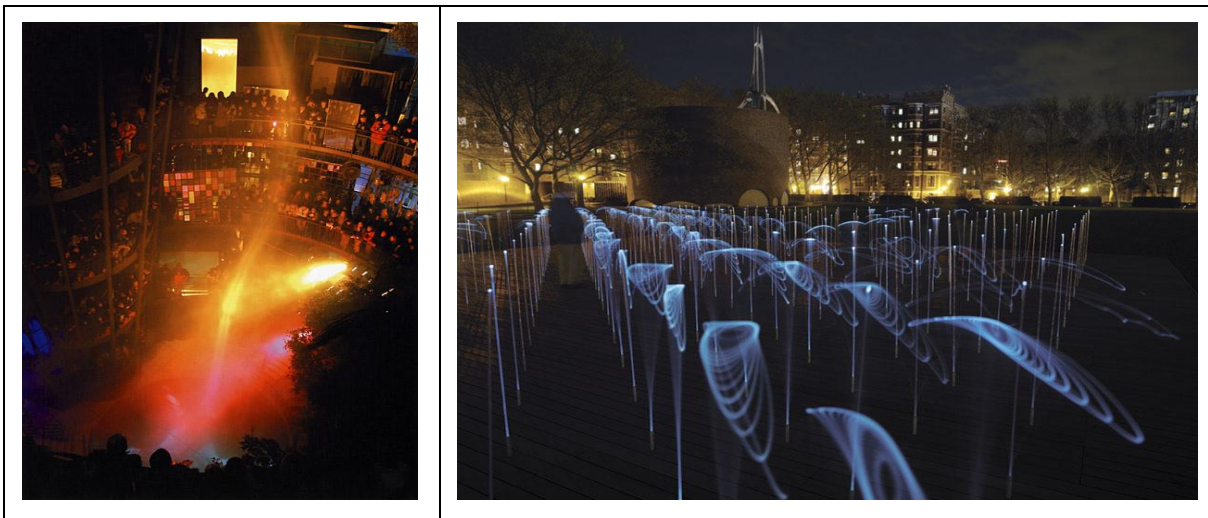


Figure 7: Example of a performance in the Cultural Centre and 'evocative light' by Howeler and Yoon

Filtering out across Barangaroo Central - now transformed from playing field to an evocative light field - to the ferry home they agree that it has been an enchanted day and yet so much remains unexplored.

3 One Planet Action Plan

This section outlines the main strategies that are being proposed to ensure that the Headland Park meets the One Planet Communities Common International Targets. Under each principle the headline targets have been given along with the main strategies to meet those targets.

Zero carbon

Making buildings more energy efficient and delivering all energy with renewable technologies

Achieving zero carbon is normally one of the largest challenges for a One Planet Community and while the challenge for the Headland Park is no less than elsewhere it does have the benefit of being able to build on the platform being developed for Barangaroo South. The Community Carbon Fund being proposed for Barangaroo South can be extended to provide zero carbon electricity for the Headland Park, augmenting the onsite renewable energy generation that will meet the public domain demand and offer a valuable visible education tool.



Figure 8: Urban renewable energy – solar streetlights and wind turbines on the ANZ Melbourne Headquarters

Headline Target	Strategies
100% Public domain energy demand met through onsite renewable energy generation.	<p>Reduce demand:</p> <ul style="list-style-type: none"> • Efficiency: Minimise energy use, planting, green roof, passive systems and behavioural change • Lighting: High efficacy light source and efficient design • Sensors and lighting levels: set to minimise demand without compromising safety • Cooling: Efficient A/C design and harbour heat rejection • On site solar photovoltaic panels sufficient to generate the equivalent power demand of the public domain (ie, lighting, irrigation pumps, toilet facilities, kiosk)
Education visitors	Interactive displays of the sustainable features of the Headland Park

Headline Target	Strategies
Zero carbon	<p>Carbon accounting of residual energy, transport and waste emissions, by the Community Carbon Fund and its offset by the voluntary retirement of Renewable Energy Certificates annually</p> <p>Opportunity to reduce carbon and fund offset through:</p> <ul style="list-style-type: none"> • Reduction in energy demand through efficient fittings, behaviour change and sustainable design • Event and car park ticketing levy • Estate levy • Joining Barangaroo South off site renewable energy generation • Onsite renewable energy generation

Zero waste

Reducing waste, reusing where possible, and ultimately sending zero waste to landfill

Strategies have been developed to minimise waste generation when the Headland Park is operational, and to maximise reuse and recycling. By making key elements of these strategies visible it will also act as a valuable education facility for the visitors. Ideally the waste facilities will become part of the visitor attraction, much like [Kew Garden's compost heap](#), and this message will be reinforced by the retail outlets onsite where there will be no (or biodegradable/recyclable only) packaging. All residual waste will be taken offsite and treated by the waste contractor through processes that are able to recycle all separated recyclables and 80% of residual waste.



