Wirral Waters

Wirral Waters

Strategic Regeneration Framework

Guiding Principles: 3. Sustainability and Physical Infrastructure

11 December 2009

Contents

01 Introduction and Summary

Strategic Regeneration Framework

1.1 The vision for Wirral Waters is to create a new city waterfront focussing upon the transformation of Birkenhead and Wallasey Docks and their surrounding neighbourhoods. East Float is to be the principle focus for significant investment, delivering a new residential, commercial, cultural and leisure destination. Delivery of the vision starts immediately and will be continued over a 30+ year timescale.

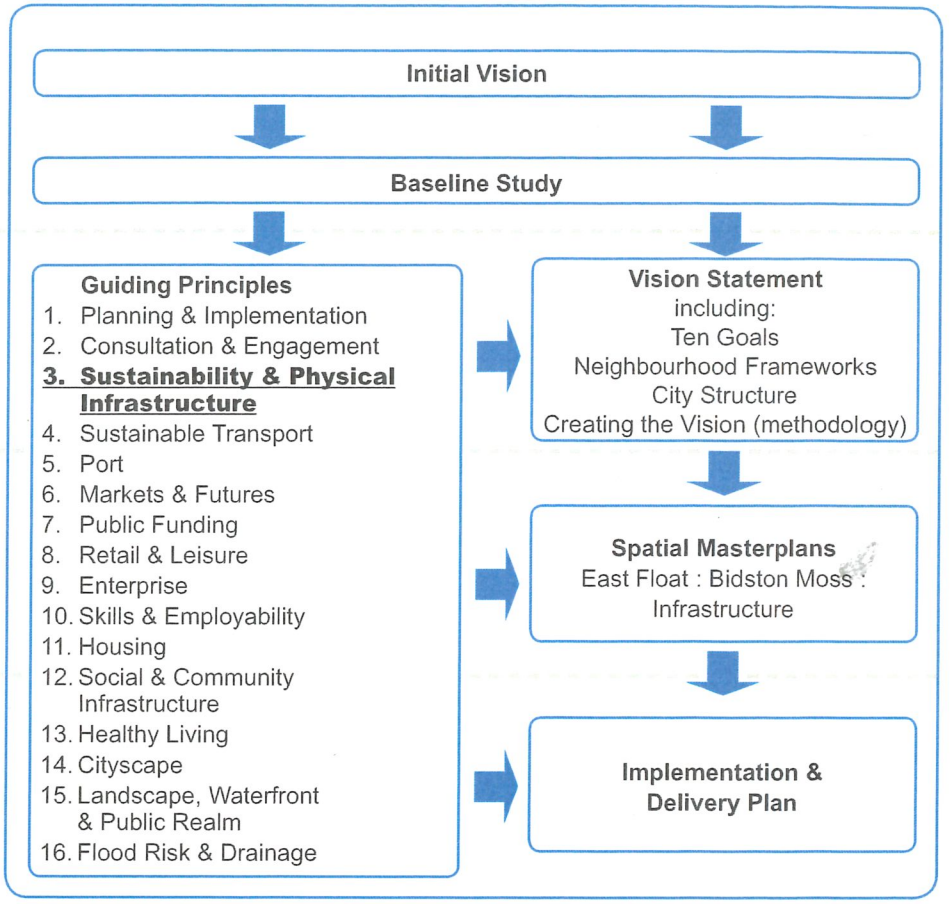
1.2 Wirral Waters is being brought forward through a Strategic Regeneration Framework (SRF). This includes five key stages. Following the Initial Vision (Stage 1) and Baseline Study (Stage 2), a Vision Statement has been produced for Stage 3, which refreshes and expands the Initial Vision through the production of Ten Goals and a series of Spatial Frameworks across 15 neighbourhoods.

1.3 The Vision Statement demonstrates how Wirral Waters will act as a catalyst to the sustainable regeneration and growth of Inner Wirral and the wider City Region. It will guide and inform the future evolution of spatial masterplans and the project implementation process.

KEY STAGES

1. Initial Vision
2. Baseline Study
3. Refreshed & Expanded version
4. Masterplanning
5. Implementation & Delivery

STRATEGIC REGENERATION FRAMEWORK STRUCTURE



Guiding Principles

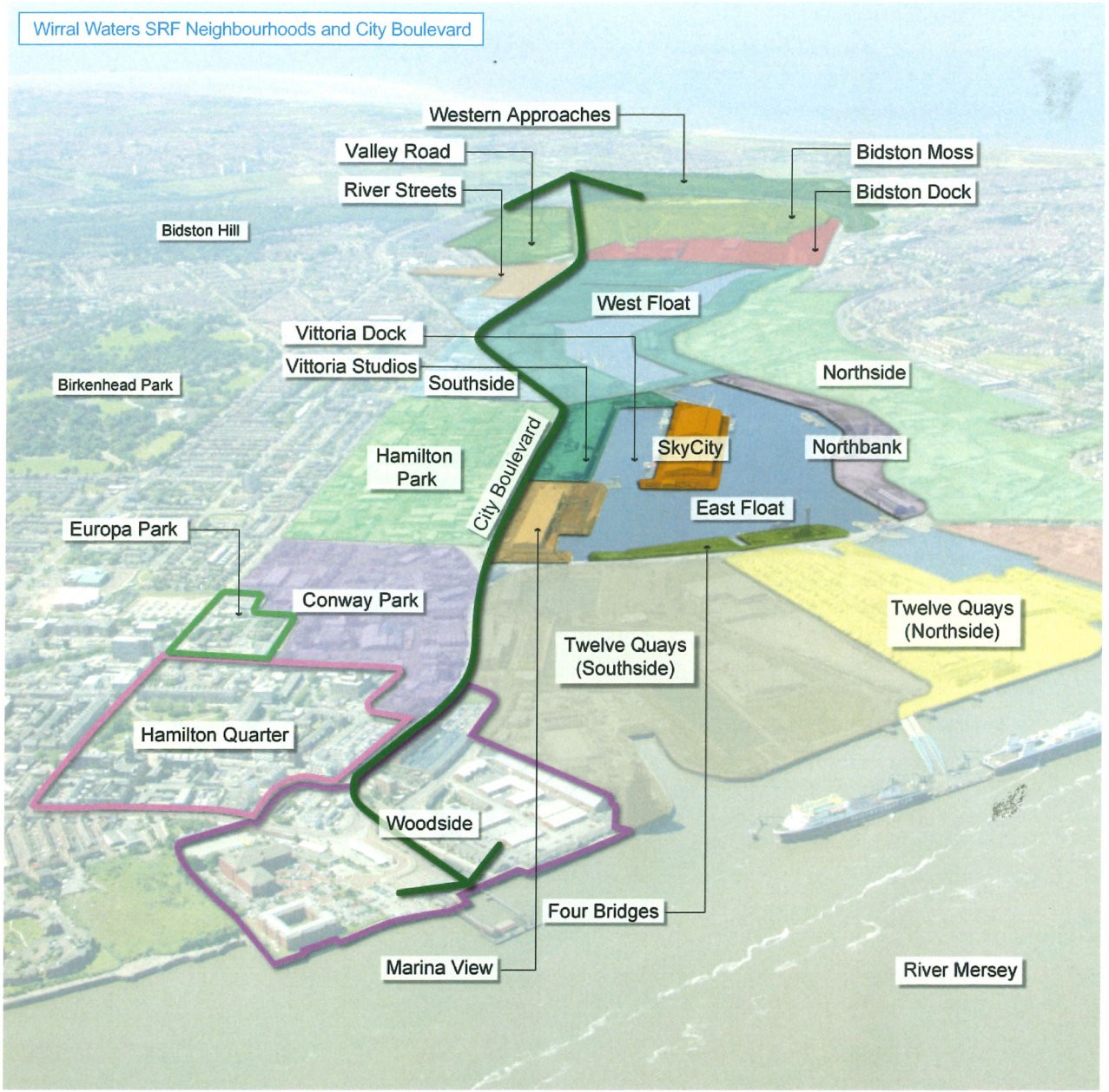
1.4 Alongside the Vision Statement, a number of documents have been produced that set out the 'Guiding Principles' of the project. These are the working embodiment of how Wirral Waters will deliver the Vision. Each Guiding Principles Document is owned by one of the Working Groups established between partners to inform, guide, shape and crucially, realise, the project.

