An introduction to the PortZED CSH Level 6 scheme

A presentation to the Hove Civic Society























The PortZED Ambition

- Was born out of the desire to create a world first truly sustainable mass housing development incorporating the latest in renewable technologies whilst utilising the surrounding natural resources
- PortZED has been designed to meet CSH Level 6 requirements and to be an iconic building which will assist Brighton & Hove City Council in achieving its key objectives for a sustainable future
- PortZED will provide much needed sustainable residential accommodation together with community and retail facilities which may serve as a catalyst to unlock the potential of Shoreham Port





What is PortZED?

PortZED is a proposal for a mixed use sustainable development to be located on privately owned freehold land adjacent to Shoreham Port Authority



- 67 residential units
- Commercial / retail space
- Public space
- Two storey lower ground car parking
- CSH Level 6
- Maximum use of onsite renewable energy





The Team

- We have enlisted the design expertise of two renowned architects, **Bill Dunster of ZEDFactory** and **Alan Phillips of Alan Phillips Architects**.
- ZEDfactory is expert in the field of sustainable architecture and climate neutral design and are based at their award winning BedZED development in Beddington, South London.
- Alan Phillips Architects (APA) are a Brighton based practice specialising in coastal Architecture with over 30 buildings completed within the City.
- APA and ZEDfactory were invited by developers BohoGreen to form a joint Practice - APZED for the purposes of combining their skills in creating this unique complex and innovative project.
- Lewis & Co Planning South East are a locally based planning consultancy with many years experience advising on major projects within the city.





Positives - 1

- Exemplar of how a good architectural concept and zero carbon solutions can come together successfully
- BohoGreen are not reliant on government funding or grants but have secured independent investment
- Pioneering Code for Sustainable Homes (CSH) Level 6 scheme
- Will act as a catalyst to attract future investment within Shoreham Port and the wider city in general
- The building has been designed by local people using local trades and constructed using local materials for use by the local community
- Backing of CABE and SEEDA
- Exhibiting at Shanghai Expo in 2010
- PortZED will form the western 'bookend' gateway development within the context of a promenade and beach creating a new context of innovative and heroic architecture all on the south side of the highway that together will position Brighton and Hove as a centre of architectural excellence
- The application for the PortZED scheme couldn't have come at a better time, with Brighton and Hove Council's continued commitment for the city to lead the way on sustainability and become the first city in the world to be recognised by the United Nations as a 'Biosphere Reserve'. The accolade is awarded by Unesco, the United Nations Educational, Scientific and Cultural Organization, to areas which 'innovate and demonstrate approaches to conservation and sustainable development.'





Location

- The site lies at the south west gateway to the city of Brighton and Hove overlooking the port of Shoreham and the English Channel to the south and the A259 to the north.
- Benefits from Existing public transport links on A259 and New Church Road (within 5 minutes walk of the site) provide fast reliable access to shopping, employment and entertainment throughout the City and beyond
- Adjacent to existing excellent seafront pedestrian and cycle routes
- Existing leisure and retail uses within walking distance
- Proposed improvements on A259 as part of Coastal Transit System (previously known as Rapid Transit System) linking Shoreham, Brighton, Black Rock and Brighton Station.







Location Plan







Current view of site from Kingsway







Current view of site from Kingsway







Current view of site from Kingsway







Design

Why the building has been positioned the way it has and philosophy behind the design decisions

- We considered the topology of the land together with its coastal position and investigated how best to harness the natural resources available to produce a highly efficient and sustainable development.
- The shape, size and orientation of the buildings are specifically designed to maximise the use of onsite renewable technologies
- This development is unique in that the onsite renewable technologies have not been merely been added as an afterthought but have been designed into the scheme from first principles to achieve maximum performance
- The site benefits from prevailing south westerly winds together with being south facing.
- Although there are no direct views of the sea through the site from the Kingsway as it currently stands, we were conscious that there may be a perception of a view. We therefore decided not to create a solid wall of development but elected to design a series of lozenge shaped buildings which provided an element of porosity and maintained the notional views through the buildings and across the Port.
- Various design options have been tested with members of the planning department throughout this design process





Design













Alternative designs View north west from the promenade



Standard





Alternative designs

View westwards along Kingsway



Standard





Alternative designs

View westwards from the Lagoon



Standard





Alternative designs

View north across the Port



Standard





WIND CAPTURED WIND TO ENE

Design cont...