Figure 9: Images of a vertical composter, pneumatic waste collection points and a 'low waste' kiosk

Headline Target	Strategies
> 80% operation waste recycled, re-used and/or reduced by 2014	<p>Reduce waste:</p> <p>Retailers: leasing requires strategy for reduced and 100% recyclable packaging and waste avoidance</p> <p>Recycle waste: recycling points throughout the park</p>

Zero waste to landfill by 2020	Zero Waste Action Plan – Review targets and strategies annually <ul style="list-style-type: none"> • Recycling of organic waste to compost. Potential for onsite facility • Waste centre – including an explanation of all waste processing types • ‘Take homes’ for visitors on how they can reduce their waste generation
Zero Emissions	The waste contractor’s system should have a zero carbon outcome CO ₂ eq emissions from residual waste offset by Barangaroo Community Carbon Fund

Sustainable transport

Reducing the need to travel and encouraging low carbon modes of transport to reduce emissions

The Headland Park is being designed as part of the transition to a lower car, sustainable transport orientated future. Therefore, while there will be an underground car park to serve visitors to the wider area, a range of strategies will be implemented in the car park, such as charges to incentivise people to use more sustainable vehicles and automatic emission offsetting fees. Likewise strategies to encourage active modes of transport (walking and cycling) and the use of public transport will include cycle and pedestrian linkages and facilities.



Figure 10: New cycle hire scheme in London (credit: AFP) and electric vehicle charging (credit: Frank on Flickr)

Headline Target	Strategies
100% reduction in emissions: <ul style="list-style-type: none"> • Trips to and from Headland Park car park • Trips to and from work • Trips to and from ticketed events 	Active travel <ul style="list-style-type: none"> • New physical links to the Park and Barangaroo e.g. Wynyard pedestrian tunnel and bridges, foreshore walk and cycleway • Cycle parking at grade level with a potential public ‘cycle concierge service’ – a changing and showering facility • Physical separation of cyclists from other modes of travel Public transport <ul style="list-style-type: none"> • New bus, light rail and ferry connections at Barangaroo • Paid ticketed events to include public transport in the cost of the ticket • Small wharf for water taxi and private boat drop off and pick up Cars and car parking <ul style="list-style-type: none"> • Car park potential to include; carbon offsets in parking charge, electric vehicle charging stations, reserved spaces for small, hybrid or car share cars, large vehicle levy

Offsetting and alternative fuels

- Carbon offset of transport related emissions managed through the Barangaroo Community Carbon Fund
- Event licensing to require the use of sustainable fuels

Sustainable materials

Low impact construction materials and encouragement of sale and purchase of sustainable, low embodied energy, products and communal ownership of large, infrequently used goods

The sustainable materials used in the construction of the headland will be communicated by subtle signage and information in the Cultural Centre and throughout the Park.

Nearly a quarter of our Footprint is from their purchase and disposal of 'goods' (Figure 2). The operation of the site will aim to change this by attracting retailers with a reputation for sustainability and to develop waste reduction strategies with them.



Figure 11: Draft images illustrating how the sustainable material selection will be visible in the Park

Headline Target	Strategies
Reuse of on site sandstone and fill materials Park furniture from recycled materials Advocate & implement UN Global Compact ten principles in the areas of human rights, labour, the environment and anti-corruption	<p>Reuse of existing materials:</p> <ul style="list-style-type: none"> • Clean basement and cove excavation material reused on site for contouring • Up to 80,000m³ of sandstone excavated and reused onsite as landscape feature, mitigating up to 2.6 tonnes of transport related carbon emissions • Adaptive reuse of heritage pump house structure <p>Recycled materials</p> <ul style="list-style-type: none"> • Use of recycled materials: concrete, aggregate, glass, steel, timber, mulch • Fly ash or blast furnace slag as cement replacement in concrete (up to 50-60%) <p>Low impact materials</p> <ul style="list-style-type: none"> • Use of recycled or FSC certified timber • Avoidance, substitution, and minimisation of high impact materials <p>Dematerialisation:</p> <ul style="list-style-type: none"> • Lightweight green roof on cultural facility to reduce structural strength required • Higher than normal car park roof to allow for alternative uses <p>Supply chain:</p> <ul style="list-style-type: none"> • Where sustainable sources are not compromised use local materials • Assess key suppliers against sustainable supply chain

Use of low impact operational materials	<ul style="list-style-type: none"> Buildings / kiosks etc fitted out with low impact materials Potential to have facilities for hiring of equipment onsite Cultural centre will minimise material use through good office management Incentives to attract retailers offering low impact products (e.g. organic clothing)
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Local and sustainable food

Choosing low impact, local, seasonal and organic diets and reducing food waste

Food is the largest single contributor to our Footprint, accounting for over a third of it (Figure 2). There is ever increasing interest in food not least because Australia has the 6th highest rate of obesity in the world, with 2/3rd of adult males overweight or obese and a quarter of all children overweight and 5% obese⁶. While many people are aware of 'food miles' and organic food, the main factor governing the impact of our food is the amount of meat and dairy we eat. Luckily a sustainable diet is generally a healthy diet, creating a clear platform for communication.