1.5 It is intended that each Guiding Principles document can be read and understood in isolation. Further information relating to Wirral Waters can be ascertained by reference to the Vision Statement or other Guiding Principles documents, or indeed other aspects of the SRF such as the Baseline Study or individual project proposals. All such information is available on the Wirral Waters website:

http://www.peelwaters.co.uk/wirralwaters.html

1.6 Each Guiding Principles document is a snapshot in time and whilst they are intended to be timeless, the implementation process will evolve and be shaped by them. Wirral Waters will also be shaped by and need to respond to external factors, such as economic conditions and climate change, so it is important that the Guiding Principles are maintained and reviewed as and when necessary.

1.7 Each Guiding Principles document will be taken forward and delivered through individual masterplans and proposals brought forward within the SRF area, and through partnership working between Peel Holdings, Wirral Council and other key stakeholders such as the Homes and Communities Agency, the North West Regional Development Agency, Merseytravel and a range of other local, regional and national groups.



Document Structure

1.8 For simplicity, each of the Guiding Principles documents is structured in a similar manner, as follows:

- Section 1 introduces the document;
- Section 2 outlines the key issues and, where applicable, the options and opportunities available for addressing the issues;
- Section 3 sets out the overall Guiding Principles;
- Section 4 provides recommendations and next steps;
- Section 5 establishes requirements for monitoring and review.

Consultation

1.9 This document has been published in advance of the submission of the East Float planning application. The Wirral Waters proposals have been the subject of considerable consultation since 2006 to date, as set out within Guiding Principles (2) Consultation and Engagement. It is therefore hoped that these Guiding Principles reflect the aspirations of a wide range of consultees, both community groups and other interested stakeholders, locally, regionally and nationally.

1.10 Comments are nonetheless welcomed and can be made in a number of different ways:

- By email to enquiries@wirralwaters.co.uk
- By completing the form on the website http://www.peelwaters.co.uk/wirralwaters.html
- By letter to Peel Holdings, Peel Dome, The Trafford Centre, Manchester, M17 8PL

OUR TEN GOALS

			RELEVANCE OF GUIDING PRINCIPLES
1	Celebrating the past, shaping places for the future	1. Revealing the contrasting identities of the 'Wallasey Pools', and the northern and southern riverbanks 2. 'Completing' and responding to the Laird Town gridiron 3. Restoring the Great Floats as a 'seam' of waterside activity 4. Creating a City Boulevard	medium
2	Creating an internationally recognisable city waterfront	1. Creating signature skylines, buildings and structures 2. Creating city approaches and arrival points 3. Creating a world class waters edge 4. Responding to cultural and environmental assets	major
3	Creating places of distinction, destinations and market concepts for the 21st century	1. Creating a critical mass of investment centred upon East Float and Bidston Dock capable of triggering the wider regeneration of the adjacent 'partnership' neighbourhoods and beyond 2. Defining East Float as a new city waterfront 3. Defining Bidston Dock as a new destination in the heart of the Wirral Peninsula 4. Creating opportunities for new ways of living, working, learning and playing within a lush parkland and waterside setting – all right in the heart of the City Region	major
4	Creating a dynamic, prosperous Inner Wirral at the heart of the City Region	1. Shaping clear roles for 'partnership' neighbourhoods joining 'catalysts' neighbourhoods to Wallasey, Birkenhead and the River Mersey waterfront 2. Supporting adjacent regeneration proposals and initiatives through partnership working, joined up thinking and actions 3. Defining West Float and 12 Quays as long term operation port facilities 4. Working in partnership with skills and training agencies	major
5	Creating world class connections, and access for all	1. Working with partners to promote and deliver a 21st century international, national and regional rail, port, and public transport system 2. Placing people at the heart of high density walkable neighbourhoods with a choice of public transport connections 3. Creating a legible 'City Structure' with safe, easily understood, attractive and animated streets, city parks and public realm	medium
6	Sharing prosperity, health and well-being	1. Supporting existing and creating new community 'hubs' and networks 2. Defining City Boulevard as a neighbourhood 'seam', a structural community, landscape, wildlife and recreational resource 3. Encourage healthy living and active lifestyles	medium
7	Creating an exemplar regional environmental resource	1. Defining Bidston as a pivotal destination at the heart of a Wirral 'Windows on the Waterfront' parkland 2. Placing Bidston and East Float at the heart of a 21st Century waste, water and energy infrastructure network 3. Bringing about transformational change in environmental quality by working with partners in 'greening the city' through long term investment in green and blue infrastructure	major
8	Securing long term success, starting today	1. Bringing forward 'Early Win' projects and events 2. Creating a critical mass of projects to build confidence 3. Raising the quality and profile of developments to set high quality benchmarks for others to follow	medium
9	Engage & inspire	1. Creating an international profile for Wirral Waters to attract new markets and growth sectors 2. Engaging with local communities and interest groups to explore how Wirral Waters may influence established projects and networks 3 Building confidence and leading by example through our long term vision and investments	medium
10	A robust delivery framework	1. Setting in place a shared programme of action that allows all partners and communities to play a role in realising the Vision 2. Ensure that the benefits and critical mass of the 'catalysts' neighbourhoods trigger and shape change across the 'partnership' neighbourhoods and Liverpool City Region	medium

Summary: Guiding Principles for Sustainability and Physical Infrastructure

1.11 This document establishes the strategic principles for the delivery of a sustainable development exemplar project at Wirral Waters, in particular the physical and environmental aspects of the sustainability agenda.

1.12 It is recognised that sustainable development includes social and economic objectives (which are dealt with through other Stage 3 documents) however this document focuses on environmental performance and delivery of sustainable infrastructure to serve Wirral Waters.

1.13 In addition to drawing upon the other documents comprising the Stage 3 Vision and Development Framework, these Guiding Principles have been informed by the following:

- Wirral Waters Baseline Study (Peel Holdings, July 2008)
- Wirral Sustainability Appraisal Framework for (WMBC, 2006)
- Core Strategy Issues and Objectives Consultation (WMBC, December 2008)
- Northwest Sustainability Checklist (NWRA)
- BREEAM for Communities (BRE)

1.14 The requirements for sustainability in the development sector have changed significantly in recent years and are expected to continue to increase over the course of this development. These policy requirements presently include zero carbon emissions for dwellings by 2016, in public sector buildings by 2018 and in commercial buildings by 2019.