Technical Scheme Design



MEE DIAGRAMM NOT TO SCALE.











Green wall benefits

- reduction of thermal loading to buildings lower heating and cooling costs = lower carbon emissions
- reduction of heat island effect less reflected heat
- stormwater attenuation panels can absorb over 30kgs per m2 of rainwater
- air purification plants are efficient filters of pollution especially when used indoors
- noise attenuation quieter buildings and streets
- increased urban biomass more green increases all of the above
- ecological habitat increased even with non-native plant species
- positive urban psychology uplifting effect on those who see it
- positive upgrade (retrofits) to existing urban fabric







Proposal in Context

Aerial view of site from the south of proposed PortZED development incorporating feasibility study for future development of eastern end of port









Proposal in Context



PortZED will form the western 'bookend' gateway development within the context of a seven kilometre promenade and beach, linking the family of buildings and creating a new context of innovate and heroic architecture all on the south side of the highway that together will position Brighton and Hove as a centre of architectural excellence.

Like the other seafront and harbour road developments, PortZED will be substantial enough to create its own context, and within the framework of new plans for the development and regeneration of the port. The scheme is not intending to look backwards the slightly run down 1930s housing to the north of the A259, but forwards to the dockside as a future destination and social hub. The covered pedestrian canopies both prevent downdraught from the wind focusing residential blocks above, and act as a portal encouraging vistors away from the main road to explore the finer urban grain of shops, café's, and small retail units. The new pedestrian promenade will open up long distance views of the dock and sea, and one day new bridge links and ramps will allow pedestrian to stroll from the bus stops on the A259 to the regenerated harbourside without crossing any more roads.











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Viewing corridors



Above - PortZED North night time

Below - Port ZED South aerial





Existing houses have no ground level view past thefence opposite but have uninterrupted sky views.



Due to the porous elevation of PortZED all homes keep sky and some will gain a ground level view through the site





Viewing corridors cont...































CGI's







CGI's









Basin Road Plan





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Kingsway Level Plan





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Play Space Area Plan





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First Floor Plan





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Second Floor Plan







Third Floor Plan





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Fourth Floor Plan





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Typical Floor Plans - 2 & 1 Bedroom 25m 10m 15m 20m 0m





Typical Floor Plan - 3 bedrooms



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Housing Mix - Schedule of Accommodation

•	Overall number of units	67
•	Affordable element at 40%	26.8
•	Actual number of affordable units	26
•	Total number of 1 bed units	20 (29.8%)
•	Total number of 2 bed units	31 (46.2%)
•	Total number of <mark>3 bed</mark> units	16 <mark>(23.8%)</mark>





Accommodation Schedule Plan







Affordable Provision

•	Total number of rented (all within lozeng		12 <mark>(46.2%)</mark>				
•	Total number of shared ownership (all within lozenges no's 4 & 5)			14 (53.8%)			
Rented accommodation schedule							
•	Total number of 1bed rented units	-	3				
•	Total number of 2 bed rented units	-	3				
•	Total number of 3 bed rented units	-	6				
Shared ownership schedule							
•	Total number of 1 bed s/o units	-	5				
•	Total number of 2 bed s/o units	-	9				
Overall mix of units to affordable accommodation							
•	Total number of <mark>1 bed</mark> units	-	8 (30.8%)				
•	Total number of 2 bed units	-	12 <mark>(46.1%)</mark>				
•	Total number of <mark>3 bed</mark> units	-	6 (23.1%)				





Affordable Provision diagram



Lifetime Homes

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ACCESSING INTRANCE LEVEL W.C. INTHIODH LOCATED AT INTRANCE LEVEL

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NOT APPLICABLE AS ALL PLATS ARE INVOLUE LY ONEY.





TYPICAL I AND 2 BED FLAT LAYOUT

TYPICAL 3 BED FLAT LAYOUT

(3) Tracking Hand Rouse The design should provide a reasonable roune for a patential hand from a roun bedroom to the halfroom.

ROUTES SHOWN ON PLANS FOR POTENTIAL TRACKING HOST PROVISION

(14) Bathroom Liyout The Lathroom Jossif he designed to incorporate new of access to the bath, WC and wait basis.

AU, BATHROOME ALLOW FOR SIDE TRANSPER TO W.C.