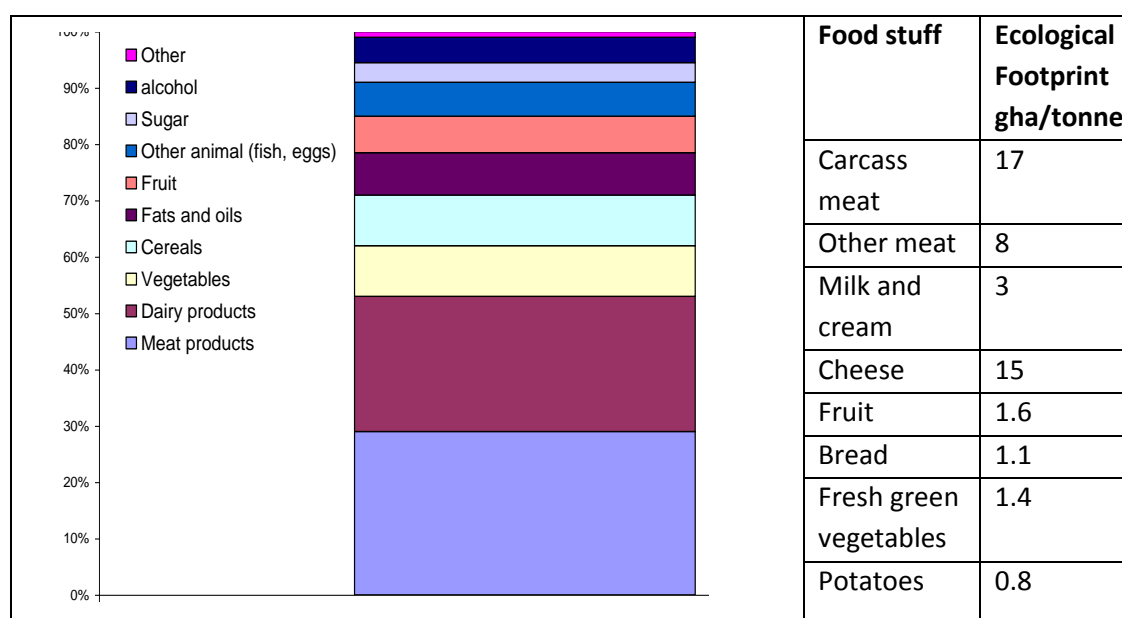


Figure 12: Ecological Footprint of the average UK diet, and the Ecological Footprint of some specific foodstuffs

Headline Target	Strategies
Park as an education for local and sustainable food	<ul style="list-style-type: none"> Potential to include: <ul style="list-style-type: none"> Planting scheme that includes Aboriginal foods and interpretation Partnership with nursery seed growing area to be shared with the local community Incorporation of performances and events based on food - artist installations, theatre projects, dinners around food and conversation Community picnics, harvest festivals, celebration of seasons potentially including the preparation of traditional foods harvested onsite Restaurant/cafe to provide local, organic food and vegetarian meals to be available and promoted as healthy

⁶ The Australian and New Zealand Obesity Society: <http://www.asso.org.au/profiles/general/faq/prevalence>

100% food and beverage outlets procure local sustainably produced food – requirements to be agreed	<ul style="list-style-type: none"> • All food and beverage outlets (retailers, temporary events and markets) provide opportunity to buy locally and/or sustainably produced food which will be enforced through lease and licence conditions • Where foods are demonstrated to be more sustainable from non-local sources these can be used in place of local sources. • Likewise all outlets will be required to use low impact produce, either organic or from farms where the practices are demonstrably sustainable • Promoting local cuisine such as the Sydney bouillabaisse could form integral part of the menu
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Sustainable water

Reducing water usage in buildings and in the products we buy; preventing flooding and pollution

Australia is a severely water stressed country and so reducing potable water demand is a high priority. As Barangaroo recycles rainwater and stormwater and recycles blackwater with onsite treatment powered through onsite renewable energy, reductions in potable water use will also reduce Sydney's energy demand in addition to potable water demand.

The Park will highlight the message that water is the source of life, and both the water cycle and how we are able to benefit from it, will be celebrated. The messaging, particularly aimed at children, will be interactive and fun for example using fountains, play-pumps and the bay area. This will ensure that the children can learn while getting wet and want to come back to enjoy the rest of the park!