1.15 In respect of infrastructure, the Guiding Principles will inform the evolution of proposals for energy, waste, buildings, water and other requirements. Community Infrastructure and sustainable transport infrastructure are dealt with through separate stage 3 documents.

02 Issues and Options

2.1 Sustainability is an overarching priority for Wirral Waters. Not only are climate change and resources big challenges to be addressed, but the human and economic aspects of sustainability are paramount of Wirral Waters. This document approaches sustainability holistically, with a particular emphasis on environmental and physical issues. Social and economic considerations are addressed through other Guiding Principles.

2.2 The overall approach can be applied across four levels as follows:

- Strategic – looking at Wirral Waters in the context of the wider area outside of the Wirral Waters Strategic Regeneration Framework (SRF) area;
- The Wirral Waters SRF area itself;
- The specific Neighbourhoods and Quarter Level Masterplans; and
- Building specific proposals.

2.3 As Stage 3 is largely focussed on the second of those two levels, there is little detail within the Stage 3 Framework about the Neighbourhoods, Quarters or Building specific sustainability aspects of the proposals. Hence, this document focuses on the overall strategy and framework.

Environmental Sustainability Issues for Wirral Waters

2.4 In order to establish a strategy for achieving an environmentally sustainable exemplar development, a number of key issues have been considered:

- Climate Change
- Fossil Fuel Depletion
- Ozone Depletion
- Pollution
- Water Resource Depletion
- Resource Efficiency
- Sustainable Timber
- Waste
- Transport

Sustainability Targets and Viability

2.5 A key issue for Wirral Waters over the lifetime of its development will be the prevailing policy targets that exist at the time of implementation of different phases. As at 2009, the Government's targets are based upon carbon neutrality at set time horizons. The meaning and achievability of carbon neutrality is currently the subject of debate. It seems likely that as Wirral Waters evolves, the understanding of climate change and how to deal with it, will improve, resulting in new policies and targets. A diagram showing current targets and milestones is set out on page 10 of this document.

2.6 The approach for Wirral Waters is therefore predicated upon meeting prevailing policy targets. It is important to highlight that although meeting policy targets is embedded at the heart of Wirral Waters, the economic viability and delivery is also critically important. Important balances and choices may need to be made about the degree and pace of implementing sustainability initiatives especially in early phases. For example, it is evident, at the time of writing, that achieving even short term (2011) sustainability targets in the midst of a global recession is a major challenge in an area of low market confidence.

2.7 Nonetheless, sustainability will sit at the heart of Wirral Waters. Innovative technologies and partnerships will be explored to maximise what can be achieved. Funding opportunities will be investigated and Peel will work with the Council and other stakeholders to explore opportunities to ensure maximum benefit is derived, using the scale and lifetime of the project to its full potential.

Physical Infrastructure

2.8 To adequately service the Wirral Waters proposals, new infrastructure needs will be considered. These will include the plant/facilities, easements and connections in respect of energy, waste, water, telecommunications and other infrastructure. To achieve this provision in a sustainable manner will be a key priority for Wirral Waters.

Sustainability Objectives

2.9 To identify a series of sustainability objectives, a number of different sources have been reviewed. The Wirral Sustainability Appraisal Framework 2006 identifies a series of objectives under key headings of social inclusion, economic growth, environmental protection, natural resources and quality of life.

Wirral Core Strategy – Draft Objectives

2.10 Most recently, Wirral Council has set out key objectives for its Core Strategy, which refresh and revise the 2006 objectives. They are set out below. Those in bold type are particularly relevant to the consideration of environmental and physical sustainability.

A Stronger Economy

1. To improve the performance of and diversify Wirral's economy in line with the Investment Strategy
2. To reduce levels of unemployment and worklessness in the Borough
3. **To provide a continuous supply of accessible, high quality and readily available employment sites**
4. To use local spending and skills to support urban regeneration
5. To focus new development within the Borough's existing urban centres
6. To develop and support a sustainable tourism and leisure based economy
7. To sustain and enhance the vitality and viability of the Borough's town and district centres

Housing

8. To provide a continuous supply of housing land to meet identified needs
9. To focus new investment to deliver housing market renewal and growth to areas of greatest need at the heart of the older urban areas in east Wirral
10. To meet proven needs for affordable and specialist housing
11. To maximise the use of derelict and vacant previously developed land and buildings while maintaining local character and distinctiveness
12. **To ensure new housing development incorporates sustainable design and construction principles**

Building Sustainable Communities

13. To reduce health inequalities and ensure that new development encourages healthier lifestyle choices
14. To reduce inequalities in skills, education and training
15. To minimize the opportunities for crime and anti-social behaviour

An Accessible Borough

16. **To provide and promote more sustainable, integrated travel options**
17. To make efficient use of existing transport networks and infrastructure
18. To maximize the accessibility of services and jobs especially to areas of greatest need
19. **To support the movement of freight from road to rail and water**
20. **To minimise the adverse impacts of transport on local communities and the environment**
21. To support the future of port activity and related maritime sectors

Environmental Quality and Protection

22. To provide sufficient opportunities for outdoor recreation, sport and to protect and enhance the Borough's natural environment
23. To protect and enhance the Borough's biodiversity and geological resources
24. To protect and enhance the character and local distinctiveness of the urban environment
25. To protect and enhance the Borough's historic environment
26. **To ensure that future development is adapted to the impact of climate change**
27. **To minimize the risk of flooding from sea, rivers and rainfall**
28. **To provide for more sustainable waste management**
29. To maximise public safety and minimise hazards to people and the environment

Lurie Gardens, Chicago

Northwest Sustainability Toolkit

2.11 Due to the scale of Wirral Waters, it was decided also to review the Northwest Sustainability Toolkit, which is a web-based system that allows developers and local authorities in the North West to review their projects against a comprehensive set of criteria.

2.12 The criteria of the Toolkit provide a useful check for establishing sustainability objectives for Wirral Waters. The key criteria in the context of this paper can be summarised as follows:

Climate Change

- **Impact of Flash Flooding**
- **Reduce the heat island effect**
- **Reduce water consumption**
- **Promote renewable energy**
- **Access to site services and infrastructure**

Place-making

- **Effective and efficient use of land**
- Landscaping appropriate to the local environment
- Achieve visual and physical links
- Create a place with a clear identity
- Building frontages to encourage pedestrian usage of streets
- Responding to local character whilst reinforcing project identity
- **Use of Sustainable Urban Drainage (SUDS) to reduce flood risk, improve water quality and enhance biodiversity/amenity**
- Access to high quality green space for all
- Promote outdoor recreation, health and community interaction
- Ensure that new buildings can be adapted to the demands of new uses
- Prevent social inequalities and foster a socially inclusive community
- Increase the security of the development and to clearly define public and private space
- Conserve or preserve heritage or archaeologically important features
- Reduce the impact of noise upon development

Community

- Promote community involvement in project formulation and decision making
- Encourage sustainable lifestyles
- Create an inclusive community
- Ensure that community facilities are maintained and community has sense of ownership