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LIFETIME HOMES





Play/amenity space













Commercial / Use Classes







D1 proposed space









PART PLAN ILLUSTRATING A3 - CAFE/ RESTAURANT SPACE ALLOCATION







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Employment

The developers are currently in discussion with the Economic Development Team and the 'Local Labour Scheme' Development Officer to provide sustainable construction industry apprenticeships as part of the 'Futures' programme in partnership with City College.

In line with the ethos of this development, it is the developer's aim to recruit from a locally based construction industry workforce.

The proposed mix of commercial units within the development are designed to suit the needs of prioritised business sectors as identified in the 'Brighton & Hove Economic Strategy 2008-2016.'

- B1 open plan office space which can be sub-divided and will be available on flexible lease arrangements at competitive rents suitable for a variety of business uses such as creative, digital, new media, and environmental.
- D1 floor space suitable for provision of healthcare services
- A1 / A3 such as a local produce store & café to service the residents of the development together with the wider community and visitors
- Retention of local business, i.e. Magnet





PREDICTED RATING - CODE LEVEL: 6

Breakdown: Energy - Code Level: 6 Water - Code Level: 6 Mandatory Requirements: met Tradable Credits Code Level: 6

Graph 1: Predicted contribution of individual sections to the total score









NOTE: The rating obtained by using this Pre Assessment Estimator is for guidance only. Predicted ratings may differ from those obtained through a formal assessment, which must be carried out by a licensed Code assessor.

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Overall Mechanical & Electrical Diagram M: LOW FLOW -> DOMESTIC NOT WATER AVAILANCES 1 HEATING San 4 WIND TURBINES BATTERY FLAT REDOWING CANOPY PV. PASSIVE 200 PELLETS . SOLAR FACADE. Commercial BOILER SITE WIDE SUPPLY. (ALSO PV FROM ROOF). ELECTRIC CARS EXPORT DGELD

MEE DIAGRAMM NOT TO SCACE.





	Demand	Demand		
PortZED	hot water	266450 kWh/yr		
	space heating	53136 kWh/yr		
	electric	173288 kWh/yr		

SUPPLY				
		no	total	%
Solar thermal	hot water	72	149040 kWh/yr	56%
Boiler	Hot water	6	117410 kWh/yr	44%
Boiler	space heating	6	53136 kWh/yr	100%
VAWT	electric	55	68750 kWh/yr	40%
PV	electric	717	109809 kWh/yr	63%
CHP (boiler)	electric	6	56848.73 kWh/yr	33%

surplus

electric

62119 kWh/yr





Heating - communal wood pellet boiler



MPICAL GROUND PLOOR BY PLAN.











Wood pellet CHP









Passive Ventilation













Heat exchange unit THERMALLY MASSIVE 67 INNER LEAF AU DIFFUSER WITH REGISTER. St A 100000000 -ZOOMM INJULATION CONTROLS SUPPLY & BORRACT BACH ROOM RAINSCREEN ALLOWING ROVERSAL STANDARD HX UNIT WITHIN CONSTRUCTION ALL WINDOWS FLUTH TO FACE PART PLAN TO LEAKE SHOWING SURFACE ROUGHNESS SMOOTH OUTER TATACTION FOR FACE PROFILED appying PANEL WORKS IN THP ENGINEERED acts SUCTION ZONE LOCAL TO INCREASE IN BOTH CONDITIONS BULKHEAD SUGTION AT HIGH LEVE

VENTILATION SOLUTION A:







Dwell Vent is a unique whole house passive ventilation system with software which generates a predictive model. This allows you to implement an efficient low tech system, with high tech assurance of

performance.

Through a carefully designed combination of Supply Air Windows and passive vents. Dwell Vent delivers energy efficiency and health benefits. The simplicity of design makes it appropriate for installation with existing skills of the construction industry, and also ensures familiarity for future property occupants.



MEETS AND EXCEEDS BUILDING REGULATIONS

- The U-values achieved by the windows are less than 1.0W/m²K which greatly exceeds building regulations' requirements, therefore ensuring against more stringent building regulations in the future.
- Dwell Vent is most appropriately applied to new buildings which are well-sealed to current energy-efficiency standards
 i.e. an air permeability of 3 4 m²/tr per m² 50 pascals, which without an engineered ventilation system would be
 akin to living in a sealed plastic bag. The health issue this poses for inhabitants is due to receive increased media
 attention over the next few years. Dwell Vent prevents the usual build up of condensation, mould growth and
 particulates, associated with sealed properties and poor health.