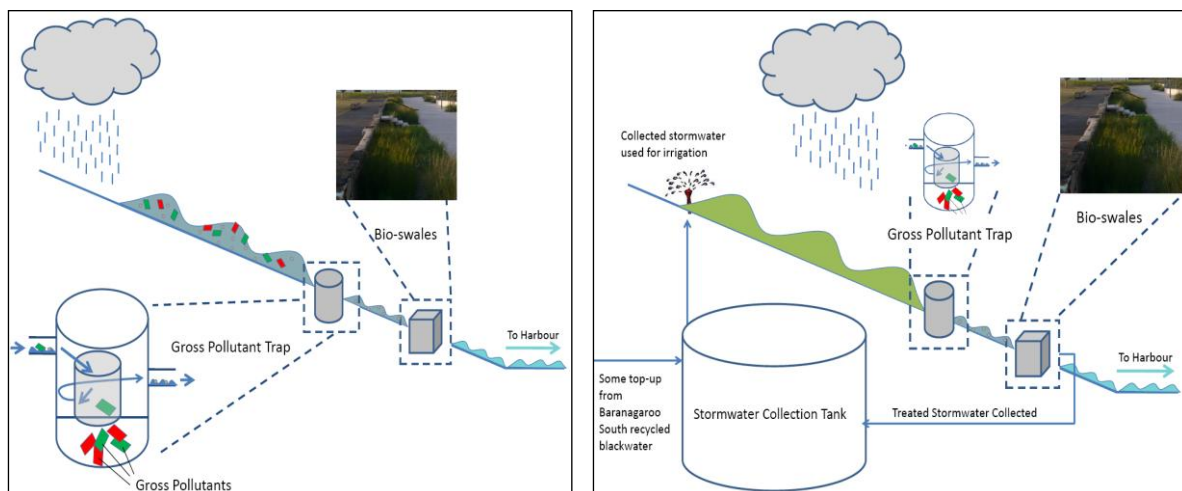


Figure 13: Example of the stormwater treatment and reuse concept

Headline Target	Strategies
All water uses, with the exception of drinking water, to use a hierarchy of rainwater, stormwater and recycled black water	<ul style="list-style-type: none"> • Efficient fittings throughout and water metering and sub-metering • Substitution of all non potable water uses with recycled / collected water, such as irrigation, toilet flushing, etc • Rainwater harvesting and storage under headland, with top-up from recycled blackwater from Barangaroo South • Target 80% of demand to be met from onsite rainwater water harvesting

All stormwater from the Park and draining through the Park from surrounding catchment is to be cleaned up utilising gross pollutant traps and bio-filtration	<p>Protect the built environment and natural systems from flooding and water logging</p> <ul style="list-style-type: none"> • Efficient infiltration bio-swale system to optimise stormwater runoff capture • Retain (use and infiltrate) stormwater at source – e.g. Bio-retention swales • Capture, treat and re-circulate runoff from external offsite urban catchment <p>Stormwater treated to exceed National Best Practice standards with:</p> <ul style="list-style-type: none"> • Total suspended solids reduced by more than 80% and • Nutrients reduced by more than 45% • Litter reduction of more than 95%
Drinking water	Water bottle filtered water refill stations in park. Reduce waste and demand on non sustainable water resources.

Land use and wildlife

Protecting and expanding existing natural habitats and creating new space for wildlife

The natural environment provides us with ‘free’ ecosystems services – from pollinating our crops to cleaning up our city’s air and water – which are valued at \$37 trillion (US) a year, twice the global Gross National Product, making a clear economic argument for protecting these services⁷. The creation of a new Headland Park on an existing concrete slab is not only a gift back to the people of Sydney but also a boon for wildlife in the City, yet the proposals acknowledge the need to further enhance these wider ecosystem services.

The site will benefit local biodiversity through the 100% native planting and the creation of habitat onsite and in the seawalls. It will also have a range of offsite benefits; eliminating topsoil import and potentially creating a seed bank of indigenous species that can be distributed to visitors. While interpretation will be important to the education role of the Park, the main strategy will be community involvement. Although the aim is not to have community led management all opportunities to involve volunteers in the creation and management of the Park will be taken.



Figure 14: Design Section of the Headland Park

Headline Target	Strategies
100% native planting	<ul style="list-style-type: none"> • 100% native plant use – 90% of which will be endemic species • This will be an expression of Sydney’s natural landscape • Traditional aboriginal plants for food, medicine and tools planted, and the cultural symbolism interpreted

⁷ <http://www.wri.org/publication/content/8381>

Manufacture of soli from sustainable resources	Develop a modular soil profile approach utilising 3 raw materials, crushed sandstone, recycled green waste compost and selected fertilisers to make any number of soil types to suit the vegetation unit – this 'anthroposol' is made from 100% recycled waste
Habitat creation terrestrial and marine	<ul style="list-style-type: none"> • Landscape: Planting Plan covers planting and habitat creation for target wildlife species (mostly birdlife) and establishing links to offsite wildlife corridors • Seawalls: Multi layered and surfaced sea walls with rock pools will replace the old vertical sea walls increasing the environmental and habitat values of the seawalls • Green roof on cultural facility and car park

Culture and heritage

Reviving local identity and wisdom; supporting and participating in the arts

The primary cultural experience at Barangaroo Headland is the spatial and sensory experience of the place itself as an urban cultural landscape representing the essence of these very qualities of Sydney. Through its physical form and urban ecology the Headland Park is a unique opportunity to embrace, explore and evoke what could be considered the 'phenomenology of place' - the intangible phenomenon and energy forces of winds, water, weather, tides, light etc.

Beyond this, cultural experiences will be configured in two ways. First, the foreshore link to the cultural ribbon of Sydney and two-way link to older cultural institutions of the city with the new cultural seeds planted at Barangaroo. Secondly a fine-grain layer of cultural experiences may be integrated into the final design. This would involve an 'interpretive repertoire' of public artworks, performance, signage and spatial graphics, multimedia, soundscapes, tours and events. These spaces and stories will evolve through people's interaction over time and occasion - investing the place with personal and public memory.