Transport

- Manage the impact of traffic generated by the development
- Provide measures which could enable people to adopt healthier and more sustainable transport patterns
- Promote the use of teleworking
- Provide communal space around homes whilst maintaining vehicular access
- Reduce any need to travel by car to essential facilities by having them within a reasonable walking and cycling distance
- Ensure development is easily accessible by foot and cycle
- Encourage cycle use by providing cycle parking and storage
- Manage car parking as an incentive to use public transport and other methods of mobility and communication
- Provide flexible space which can accommodate other uses outside the areas of peak parking demand

Ecology

- Maintain and enhance biodiversity
- Improve and strengthen the ecological value of the site and existing habitats
- Support the viability of species by linking populations and habitats
- Ensure that the planting specified contributes to the ecological value of the site

Resources

- **Take account of flood risk and undertake mitigation measures where appropriate**
- **Increase the percentage of timber used in construction from sustainable sources**
- **Re-use contaminated land in an appropriate and sustainable manner**
- **Plan and build environmental infrastructure, to manage risks to the environment**
- **Develop a sustainable water efficiency strategy**
- **Minimise the impact of air contamination from the development**
- **Minimise / manage the waste produced on site to limit diversion to landfill**
- **Maximise the role played by secondary and recycled sources of aggregates**
- **Allow for storage of recyclables and composting**

Business

- New business space to complement and enhance existing business
- Promote business growth within regionally prioritised sectors
- Attract inward investment
- Improve the connectivity and communication between business to enhance viability
- Create additional permanent jobs within the local area
- Ensure that the development contributes to regeneration initiatives
- Provide space for all business types, both start up or expanding, to maintain a diverse and flexible business sector within the area, and provide for facilities for future growth

Buildings

- **Ensure individual buildings underpin the sustainability of the development**

BREEAM for Communities

2.13 As the project has evolved, consideration has been given to the emerging methodology of the Building Research Establishment Environmental Assessment Method for Communities known as BREEAM for Communities, which seeks to introduce a means of assessing the overall sustainability of large, mixed-use developments. The criteria fall into nine categories: Climate and Energy; Placeshaping; Community; Transport; Ecology; Resources; Business; Buildings; and Innovation. Further consideration will be given to the use of BREEAM for Communities.

Bespoke Sustainability Objectives for Wirral Waters

2.14 In considering the objectives of the emerging Wirral Core Strategy, the Northwest Sustainability Toolkit, BREEAM Communities and other sources of guidance reviewed in the Baseline Study, it is evident that there are many potential tools for guiding the development of Wirral Waters.

2.15 In order to provide a basis for assessing strategic options through Stage 3, a series of criteria have been developed. These embrace the various themes and aspects of the emerging Wirral Core Strategy sustainability objectives and the Northwest Sustainability Toolkit.

2.16 They also take their content from the Wirral Waters Baseline Study and associated initial environmental analysis. The approach was to categorise the objectives, by theme, as follows:

- **Design:** formulated from the 9 criteria of the By Design guidance, which are reflected in the Northwest Toolkit
- **Visual, Heritage and Townscape:** 7 objectives to encompass a range of key issues
- **Natural and Physical Environment:** 6 objectives incorporating key environmental/EIA issues
- **Human Environment:** 7 objectives again using

1 2 3 4

1. Green Park, Reading
2. Hegianwadweg, Zurich
3. Global Community
4. Bristol Harbourside, Bristol

key environmental/EIA issues

- **Infrastructure and Transport:** 6 objectives informed by the transport analysis of the Baseline Study and the need for exemplar project infrastructure
- **Climate Change and Sustainability:** 6 objectives to incorporate carbon reduction and other key sustainability aims
- **Sustainable Communities:** 11 objectives informed by the Baseline Study and review of issues facing the inner Wirral area
- **Economic Development:** 7 priority/objectives for maximising the economic benefits of Wirral Waters
- **Spatial Integration:** 3 key objective aims for ensuring the proposals integrated with the surrounding area

2.17 The full list of these objectives is contained at Appendix 1. The Guiding Principles for Consultation and Engagement Strategy, and other Guiding Principles documents, supplement the list of objectives in all areas.

Options

2.18 Options for the purposes of the Guiding Principles for Sustainability are as follows:

- **No overall approach to Sustainability and Physical Infrastructure** – given the requirements now incorporated in policy and guidance it might be argued that demonstrating their sustainability will be a pre-requisite of all significant development proposals and that a separate strategy is not, therefore, required. However, this approach was discounted on the basis that an overall approach should be articulated at this stage so as to inform the development and design process, and to make the most of potential opportunities.
- **Specific Targets** – the identification of 'specific targets' was considered. However, fixing the precise requirements at this stage was deemed neither desirable nor possible. Doing this would run the risk of unnecessarily constraining/restricting the design process and limit the long term approach that allows us to respond to the inevitable but unforeseen changes in policy, technology, markets etc. as the development progresses over its 30 year + projected implementation timescales.
- **Overarching Principles** – the preferred solution was the setting out of a headline commitment to 'sustainability', a series of 'principles' that the project will follow along with objectives and measures being identified where possible, and a range of actions in order to deliver an exemplar sustainable development.

CURRENT SUSTAINABILITY TARGETS

Timescales and requirements exist for different initiatives; the scheme will be phased over a long period and so will incur different requirements at different times. Not all the points below are policy at present, but are the aspirations and targets as set out in the various documents which the Government is seeking to deliver.

	Time/Action	2009	2010	2011	2012	2013	2015	2016	2018	2019
A	Definition of Zero-Carbon agreed	Summer								
B	Regional Targets	10% decentralised renewable or low carbon sources of energy required as interim target in advance of local targets to be set through LDF								NB -Will require more than 10% to meet zero carbon targets for 2016
C	NW RSS policy EM18	Required for >10 dwellings or 1,000 sq m of non-residential uses, unless it can be demonstrated that this is not feasible or viable								Will have to account for emissions from all appliances and gadgets as well
D	Construction of new Housing Corporation dwellings (2012 & 2015 is subject to cost effective technology being available)	All new Social Housing to Code Level 3			All new Social Housing to Code Level 4		All new Social Housing to Code Level 6			
E	Construction of new market dwellings to Code for Sustainable Homes standards (voluntary – unless stipulated by LDA)	All housing sold will be Code rated, even if not constructed as such	Most Code Level 3 Energy/Carbon standards made mandatory through Building Regulations			Most Code Level 4 Energy/ Carbon standards made mandatory through Building Regulations		Most Code Level 6 Energy/Carbon standards made mandatory through Building Regulations		
F	Proposed changes to Building Regulations to reduce Regulated Carbon Emissions (as compared to 2006 Part L levels) for all new buildings		Amendment of Part L to reduce regulated carbon emissions by 25%			Amendment of Part L to reduce regulated carbon emissions by 40%		Amendment of Part L to reduce regulated carbon emissions to zero (by 100%)		
G	Changes to Building Regulations (G) to reduce water consumption	Max consumption reduced to 125 litres / head /day	Possible reduction in water consumption to be 50% more efficient			Possible reduction in water consumption to be 50% more efficient		Possible reduction in water consumption to be 80% more efficient		
H	Construction of new dwellings to Lifetime Homes Standards	If seeking Code Level 6 then LH is already mandatory	If seeking Code Level 4 then LH will be mandatory at this level	All new public sector homes		If seeking Code Level 3 then LH will be mandatory at this level				
I	BREEAM launch Communities rating assessment scheme	Consultation & launch								
J	National Standards for the construction of SUDS = a Material Consideration			SUDS will be mandatory						
K	Construction of new public sector buildings to zero carbon standards (maybe Regulated Carbon Emissions) – as set in 2008 Government budget							All places of Education (Schools & Colleges)	All other public sector buildings	
L	Construction of non-domestic buildings to a recognised Code standard (maybe Regulated Carbon Emissions)									All new non-domestic buildings
M	LPA targets	To be established by Core Strategy								

KEY Definite/Statutory/Policy | Emerging Policy | Under consultation/Aspirations | Voluntary/Best Practice | Note

03 Guiding Principles

3.1 The ambition and desire of Peel Holdings is to make Wirral Waters a truly sustainable development on all counts. Not only is this the right thing to do, but the project benefits from an inherently sustainable starting point and vision, whilst it makes commercial and investment sense to ensure that such a large scale, long term project is sustainable in every manner.