COST COMPETITIVE OVERALL SYSTEM

- To our knowledge, there is no other whole house passive ventilation system with heat reclaim which is cheaper on the market.
- The Supply Air Windows are comparable with the cost of conventional windows made to the same materials specification. But in addition they form part of a whole house passive ventilation system which is very competitively priced, has energy and health advantages, and has minimal maintenance requirements.
- Saves 15-20% on space heating costs, and up to 10% on overall energy consumption. Energy efficiency is a growing concern given increasing energy costs.

VENTILATION SYSTEM UNIQUE TO DWELL VENT

- Innovative system developed from ten years of scientific research. Dwell Vent is a Cambridge University start-up company.
- Our house ventilation and heat reclaim efficiency is better than other ventilation systems, with the exception of MVHR which uses motorised fans. However the Dwell Vent system is up to half the price of a MVHR system, with only small sacrifices in performance.

OTHER QUALITIES OF DWELL VENT

- Our glazing is durable for the life of the window, unlike double glazing which comes with a maximum guarantee of 10 years.
- Minimal maintenance.
- In addition to improved air flow, the windows act as a primitive air filter which improves air quality inside the home.
- We use SMART vents, ensuring smooth air flow which pre-heats the ventilation to guard against draughts.
- The system is entirely passive, so no need for noisy fans and the window design limits the amount of noise heard from outdoors.

Our website has more details, alternatively we are happy to talk to you if you would like further information about the Dwell-Vent System, please contact us at: Dwell-Vent Ltd 7 Rokesly Avenue London N8 8NS Tel: +44 (0) 7816 769332 Email: info@dwell-vent.com



Dwell vent passive ventilation system



Sunspace diagram





Sunspace detail



[Home use only] ...\Dwg\Bldgs\P_ELE_03.dgn 18/05/2007 15:54:31





Photovoltaic array







Photovoltaic array - roof plan



0

boho

green

Wind turbine CGI





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Quiet revolution - a







Quiet revolution - b

The quiet**revolution** is a wind turbine designed for use on or near buildings, where low noise and performance in turbulent, gusty winds is of paramount importance









Quiet revolution - c

Unlike traditional propeller type turbines, the qr5 collects wind from all directions, harnessing the energy in gusts that would slow or stall a HAWT






Quiet revolution - d

NOISE

The turbine is designed and engineered to be virtually silent and vibration free:

- The blade tip speed is much lower than on a similarly rated HAWT so less noise is produced
- The helical blade design results in a very smooth operation that minimises vibration and further reduces acoustic noise
- The three 'S' shaped blades are tapered to shed noise

The qr5 has been measured in accordance with BS EN 61400-11: 2003 by independent consultants ISVR

Our own internal standard is not to exceed 50dB (A) for outside spaces and 35dB (A) for inside spaces

A full report is available at <u>www.quietrevolution.co.uk</u>



quietrevolution





Quiet revolution - e

Turbine Immission Noise Map

The graph below shows equivalent sound pressure levels at various distances from the turbine.



qr5 Immission Noise Map

Produced by quietrevolution from data contained within ISVR's report.

It can therefore be concluded that if a gr5 turbine is greater than 35m away from an open window, noise levels inside a building would never exceed the recommended 45 dB(A) (as per BS 8233: 1999) nor our own recommended maximum levels of 40 dB(A), even with no other background noise such as traffic, machinery, vegetation, people.





Quiet revolution - f

Comparisons with other noise sources

To provide some points of comparison for the noise levels in question, please find below a table of typical noise levels in dB (A). Heard through an open window at a distance of 40m, a qr5 wind turbine would therefore sound about as noisy as a fridge freezer, and much quieter than an air conditioning unit.

Primary source of information: <u>www.hse.gov.uk/noise/advise.html</u>.







Quiet revolution - g

OCCURENCES OF FLICKER - HORIZONTAL VERSUS VERTICAL WIND TURBINES

At this stage the issue of reflected light for quiet revolution turbines is not considered to be a problem, as the twisted helix shape of the blades and the curved shape of other surfaces will disperse light rather than focusing it toward the viewer. The same may not be true of the majority of land based horizontal axis wind turbines, which have three or five blades; are often larger in scale; and commonly have flatter more linear faces which would have more of a potential to reflect light in a single direction causing a flickering affect to the viewer.