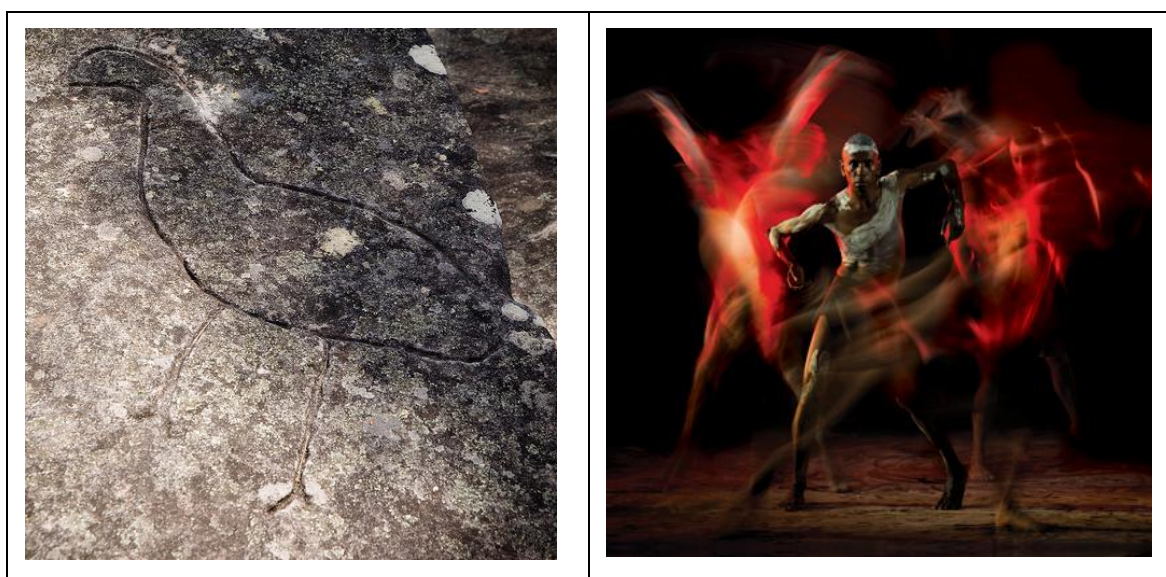


Figure 15: Rock carving at Palm Beach and the Bangarra Dance Company

Headline Target	Strategies
<p>Create a new cultural identity for Sydney:</p> <ul style="list-style-type: none"> - A sense of public ownership and access - Multiple audiences - Defining new arts for the 21st century - Fresh approach to public history in the public domain - World class artworks and projects 	<ul style="list-style-type: none"> • The underground cultural space will have unique architecture to create a new cultural experience • Art will be integrated into the landscape design • Heritage features will be retained; e.g. the cliff face • Original foreshore will be revealed, possible Aboriginal middens, possible excavation of c1820s limekiln using Cadigal shell midden material • A programme of annual events will be established • The Headland to the other headlands - Me-Mel and the archipelago of headlands in inner harbour • Barangaroo could act as a reconciliation 'bridge' by celebrating the rich maritime and indigenous history of the area, with its associations a neutral meeting place for clans • Create a culture of sustainability through educating visitors and training everyone involved in delivery in One Planet Living and its 10 principles

Equity and local economy

Creating local economies that support fair employment, and international fair trade

Social Return on Investment is being used as a key indicator for the success of Barangaroo as a whole. A study undertaken for Barangaroo South showed that each \$1 invested during development will generate more than \$3 of social capital Social return on investment will be motored to track the performance of Headland Park and Barangaroo as a whole through the Community Plan

The Park will emulate this social benefit and support the local economy through a range of initiatives for example tendering and leasing arrangements to promote local labour and training programmes to support lifelong learning and help people back into work. Similar strategies will be used to enhance global equity though support for fairly traded products. .



Figure 16: Apprentice training in construction and Barangaroo community consultation event

Headline Target	Strategies
Social Return on Investment (SROI) of \$3:\$1	<ul style="list-style-type: none"> • The Park will boost surrounding local businesses due to the expected 12 million visitors per annum to Barangaroo • Barangaroo Community Plan takes a wellbeing approach to community needs and support of disadvantaged groups, including youth and aged populations • Arts incubator projects will be supported through the Public Art and Cultural Development contribution provided to the Authority by the Developer • Funding of services and programs through car park ticket sales will be explored • Physical and social linkages and connections will be provided between Barangaroo and its surrounding communities to ensure integration of the development and facilitate benefits to be shared across the community • The Park and Cultural facility will be fully accessible and adaptable
Local employment and training opportunity in construction and operation	<ul style="list-style-type: none"> • Local employment will be promoted with conditions in construction contracts and attached to the leasing and licensing of kiosks and concessions • All construction contracts will ensure training and apprenticeship opportunities, through an employment and training plan, which includes indigenous participation opportunity. • Partnership with horticultural college and university courses will be explored • Community outreach and learning will be established to help job creation

Health and happiness

Creating that promote health and wellbeing

As discussed in section 2 the majority of people living below the One Planet level have a low quality of life. The aim of this Action Plan is to enable visitors to the Headland Park to reduce their Ecological Footprint whilst increasing their health and wellbeing. Many of the strategies outlined above in this Action Plan will endeavour to make visitors healthier, but The Authority is also developing a Barangaroo Community Plan aimed at increasing the wellbeing of the visitors to the Barangaroo Precinct including the Headland Park.