3.2 Climate change and resource availability are key challenges for society and bringing forward a major project such as Wirral Waters should be seen as an opportunity to create a successful and sustainable economy and society, whilst minimising the impact on the environment and future-proofing the project against change.

3.3 As highlighted in section 2, there are now a range of policy objectives and targets that seek to promote sustainable development and addressing climate change. Policy tests will become more challenging as the project evolves. Peel and its partners will rise to the challenge through a clear, phased approach, using technical innovation, maturing markets and the support of all stakeholders.

3.4 Most pertinently, the development will need to move towards being zero carbon, away from reliance on fossil fuels, through energy efficiency and the use of clean and green energy supplies. It will also need to promote sustainable transport patterns, sustainable waste and water management and other elements of best practice sustainability.

3.5 ***The Wirral Waters project aspires to use the scale of the development, the extended time horizon over which it is expected to be delivered, the expertise of Peel in sustainable technologies and transport, and the opportunities for joint working with partners, to create a sustainable development exemplar project.***

3.6 The Guiding Principles are therefore focused on:

- Achieving legislative requirements, which are likely to become more testing and stringent as the project evolves;
- Keeping ahead of emerging technologies and using the scale and nature of Wirral Waters to bring forward new solutions that would not be possible elsewhere;
- Taking an holistic approach to sustainability – across all agendas;
- Considering sustainability at different scales, regionally, locally and in terms of the SRF area and the Neighbourhoods and Quarters within it;
- Seeking public funds where possible to assist in the viability of sustainable solutions;
- Ensuring a robust framework for delivery, whereby triggers and targets respond to the evolving policy and market context.

3.7 This will be achieved through the following commitments.

Sustainable Communities and Economic Growth

3.8 The principle aim is to deliver a Vision and Development Framework that provides for a "transformational agenda" in inner Wirral and a legacy of sustainable regeneration, in accordance with the 10 Goals.

3.9 Wirral Waters will create sustainable economic growth, by providing for enterprise growth and the environment for significant inward investment, and will assist in creating an economically active and skilled local workforce.

3.10 This will create sustainable communities, places where people want to live, which integrate with existing communities. Housing will meet Building for Life criteria and achieve Lifetime Homes standards.

Sustainable Transport and Movement

3.11 The key part of the transport strategy is to create sustainable forms of movement to and around the area, utilising public transport and walking/cycling which will minimise carbon outputs and air quality impacts and introduce demand management measures.

Sustainable Built Development

3.12 In terms of the built development itself and its approach to sustainability, the strategy is to:

Create an exemplar, low carbon, low resource demand, sustainable development, through design approaches that:

- ***have low energy demands ('lean');***
- ***use low carbon technology approaches throughout the site ('clean');***
- ***incorporate widespread use of renewable technologies ('green');***

- ***incorporate large scale site wide sustainability initiatives.***

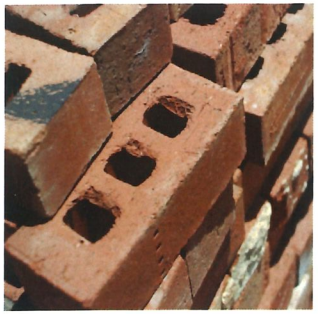
National, regional Policy targets in respect of sustainability credentials will be met provided project viability allows.

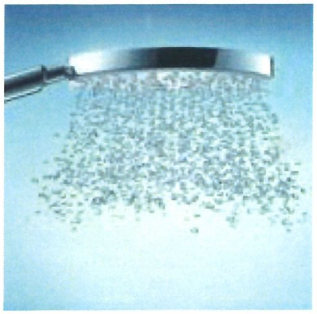
Sustainable Energy

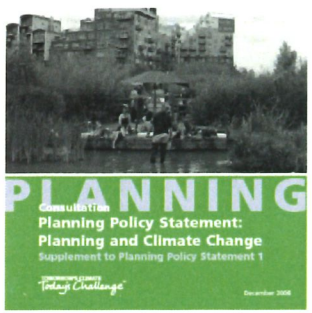
3.13 Wirral Waters will aim to achieve Building regulations part L standard (equivalent to code Level 3) until 2013 and then progressively improving to achieve zero carbon performance for dwellings from 2016 and all buildings by 2019. BREEAM 2008 - the Code for Sustainable Homes schemes, Energy Performance Certificates and Design Energy Certificates will be used as appropriate.

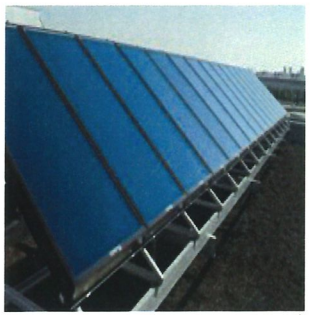
3.14 To reduce energy demands, maximise energy efficiency, provide long term sustainable energy solutions and achieve economies of scale the following will all be considered from the outset:

- Optimise Passive Design (daylight, sunlight, orientation, built form) and manage Heat Island Effects;
- Maximise natural mixed-mode cooling and ventilation (including fenestration and whole unit ventilation with heat recovery) and Passive Cooling and Shading (buildings and landscape cover);
- Maximise the use of thermal mass through exposed concrete soffits coupled with night cooling for passive cooling where appropriate;
- Permanent Horizontal shading devices of southern facade;
- Occupant controlled shading to east/west facing glazing;
- Use of lower energy cooling techniques such as displacement ventilation coupled with chilled beams;
- Promoting energy efficient appliances within buildings including 'Class A' rated white goods in domestic properties;
- Local thermostatic heating control;
- Dedicated energy efficient light fittings for all buildings;
- PIR controlled lighting to all offices and transient areas in residential use;









- Use of high efficacy lamps and timer/daylight controls for external lighting;
- Wherever on site outdoor lighting is proposed as part of a development, it should be energy efficient, minimising light loss;
- Microclimatic cooling, including encouraging the use of green roofs and other types of planting within and around the buildings;
- Initial phases will undoubtedly utilise existing technology including gas fired boilers, air cooled chillers, but be capable of being connected into a community energy wide network.
- Sustainable material selection (expanded below).

3.15 The buildings will be designed with appropriate improvements to the Building Regulations to enable us to meet the previously set out BREEAM and Code for Sustainable Homes requirements.