Extract from PPS22

Under certain combinations of geographical position and time of day, the sun may pass behind the rotors of a wind turbine and cast a shadow over neighbouring properties. When the blades rotate, the shadow flicks on and off; the effect is known as 'shadow flicker'. It only occurs inside buildings where the flicker appears through a narrow window opening. The seasonal duration of this effect can be calculated from the geometry of the machine and the latitude of the site. Although problems caused by shadow flicker are rare, for sites where existing development may be subject to this problem, applicants for planning permission for wind turbine installations should provide an analysis to quantify the effect. A single window in a single building is likely to be affected for a few minutes at certain times of the day during short periods of the year. The likelihood of this occurring and the duration of such an effect depends upon: the direction of the residence relative to the turbine(s);

the turbine hub-height and rotor diameter;

the time of year;

the proportion of day-light hours in which the turbines operate;

the frequency of bright sunshine and cloudless skies (particularly at low elevations above the horizon); and,

the prevailing wind direction.

In the case of this application, this means that properties within 30m (102'4") could be affected, although the further the observer is from the turbine, the less pronounced the impact would be. Due to the position of the turbine in relation to the nearest residential properties, which are 35 metres away it is unlikely that shadow flicker would be a significant problem.

Turbines do not cast long shadows on their southern side.

Should any instances of visual disturbances be reported it is possible to provide braking to the turbine, which is controlled by a photosensitive detection device.







Wind flow analysis - a

CFD analysis of PortZED Preliminary

The two most promenant directions for the wind in the area are from the South West and from the North East and this is what is analysed here.

The wind in other directions has varying amount of success in providing the energy required to generate power from the wind turbines.

It should be noted that the model is small in the wind field so anomalies are bound to occur at the edges of the model and can be explained as such.

Two main forms of analysis are used:

- · Air flow rate the speed of the wind in a certain point
- Air flow direction, arrow vectors explaining why the air speed is like it is in certain directions

Below is shown the key map of where analysis was taken through the site and points discussed. On plan view layers were taken at Kingsway (0), +6m, +11m and +17m.







Wind flow analysis - b







Wind flow analysis - c







Wind flow analysis - d



Conclusion

- space between towers is adequate for turbines but could be larger for optimum speed up
- Smoother transitions are required on building form especially from the NE
- · Rounding on plan should be translated to roofs and parapets
- · Canopies on street side should be taken lower to avoid wind tunnel effects
- · The quicker the field recovers on the leeward side indicates how effective the design is
- More detailed analysis is required on the contributing air streams on the leeward side and how they influence each other





Sustainability checklist









Other information...

- Waste minimisation statement
- Site waste management data sheet
- Biodiversity checklist
- Design and access statement
- Planning statement





Sustainability features

- Rainwater collection for use in irrigation and toilet flushing
- Passive ventilation
- Thermally massive walls etc.





Sustainability features – ventilation & passive heat recovery?







Sustainability features – recycling etc









Shoreham Harbour's bid for Eco-Town status

- PortZED will encourage private and governmental investment in Shoreham Harbour's future regeneration
- Proposals for sustainable developments will include 8,000 homes and demonstrate innovative ideas for how jobs, schools and services are delivered in low carbon ways that will help Brighton & Hove City Council respond to climate change.
- Thousands of new jobs will come to the Sussex coast if plans for a new ecotown win support fulfilling a massive need for local jobs.
- Shoreham Harbour would be the focus of a major new community.





Transport Assessment

Parking and Car Clubs

Streetcar and City Car Club operate car clubs within the City, a car in this location would complement the network. For a development of this size one car would be provided initially, with the potential for expansion as demand dictates. A van could be considered for use not only by residents but by the associated and adjacent businesses.

Although they are not currently part of the fleet, the Brighton car club operators are investigating providing electric vehicles. Streetcar operate VW's "Bulemotion" vehicles in Brighton and Hove, these are incredibly fuel efficient with subsequent low emissions.

Provision of around 50% parking on site will cater for the likely demand without detriment to the surrounding highway network, given the availability of public transport and the lifestyle choices of the likely residents.

Residential parking would be accessed via Wharf Road / Basin Road, making good use of the existing streets.

There are no parking restrictions in the vicinity of the site, meaning parking and servicing of the commercial elements can take place on Kingsway without detriment to the flow of traffic





Transport Assessment cont...

Electric Vehicles

There is scope to provide electric vehicle charging points as part of the development, powered by the generation on site.