Headline Target	Strategies
Visitors enjoy the Headland for respite from the City and place of peace and contemplation	<ul style="list-style-type: none"> • Large spaces balanced by secluded areas for 'passive recreation' • Multiple points that provide contact with the harbour • Large City scale events and programmed events to provide opportunities for shared experiences and community interaction • Access path to engage many senses – sight, sound, touch, smell • Space for informal sporting and recreation – this could be extended to organised competitions and friendly games etc.

Headline Target	Strategies
Positive health outcomes due to access to and facilities for walking, cycling and passive recreation	<ul style="list-style-type: none"> • Food: Healthy eating as per local and sustainable food section • Water: Water bottle fillers as opposed to bottled water and drink • Barangaroo Community Plan: Based on wellbeing with the Park enabling: <ul style="list-style-type: none"> ○ Active living and healthy lifestyle programs ○ Potentially hire of equipment, such as roller blades, bikes, etc. ○ Fitness equipment designed into landscape features • Built form: Natural ventilation and improved indoor environment quality focusing on minimisation of emissions and off-gassing • Universal access principles applied across most areas of the park • Art: Cultural and arts activities and support through incubator programs • Design application of relevant safety by design and CPTED principles
Improved well-being due to lifelong learning opportunities	<ul style="list-style-type: none"> • Small space for community educational/engagement focus: e.g.: One Planet Living sustainability centre and/or Cultural and arts incubator programs • The public art and landscape design deliver fine grain and interest across the Park to create places for shared discovery particularly for children • Community educational facilities • Parkland interpretation strategy providing education through art, interaction with water and parkland design features, including notice boards and real time displays of energy and water consumption
Community engagement opportunity in Park construction and operation	<ul style="list-style-type: none"> • Community outreach will ensure that the Park benefits both the local community and the community of Sydney as a whole • Volunteer organisation that encourages involvement of both the local and broader Sydney community in: <ul style="list-style-type: none"> ○ Planting and maintenance programs ○ Cultural and recreational programming • Program of corporate philanthropy to maximise funds and support for cultural programs, public art, sponsorship of land care and planting projects

4 Headland Park construction targets and strategies

The creation of a sustainable Headland Park starts during the construction phase; this will be the first opportunity to show how the One Planet approach differs from standard construction. Everyone involved will undergo a One Planet Induction: the site workers, the lawyers, everyone. At One Brighton⁸, a development of 170 apartments, over 1300 people underwent a One Planet induction. The Headland Park will have a huge capacity to directly educate a large number of people.

Site workers will undergo sustainability training alongside their health and safety training before starting on site. The induction will cover site procedures and what workers can do in their daily lives and to reinforce this message the onsite canteen will serve healthy sustainable food. At One Brighton site workers have responded well to this, showing a willingness to pay more for better quality food and encouraged to be more proactive onsite if they see that the agenda is also benefitting them.

A detailed construction phase One Planet Action Plan will be developed as the project starts on site, with targets and indicators for each of the principles. The table below outlines the key targets to date.

Key targets	Strategies
Training	<ul style="list-style-type: none"> Train all construction workers in One Planet Living and its 10 principles
Reduced construction emissions	<ul style="list-style-type: none"> The site is to commit to 100% Green Power On site quarrying of the sandstone and fill to reduce transport emissions 100% Biodiesel construction equipment where possible. Alternatively 20% bio-fuels should be used where possible
> 90% construction waste recycled	<ul style="list-style-type: none"> Construction tender to require > 90% construction waste recycled, re-used and/or reduced Waste management plans to reduce waste from early works construction
The Early Works is targeting an 80% water reduction from quarrying and other construction practices	<ul style="list-style-type: none"> Ideally the rainwater tank will be utilised within the Main Works Treatment of stormwater during early works to prevent pollution into the harbour including gross pollutant traps and swales Quarrying will require 52ML of water – recycling of this and other water on site will be a key feature in construction and quarrying processes.
Environmental management plans to be ISO 14001	<ul style="list-style-type: none"> Environmental management plan to minimise local environmental disturbances
Local economy	<ul style="list-style-type: none"> Tenders to maximise the amount of work undertaken by apprentices
Health and wellbeing	<ul style="list-style-type: none"> Pollution control measures on construction equipment including diesel oxidation catalysts and diesel particulate matter filters HVAC Protection – Cover ductwork and open grilles Source Control – Use low-VOC materials, limit indoor machine exhaust, use low VOC cleaning products Provide areas for construction workers away from construction to limit exposure to dust and exhaust Housekeeping – regular sweeping and wet mopping of indoor spaces Daylighting – Provide natural daylight to indoor office areas

⁸ www.onebrighton.co.uk

5 Summary of approach

Whilst the Authority cannot guarantee that the Headland Park will help to reduce visitor's Ecological Footprint or that their visit to the park will be commensurate with a one planet lifestyle. The implementation of a One Planet Action Plan and incorporating One Planet principles into design and operation will promote and help to enable a one planet lifestyle. Figure 17 shows that the Ecological Footprint of an average resident of Barangaroo – one who is making use of the facilities available but not making other lifestyle choices to reduce their Ecological Footprint – will be about 40% less than the average Australian. To reduce the Ecological Footprint to the One Planet level requires further positive lifestyle choices and a city-wide initiative enabling sustainable living.