3.16 The intent to achieve BREEAM "Very Good" and Code for Sustainable Homes Level 3 for short-term developments will be achieved through the specification of improved standards of thermal insulation for walls, roofs, ground floor slabs and glazing and also the specification and installation of low-energy lighting, lighting controls to transient areas, energy efficient boilers for heating and low carbon technology cooling systems.

3.17 Individual building design will incorporate features that will allow for future site wide infrastructure connections to be made as the overall project develops. These features will include connections to any Community/ District heating scheme provided. The programme for the development and provision of these site wide schemes will be dependant upon the delivery programme to ensure that the phasing is coincident with the required load capacities.

3.18 The initial phases of Northbank and East Float will undoubtedly rely on "stand alone" systems in the buildings. As each of the buildings are developed each of the systems will be connected to each other through an underground service infrastructure system. Through the adoption of this incremental strategy and through diversity of uses, it is anticipated that the main plant in subsequent buildings can be reduced in capacity.

3.19 Subject to capacities and availability, 'low-grade waste heat' will be used to pre-heat the incoming cold water that feeds the domestic hot water calorifiers. Cooling . can be provided through air cooled and/or water cooled outdoor adsorption refrigeration units.

3.20 Later buildings will be designed to achieve a higher level of inherent energy efficiency. Subsequent reductions in carbon emissions, in line with Government targets, will be achieved through energy supply improvements.

3.21 Heating is anticipated to be provided to the site through Community heat network in order to maximise the economies of scale. In order to meet the requirements of the zero carbon development a variety of technologies are possible:

- Heat Led Combined Heat and Power for heating with the flexibility for a variety of Low Carbon primary fuel.
- Gas and/or biomass/RDF fired heat led CHP
- Biomass/RDF Boilers
- Natural Gas boilers
- Anaerobic digestion.
- Absorption refrigeration
- Installation of wind turbines, potentially at Bidston Moss/Dock and/or Twelve Quays (subject to technical feasibility) and/or off site.

3.22 The implementation of these technologies will be dependant upon the viability, construction programme and the selection of the most appropriate technology to accommodate the load requirements at that stage.

Water

3.23 The Guiding Principles for Flood Risk and Drainage set out the issues and approach in respect of managing flood risk and draining the site of surface water.

3.24 An important aspect will be to determine the existing water quality in the docks and monitor this over the long term, with measures put in place to ensure that water quality is not adversely affected and, where possible and where required, is enhanced.

3.25 There are a number of opportunities for reducing water consumption that will be considered in the developments, these are:

- Dual flush WCs (using 4/6 litre flushes)
- Aerated / Spray taps
- Waterless Urinals
- PIR controls on wash hand basins
- Flow restrictor valves in appropriate locations to limit excessive water pressures
- Leak detection meters

3.26 Rainwater re-cycling is to be considered to provide a number of "community supplies" as the scheme develops. Long term consideration will be given to local water treatment to provide potable supplies from local recycling.

3.27 The potential for rainwater recycling and Sustainable Urban Drainage Systems (SUDS) will be investigated in order to reduce the impact the buildings have on water supplies.

3.28 During the demolition and construction phases all necessary precautions will be undertaken to ensure that there is no contamination of the existing waterways.

Waste

3.29 This section outlines how the development will practically meet the sustainability objectives in relation to waste minimisation during the design, construction and operational phases of the development.

3.30 Waste will be minimised by considering the following construction methodologies at the design stage:

- Maximisation of pre-fabrication of building structure and façade elements;
- Maximisation of pre-fabrication of building services elements such as pipe-work and ductwork;
- Increasing standardisation of room height and widths for each of the developments; and
- Procurement of materials cut to standard widths and heights.

3.31 The following measures will be considered during

demolition and construction to control and reduce waste on site:

- Reduce, reuse and recycle waste wherever possible
- Provide dedicated waste storage areas
- No mixing of hazardous and non-hazardous wastes
- No mixing of incompatible special wastes
- Labelling of all waste skips and containers with their contents
- Ensuring all waste skips and containers are in good order, not leaking and not overflowing

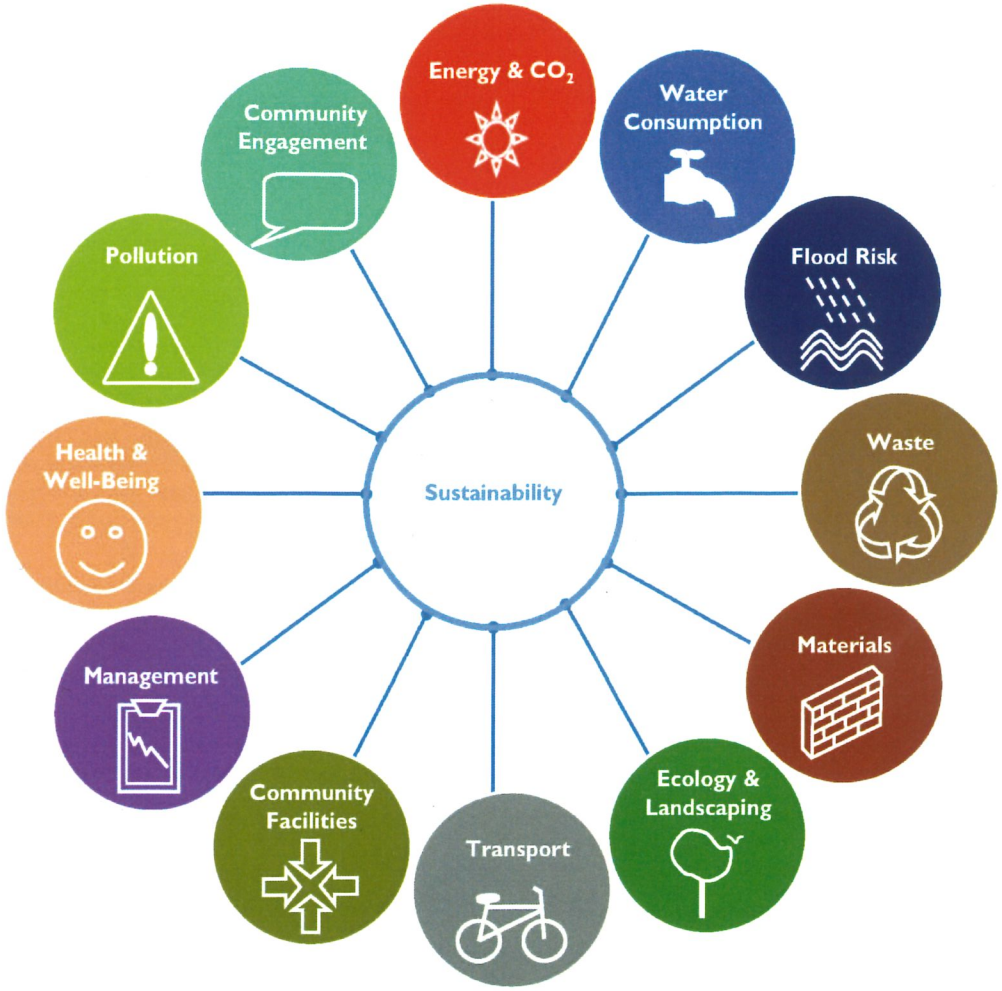
3.32 Waste management is increasingly an issue of concern for local authorities. Initial discussions have been held with MWDA regarding waste collection, sorting and disposal in the local area. Facilities will be provided to allow occupants of the buildings to sort and store recyclable waste. Waste storage space can be provided within the built development. Waste collection and carbon minimisation will be optimised through the development. Site Waste Management Plans will be provided for projects as they are taken forward.