The provision of a charging point on street would add to the network of 10 points proposed by BHCC, increasing further to the viability of electric vehicles in the city.

Initially the on site residential parking will be provided with three electric vehicle charging points. The infrastructure will be installed to convert all of the spaces to electric charging points in the future as the need arises.





Vehicle and Transport Links 1

Buses routes immediately adjacent to proposal - Brighton
 & Hove Buses

-No. 20 serving Brighton to Steyning

• Buses routes within 400 m - Brighton & Hove Buses

- -No. 1 serving Whitehawk to Mile Oak
- –No. 1A serving Whitehawk to Mile Oak
- -No. 6 serving Brighton Station to Portslade
- -No. 71 serving Whitehawk to Mile Oak
- -No. N25 serving Portslade to Universities





Vehicle and Transport Links 2

- Portslade Train Station is 0.7 miles (1.1km) to the north
- Hove Train Station is 1.9 miles (3.1km) to the north east
- The stations serve key destination along the south coast and to the north to Gatwick, London and beyond
- The A27, A259 and A23 are all within easy reach of the site.







Cycle Storage





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Cycle Storage - detail



Cycle-Works com Secure Bicycle Perking

Tel: 02392 015555

Josta 2-Tier Bicycle Racks

The market leaders in high capacity bicycle racks, offering space efficient and cost-effective cycle storage.

- Double the capacity of bicycle storage aclastve
 Easy and safe to use with a proven track record in the UK, Europe, Australia and the USA
- UK, Europe, Australia and the
 Scate afficient
- Fienble and adaptable
- Next and organized
- · Individual racking one tike per space
- · No maintenance required
- Patented groping system keeps bits accuraty in place
 Maximises cycle parking spaces, and allows more car
- parking (if required) or creates space for other uses
- Achieves cycle-perking requirements in buildings with limited space



The easy operation of the Josta 2-Tier



Doubles the siturage space in shefters



Ideal Applications

- · Bito-Stations and Bito Parks
- Trein and bue stations
- · Commercial or residential projects
- New sheltens and compounds
- Custom storage spaces



250

Please contact us for more information on

Tel: 02392 815555 Email: info@cycle-works.com Web: www.cycle-works.com



RESIDENTIAL CYCLE STORAGE PROVISION



JOSTA



82 CYCLE SPACES FOR FLATS. CYCLE STORAGE FITTED WITH JOSTA DOUBLE DECKER 2-TIER RACKS











Parking detail – lower level







Parking detail – mezzanine level







Consultations

CABE - Commission for Architecture & the Built Environment

CABE commented that "this project is one of the best proposals for sustainable living that we have seen at design review and we wish this exemplary project well."

SEEDA - the South East England Development Agency

Lee Amor, Executive Director - Enabling Infrastructure and Development at SEEDA, said "Achieving the vision of quality design through zero carbon development is core to SEEDA's vision for sustainable prosperity in the region, and we are keen to work with PortZED to achieve their aspirations in partnership with the local community".

Local residents

A meeting was held with the Wish Road residents association and a further residents association meeting attended by representatives from each of the neighbouring streets.

Local ward councillors

PortZED has been presented to local ward councillors and the local member of parliament and the prospective parliamentary candidate.





Presentation to local residents

• A leaflet drop to over 600 local residents was carried out to invite them to an informal presentation at the Big Fish Café.

The Argus covered the story in a centre page spread on 31 January 2009 and a further article on 11 December 2009.









Argus coverage

Double page spread January 31 2009

Each flat to have its own dedicated wind turbine – with aglowing light showing how much energy is being used New homes would make the very best green grade

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we're building the future here



Advantue property





Argus coverage

11 December 2009

munity are considering working jointly with the Brighton Sussex and Hove Racial Harassment highest phoble Forum. James's St James's Street trader

letters@theargus.co.uk or tell us at theargus co.uk news





Green homes for harbour project

greenest buildings in the world at Shoreham harbour are about to be submitted.

The PortZED development, from Hove-based firm BohoGreen, aims to be a shining example of how to build the homes of the future and set the tone for the much-hyped, yet forever delayed, Shoreham harbour regeneration.

The Commission for Architecture and the Built Environ-

Ministering to revellers

STREET pastors are being sent on to the streets of Worthing to try to cut violence and ensure latenight revellers are kept safe.