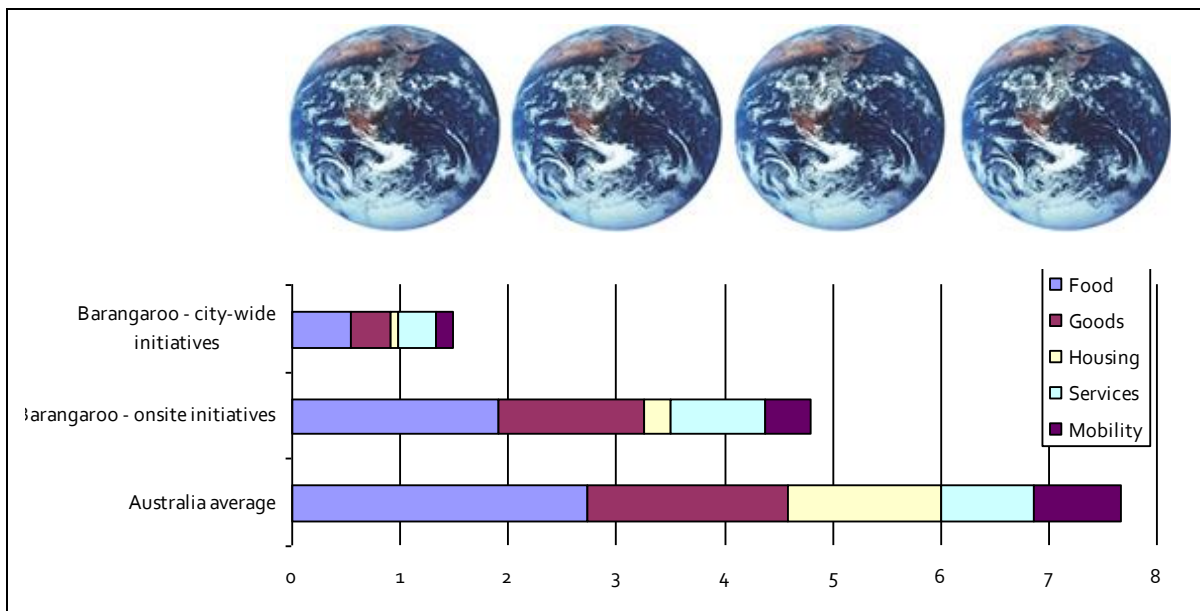


Figure 17: Potential Ecological Footprint reductions at Barangaroo

However, by using the One Planet framework and taking a lifestyles focused approach The Authority is ensuring that all possible strategies to enable sustainable ways of living have been explored. Most notably there will be both:

- a sustainable infrastructure basis that provides normal services with minimal impact
- provision of a range of new and innovative services that encourage, enable and support people in making more sustainable lifestyle choices.

5.1 Sustainable infrastructure

The experience that a visitor has of the Headland Park or cultural centre will not be diminished by the sustainability approach as the correct 'hardware' will be in place to power the facilities. The buildings and Park will be designed to be energy and water efficient and the Community Carbon Fund and the combination of on and offsite water recycling will ensure that the carbon emissions and potable water consumption are reduced to net zero.

The car park and site will be equipped with facilities for electric vehicles and have a management system in place to offer favourable rates to low emissions vehicles. The Park and centre will be constructed out of

local and sustainable materials and have a waste system, possibly involving pneumatic collection, to ensure that its recycling is maximised.

5.2 Sustainable lifestyles

The One Planet Communities approach accepts that lifestyle change is required to reduce our Ecological Footprint. This change is inevitable as oil price rises will increasingly make previously affordable behaviour prohibitively expensive. The One Planet approach sees a positive opportunity to promote a sustainable lifestyle that has associated social and health benefits. Having low impact retailers offering sustainable and healthy products will create a different recreational experience, one that celebrates the natural environment and the services that it provides for us.

The Park will tell the One Planet Living story and this message will be communicated before the visitor even reaches the Park, with active and public modes of transport encouraged, for example on the website. The sustainability story will also be subtly interpreted throughout the Park and this will be crucial in ensuring that visitors understand why the Park is as it is, why these retailers are here, why these products are on sale etc. It is important that visitors see this not as interference with their lifestyle but rather a genuine alternative to what is normally on offer in Sydney, an alternative that is truly attractive and sustainable. BioRegional have developed considerable expertise in this area through the global One Planet Communities programme and The Authority will work with them closely to develop the sustainable lifestyles package.

5.3 Overall

The Authority is taking a long term view of sustainability, accounting not just for the construction but also the operation and maintenance of the Park. This approach, while not guaranteeing that visitors will behave sustainably, will ensure that the Park and Barangaroo as a whole is at the forefront of sustainability globally.