3.33 The energy requirements of the site may include the use of Refuse Derived Fuel. Investigation into completing the recycling circle by creating demand for unwanted combustible recyclates will be progressed.

Materials

3.34 This section outlines how the development can practically meet the objectives in relation to the selection of materials and conservation of natural resources. The key principles are:

- Reducing the volume of materials used;
- Using recycled materials;
- Using materials which are naturally self-regenerating;
- Using locally sourced materials;
- Avoiding materials which are harmful to environment and health - insulants with Global Warming Potential of less than 5;
- Transport materials to site by water where possible;



- Using or recycling demolition materials; and
- Adopting BRE's Green Guide to Specification as standard method for specifying materials.

3.35 During the design and procurement process materials will be considered in accordance with the following criteria:

- Maximisation of the specification of materials which are inert such as (glass/concrete, ceramics);
- Maximisation of the use of materials which can be recycled easily (timber, steel);
- Minimisation of the use of hazardous materials ;
- Maximisation of the specification of materials which have a percentage recycled content;
- Maximisation of the specification of materials which have a local content;
- Minimisation of the specification of materials containing PVC;
- Maximisation of the specification of low VOC paints;
- Minimisation of the use of solvent based mastics and sealants; and
- Avoidance of the use of tropical timber and plywood unless FSC certified.

Noise

3.36 This section formally outlines how the development will practically meet the objectives in relation to the control of noise pollution.

3.37 During the demolition and construction phases all necessary precautions will be undertaken to ensure that noise will be reduced or avoided by:

- Investigating alternative methods and plant for each activity to determine which is likely to generate the lowest noise and vibration impact in sensitive locations;
- Control at Source - internal combustion powered plant will be fitted with silencers and be regularly maintained;
- Control along path of noise from source to receiver;
- Consider the timing, duration and phasing of construction activities to cause minimum nuisance where practicable; and
- Monitor conditions before the works start and throughout construction period, particularly at the start of any high noise generating activities.

3.38 From the design stage, the operation of the buildings from the perspective of noise generation from people, plant, equipment, etc will be controlled through the requirements of the local authority.

Security

3.39 The security strategy for the site will work on a site wide, neighbourhood by neighbourhood and building by building basis. The provision of passive and active security systems will be developed, with the aim of providing a fully integrated site wide system.

3.40 The passive element will be developed in conjunction with the design team and local and regional agencies to provide a development that minimises areas and opportunities for anti-social behaviour and maximises an individual's feeling of well being and safety.

Active measures will be provided on a building by building and neighbourhood by neighbourhood basis. Consideration will be given to the feasibility of integrating the complete system into one operation and control facility that will handle Wirral Waters. It is also proposed to look at how this centralised facility can be expanded to provide enhanced support services for residents and occupiers in the form of concierge services, maintenance services and monitoring during unoccupied periods.

Telecoms

3.41 The central aim is for telecommunications, data connectivity and New Generation Access that will meet the requirements of the world class organisations locating to Wirral Waters.

3.42 It is intended that Telecommunications will be developed to provide the site with the latest technology in the provision of voice and data systems. The telecommunications strategy is based on the provision of a number of providers around and into the development, including the consideration of private network providers in to each of the buildings. With the continuing developments in speed and reliability, the delivery of wireless technology will also form part of the ongoing design evolution for the development.

3.43 Initial phases will be provided with telecommunications and data connectivity through the use of current hard wired systems in to buildings, private network suppliers and wireless providers. The initial strategy will be to provide ducted services for a number of telecommunications across the development. These hard wired systems will be developed over time in conjunction with wireless operators to provide the coverage required for the development.

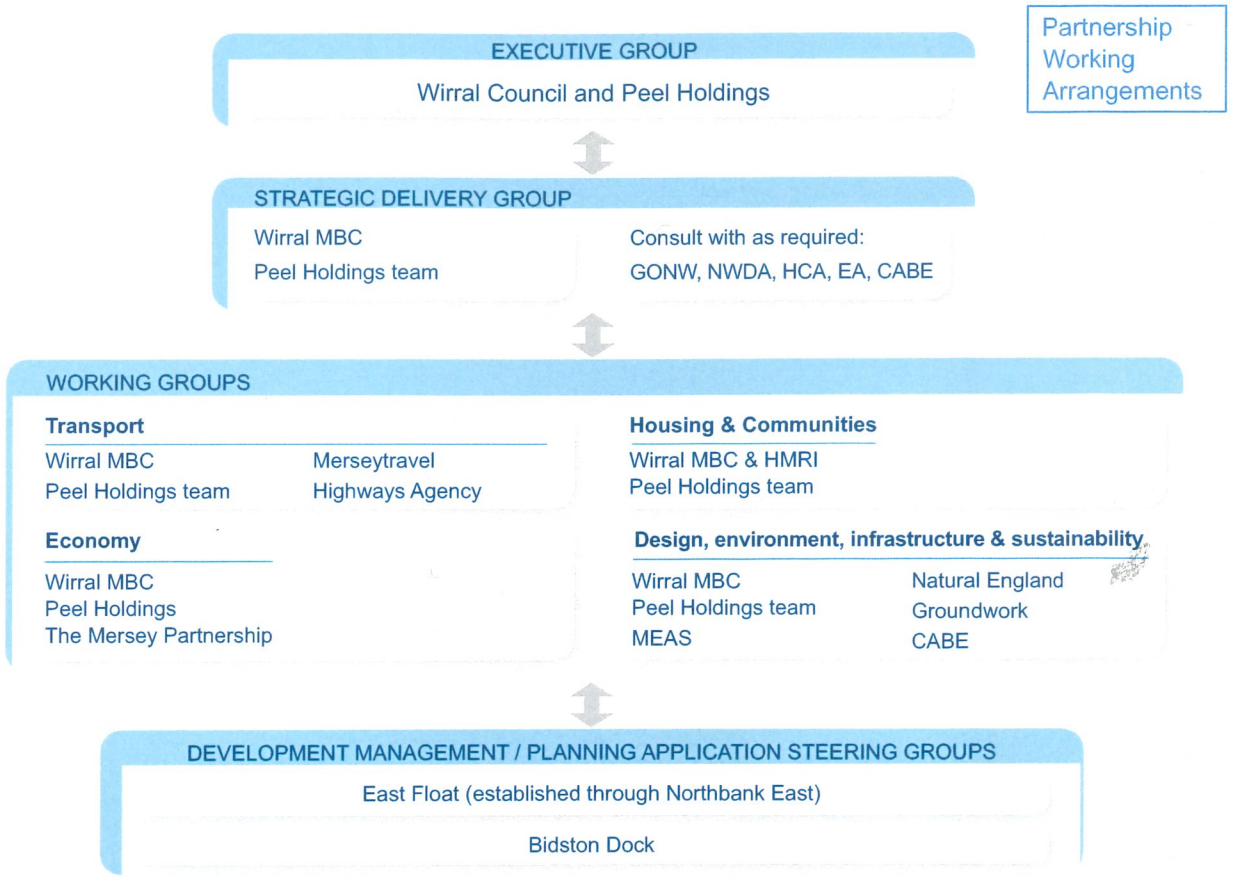
Infrastructure Provision

3.44 The infrastructure requirements of each of the above issues is considered very broadly in the vision statement. The stage 4 Masterplanning process will consider these issues in more detail and identify spatial principles for infrastructure, which will be implemented as the project moves forward.