More than 25 pastors from nine church groups have volunteers trained to look after clubbers throughout the night and build relationships with bar staff and pub managers.

PLANS to build some of the ment, the Government's architectural and urban design watchdog, called it "one of the best proposals for sustainable living" when plans were first announced at the beginning of this year.

BohoGreen hopes its development will set the standard for the rest of the area's regeneration.

Earlier this month, the overall Shoreham harbour project was given a boost after it was named as a potential site for a Government-backed eco town.

The announcement was a welcome boost to the regeneration plans that had all but stalled because of a lack of public funding,

It means supporters of the planned development, which include Adur District Council. Brighton and Hove City Council and West Sussex County Council, may now access a £10 million fund to help them develop. proposals.

Originally the scheme involved the construction of 10,000 homes to be built during the next 30 years. But after public bodies pulled funding, the project will be scaled back







Brighton & Hove Eco Energy Fair

• A exhibition and information was provided to all attendees at the Eco Energy Fair in October 2009



PortZED, Kingsway, Hove

A world first iconic mixed use development positioning finighton and Hove to become a centre of excellence for sustainable building design



We've building the future here

In collaboration with IIII Dunster of 20DFactory, BohoGreen are proud to present a landmark development built to the Code for Sustainable Homes. Level 6 incorporating the highest levels of onsite renewable technologies and Roming a gateway to the city of Brighton and Hove and Shoreham Port.



BabaGreen The Paddock London Road, Hassocks, West Sussex, BN6 9NA Infoil/bohogreen.co.uk www.bohogreen.co.uk





Reasons to support PortZED

- The scheme sets out a density bench mark for the Port.
- Sets out sustainability credentials and acts as a marketing symbol for the Port development.
- Flushes out engineering issues.
- Test planning, policies and political will (in microcosm).
- Establishes level of local community support (in microcosm).
- Acts as a monitored working model for the future of Shoreham Port Eco Town climate neutral ethos.
- Delivers and early start up project that can be used as a catalyst for on-going masterplans and initiatives.





Reasons to support PortZED

• Will regenerate a run down corner of the existing port environment preventing fly tipping and all other anti-social activities.

• Will have the affect of increasing land values to the immediate area including land owned by the Port Authority.

• Will facilitate new routes of pedestrian access to any future development in the north east corner of the Port.

• Make significant improvements to the public realm and our development will upgrade the visual environment for the benefit of all port based businesses.

• Both national and international significance in that it is the first of its kind in the world.

• It is intended that the development will be exhibited at the Shanghai Expo 2010 and therefore this considerable international coverage will help to raise the profile of both our development and Shoreham Port & the wider port in general.





Reasons to support PortZED

• It is expected that there will be opportunities for the development to interface with the port and depend on the port for supply of construction materials and materials throughout its lifetime.

• The envelope that contains all of the apartments is (by virtue of the requirement for it to maintain the climate neutral environment), very acoustically tuned whereby no noise from the outside will be able to penetrate whilst the balconies are closed.

• The construction methods used to construct the PortZED development incorporates the very latest in sustainable design technologies. In principle the level of acoustic attenuation and thermal insulation are considerably in excess of standard building regulation requirements.

• Incorporation of a 600mm thick building skin incorporating 300mm of thermal insulation.

• Triple glazed windows.

• Passive heat recover systems will ensure that the occupants of the residential apartments will suffer no noise intrusion either form the Kingsway traffic or the Port activities.





Conclusions

"This is an exciting opportunity to attract investment into our city and focus the world's attention on Brighton and Hove as an example of a city that is truly serious about reducing carbon emissions whilst enhancing the quality of its built environment. We see PortZED as the first step to regenerate the Shoreham Port area and setting the tone for the future development of the Port itself. We are looking forward to the opportunity to exhibit the PortZED development at the forthcoming Shanghai Expo in 2010 whose theme 'Better City, Better Life' will showcase the world's best examples of sustainable and harmonious urban living."

Colin Brace





Past Projects





ALAN PHILLIPS ARCHITECTS



















we're building the future here


























victorian terraced house

Detailed section of a ZEDroof refurbishment of a victorian house







Installing a ZEDroof on a new, zero carbon house



All rooflights, glass panels, solar thermal and PV panels have the same planning grid of 1631 mm on slope by 863 mm on plan.

Section through the conservatory created at the top of a new build ZEDfactory house



Upgrading to an insulated roof: section through roof build up























































Questions?