Figure 18: People enjoying the Headland Park and Central Parklands

Appendix A – Common International Targets

The Common International Targets consist of:

- 3 Overarching Targets and
- 10 One Planet Living Principles

Overarching Targets

Principle	Overarching Targets
Greenhouse Gases (GHG)	Contract and converge rapidly, aiming for 0.8 tonnes per person by 2050. One Planet Communities will strive to show consistency with the most up to date climate science and the GHG reductions necessary to avoid dangerous climate change.
Ecological Footprint	One Planet Communities will enable residents to achieve Ecological Footprints of 1.7gha as soon as possible and 1.25gha by 2050. One Planet Communities will strive to show consistency with the concept of living within our fair share of the earth's renewable and replenishable resources.
Clean Activities	One Planet Communities will avoid any damaging pollution to air, land or water as a result of their activities at construction or occupation stage. Suppliers of goods and services with strong environmental track records and low pollution impacts will be favoured over more polluting alternatives.

Ten One Planet Principles

Principle	Common International Targets
Zero Carbon	All buildings to be 'net zero carbon' in use through exemplary energy efficiency and a combination of on and off site renewable energy generation.
Zero Waste	Reduction in all waste generation including recyclables, and approaching zero waste (2%) to landfill by 2020.
Sustainable Transport	Contract and converge rapidly to achieve personal transport emissions that are consistent with the overarching GHG target through reducing the need to travel and by facilitating low and zero carbon transport solutions.
Sustainable Materials	One Planet Communities strive to reduce the impacts of all goods and materials used in the construction, maintenance and occupation of the community, to a degree that is consistent with the overarching GHG and Ecological Footprint target. One Planet Communities will enable householders and businesses to avoid the need for, and to choose low impact alternatives to every day goods and materials.
Local and Sustainable Food	Contract and converge on personal food footprints that are consistent with the overarching targets through encouraging local, fresh unprocessed produce, organic produce, reduced waste and lower animal protein diets.

Principle	Common International Targets
Sustainable Water	One Planet Communities adopt locally specific best practice in water conservation, water efficiency and recycling, and surface water management, making a net positive contribution to the local natural water system.
Land Use and Wildlife	One Planet Communities make a net positive contribution to local native biodiversity. They work to a resourced biodiversity action plan for the area of the community and they showcase at least one project to regenerate degraded local natural resource stocks (soils, trees, fisheries, etc). One Planet Communities look for ways to facilitate the establishment or enhancement of valuable wild space consistent with the global need for 20-30% of biologically productive land.
Culture and Heritage	Create a thriving sense of place and a sense of community through enhancing and reviving valuable aspects of local culture and heritage. A resourced action plan is developed with community involvement and two locally specific showcase projects deepen the local sense of culture and heritage.
Equity and Local Economy	Helping towards a thriving, equitable future for all through inclusiveness, participation, fair employment, and affordability. One Planet Communities will improve the welfare of locally relevant disadvantaged populations. Two priority groups are identified and through discussion with them or their representatives, actions are taken to improve their welfare.
Health and Happiness	One Planet Communities strive for best practice in promoting the health and happiness of their residents and workers, through neighbourhood design, construction phase, community governance and lifestyles. Two locally relevant showcase initiatives aim to support people in improving their well being.

Appendix B – About BioRegional

BioRegional Development Group (BioRegional) is an entrepreneurial charity which invents sustainable products, services and production systems, and initiates the development of sustainable communities. We deliver practical solutions to help us to live within a fair share of the earth's resources by setting up new enterprises and partnerships around the world. We are skilled in designing and managing neighbourhoods to make sustainable lifestyles convenient and practical.

Established in 1994, BioRegional is one of the UK's most experienced organisations working in the field of sustainability. We have a track record of delivering successful sustainable development projects in our local community, nationally and internationally. BioRegional lead the One Planet Communities programme, working on projects including BedZED in South London, Sonoma Mountain Village in California, Jinshan in China, and Masdar in the United Arab Emirates.

BioRegional's wide expertise includes sustainability visioning, materials sourcing, green lifestyles (recycling, local food supply, car club introduction), Ecological Footprint analysis, sustainability Key Performance Indicators, monitoring and cost and benefit analysis. Through BedZED, One Planet Communities and our third party work, we have learned a huge amount about how, and how not, to build for sustainability.

Since 1994, BioRegional projects and the enterprises and companies which BioRegional has helped to establish have won 22 awards in the UK and six international awards for outstanding practice. Recent awards include:

- 2009 Skoll Foundation Award Winner (prize of \$750,000 awarded)
- 2009 UN Habitat Award for Green Infrastructure at Jinshan, China
- 2007 Building Magazine's 'Sustainable Consultant of the Year'
- 2006 Ashen Sustainable Energy Award Winner

		
Enabling paper recycling by small businesses, London ⁹	Charcoal from local coppice woodlands ¹⁰	BedZED – the UK's first large scale zero carbon development ¹¹

⁹ www.bioregional.com/what-we-do/our-work/the-laundry

¹⁰ www.bioregional.com/what-we-do/our-work/bioregional-charcoal/

¹¹ www.bioregional.com/what-we-do/our-work/bedzed/