04 Recommendations and Next Steps

4.1 The Wirral Waters Guiding Principles for Sustainability and Physical Infrastructure should be taken forward by Peel Holdings, Wirral Council and other partners including infrastructure providers and statutory bodies. It forms the basis for the creation of a sustainable development exemplar project.

4.2 The creation of more detailed proposals will flow from the overarching principles, through the Stage 4 Masterplanning projects and the subsequent implementation process.



05 Monitoring and Review

5.1 To monitor and review the sustainability offer of Wirral Waters, reviews and assessments will be undertaken as appropriate for projects, to inform 'decision making' and to guide the implementation process.

5.2 The Strategic Delivery Group will retain overall responsibility for sustainability and physical infrastructure, with thematic partnership groups to be established as appropriate.

Appendix

Sustainability Objectives

01 List of Sustainability Objectives for Wirral Waters

Area	Ref	Criterion
Design	1	Creation of a place with its own Identity
	2	Creation of new visual experiences / landmarks / improved visual amenity
	3	Creation of a place where public and private spaces are clearly distinguished
	4	Public Realm provision: a place with attractive and successful outdoor areas
	5	Creation of a place that is easy to get to and move around
	6	Legibility - a place that has a clear image and is easy to understand
	7	Adaptability – a place that can change easily
	8	Diversity - a place with variety and choice, including places to live, work, play and visit
	9	Security - a place where the users feel and are as safe as feasibly possible
Visual, Heritage and Townscape	10	Relationship with / impact upon the World Heritage Site, Scheduled Ancient Monuments, Conservation Areas, Listed Buildings and Registered Parks and Gardens;
	11	Envisaged impact upon archaeological remains / recorded features
	12	Appearance of materials, façade treatment and relationship with existing historic and townscape environment
	13	Relationship with / impact upon identified Townscape Character Areas (TCAs), natural topography, existing scale, massing building heights, proportions and urban grain (streetscape, built form, open space, rivers and waterways)
	14	Relationship with / impact upon primary and strategic views, secondary views, sequential views, view composition, landmark and skyline features
	15	Overall extent of visual influence
	16	Impact on night-time appearance
Natural and Physical Environment	17	Relationship with / impact upon Designated Wildlife Sites (Ramsar, SPA, SSSI and LNR), protected wildlife and habitats, Biodiversity Action Plans (BAPs) and Species Action Plans (SAPs);
	18	Protect and enhance habitat linkage / green corridor creation / ecological and biodiversity design
	19	Potential impact on / potential exposure to contaminating materials
	20	Geotechnical and geological conditions, and potential impact on existing structures
	21	Potential impact on hydrology and hydrogeology e.g. water quality in the Docks, Marine Water quality and abstractions
	22	Potential tidal flooding and impacts upon surface water regime

Area	Ref	Criterion
Human Environment	23	Potential overall impacts on human health
	24	Potential impact on existing and proposed noise sensitive receptors; compliance with PPG24
	25	Potential pollution and impact on Air Quality, existing and proposed sensitive receptors
	26	Potential impacts of existing lighting on proposed receptors, and of proposed lighting upon existing and proposed light sensitive receptors
	27	Inter-relationship of the proposals upon the sunlight, daylight, overshadowing regime and glare
	28	Impact of the proposals on existing and proposed open spaces and amenity areas, and provide opportunities for recreation and sport
	29	Impact of the proposals upon the proposed usage, with regard to achieving appropriate wind conditions
Infrastructure and Transport	30	Provision of appropriate and high quality services infrastructure and capacity i.e. water, drainage, energy, telecoms etc.
	31	Potential impacts of aviation e.g. radar interference
	32	Potential impacts on maritime transportation/engineering
	33	Provision of transport infrastructure to ensure sustainable access to work, live and visit i.e. bus, rail, light rail, ferry, water taxi, Park & Ride/Stride etc.
	34	Promotion of pedestrian and cycle connections and choices
	35	Access to the strategic and local highway network, whilst minimising adverse impacts of transport on local communities and the environment
Climate Change and Sustainability	36	Potential Impact on Climate Change / Greenhouse gas emissions; potential impacts as a result of Climate Change; Minimisation of Carbon footprint
	37	Reuse of previously developed land
	38	Incorporation of sustainable energy uses and reduced reliance on fossil fuels
	39	Waste minimisation and sustainable waste management
	40	Efficient water use and recycling
	41	Materials use
Sustainable Communities	42	Creation of sustainable communities and high quality sustainable development for working, living and visiting
	43	Compliance with RSS level of housing provision
	44	Scope for local people in deprived communities to access employment opportunities created (and increase employment rate)
	45	Inclusion of supporting investments to support target cluster/ sector development and local access to jobs
	46	Ability to secure population growth locally, including reduced depopulation in deprived communities
	47	Ability to secure a more sustainable demographic profile locally (including attraction and retention of younger people)
	48	Ability to secure a better skilled population (through attraction and retention of skilled workers)
	49	Provision of new housing and mix which will contribute to more favourable demographic and tenure mixes locally
	50	Clear basis for investment in range and quality of communities facilities and public realm to support attraction of inward investors, a skilled workforce and overall achievement of a sustainable community
	51	Reduce health and education inequalities locally
	52	Provision of new health and education facilities for future population

Area	Ref	Criterion
Economic Development	53	Supporting local economic development goals
	54	Raising the profile of Wirral and the Liverpool City Region regionally, nationally and internationally.
	55	Provision of employment floorspace to enable targeted or desirable sectoral change (and contribute to long term goal of a World Class business location), including developing and sustaining a tourism and leisure based economy in inner Wirral
	56	Provision of amount of floorspace appropriate to the neighbourhood, overall WW scheme, Wirral and region
	57	Provision of enterprise, start-up and other floorspace to enable targeted or desirable SME development (and contribute to goal of Wirral as a dynamic SME economy)
	58	Compatibility with local maritime economy and supporting the movement of freight from road to rail and water.
	59	Extent to which relocation of local occupiers required and satisfactorily addressed through plans
Spatial Integration	60	Integration with, and catalyst to, adjoining initiatives – i.e. Woodside, Hamilton Quarter & HMRI neighbourhoods, particularly North Birkenhead
	61	Potential impact of the proposals on surrounding existing and proposed land uses
	62	Compatibility with role, function, vitality and viability of Birkenhead Town Centre
Deliverability	63	Suitability - Overall Performance of Environmental Appraisal
	64	Availability – of land and other assets required to deliver the option. Particularly implications of decanting strategy
	65	Viability - is the option viable? – Supply + Demand analysis and market potential – Potential Impact of financial market conditions – Cost and Return on Investment incurred – Phasing of infrastructure, social infrastructure, cultural landmarks and other non-commercial developments – Technical/structural/M&E constraints