

**Joint Statement by Associated British Ports and DP World Southampton for the
Southampton City Council Air Quality Scrutiny Panel**

Thursday 23rd October 2014

This paper has been jointly produced by Associated British Ports (ABP) and DP World Southampton (DPWS) to assist the Panel in its understanding of the Port of Southampton and its operations together with measures already implemented and those under consideration in order to reduce emissions that may impact local air quality.

Associated British Ports and the Port of Southampton

1. Associated British Ports (ABP) is the owner of the Port of Southampton. It is also the statutory harbour authority for the navigable areas of the River Test, River Itchen, Southampton Water and parts of the Solent. Copies of ABP's annual report have been sent to the Council for distribution to the Panel and copies of ABP's environmental policy can be found at www.abports.co.uk.
2. The Port of Southampton in its wider context (which includes the Fawley Marine Terminal and wharfs at Marchwood and the River Itchen) handles some 38 million tonnes of cargo per annum. The Port contributes £990 million annually to the UK economy supporting almost 15,000 jobs. ABP's planned investment programme of £150 million over 5 years is set to deliver an additional £437 million to the economy every year.
3. It may be useful for readers of this document to understand the relationship between ABP and its customers. Whilst being the owner of the Port, ABP is not the operator or handler for all of the operations taking place within its boundaries. The main commercial area, comprising the Eastern and Western Docks, handles four main trades: containers, cruise, vehicles and bulks. With the exception of some, but not all, notably vehicle handling operations, these activities are carried out by third party organisations. Haulier activities and operations are normally the product of a commercial agreement between the haulier and the cargo owner. Direct management is not within the control of ABP, but ABP recognises that it can assist in playing a co-ordinating role to effect change.

4. The container terminal, for example, is operated by DP World Southampton (although ABP has a 49% stake in the company); the Bulks Terminal is operated by the independent company Solent Stevedores and companies such as Wallenius Wilhelmsen, ICO and CAT UK operate a significant percentage of the vehicle import and export market. Nonetheless, ABP works closely with all of its customers, to ensure efficient operations that seek to minimise their environmental footprint wherever possible. The Port handles cargo for a number of 'blue-chip' customers that ensures the very highest standards in logistics management in today's global supply chain.
5. ABP recognises that vehicle movements to the Port contribute to the overall emissions total generated within the Southampton area every year. The very nature of ports means that goods arrive and depart from all corners of the UK and the world. ABP has, however, working with its customers and other stakeholders recognised that measures can be implemented in order to reduce the contribution of emissions, particularly NOx.

DP World Southampton (DPWS)

6. **Introduction:** The container terminal run by DPWS has been operating in the Port for over 40 years and is now the second largest container terminal in the UK servicing primarily the Far East and North Atlantic trade routes. The terminal is operating in a very competitive environment because the terminal market in the UK is currently experiencing overcapacity. To retain existing customers and to ensure future growth the company has implemented a change program based on the vision of becoming the leading UK container terminal for excellent customer service. The achievements to date have been recently recognised by the industry at the Lloyd's List Global Awards where it won the award for the **Global Port Operator of the Year 2014**, which recognises "a company or port authority that has maintained the highest standards of operational efficiency and customer service throughout the year". To meet the needs of its customers the terminal operates 24/7 and has to be flexible and responsive to its customers' requirements whilst recognising its impact on the local area and its neighbours. Examples of DPWS's Corporate Responsibility activities are enclosed as appendix 3 to this report.

7. **Rail transport:** ABP and DPWS made a £6 million contribution towards the Government's Transport Innovation Fund in order to undertake gauge enhancement works to the rail infrastructure between Southampton and Nuneaton. The works were required to remove the height restrictions on the national rail network that prevented more of the 'high cube' 9'6" containers being transported to and from the Port by rail. Today the high cube containers account for 50% of all containers moving through the Port. On completion in 2011 the impact of the works was immediate with the percentage of containers using rail infrastructure increasing from around 30% to 36% taking more HGVs off the local and national road network. During 2012, rail freight operator Freightliner invested £9 million in two new cranes to modernise its rail terminal at the Port and to ensure it has sufficient capacity for the future. The Port will also benefit from Network Rail's plans to extend the 'Electric Spine' to Southampton via its CP5 Enhancements Delivery Plan¹. Currently demand for moving containers by rail is higher than the number of trains available. It should be noted that the choice for mode of inland transport is not made by ABP or DPWS but by other parties in the logistics chain.

8. **Vehicle Booking System:** DPWS was the first terminal in Europe to introduce a Vehicle Booking System. This is a management tool that requires hauliers to book a time slot in order to deliver or collect their container from the terminal. The system has proved to be very successful leading to efficiencies for DPWS, enabling better planning for arrivals and departures, and also for hauliers allowing them to schedule journeys to and from the Port away from normal commuter peak hours and minimising waiting time, with the average truck stay within the terminal being around 30 minutes.

9. **Energy and Environment:** DPWS has been actively seeking to reduce energy consumption, and hence emissions, for a number of years. Together with ABP we are members of the SCC Energy Partnership and Air Quality Working Groups and supplied data into various projects such as the Carbon Footprinting and Low Emissions Strategy studies. DPWS has been set emission reduction targets by its parent company DP World with a base year of 2008. Figures for DPWS show that our normalised energy consumption [MJ/TEU²] due to diesel consumption had reduced by 22% by the end of 2013. This was primarily due to improvements in yard efficiency, reducing distance per move, retirement of old / investing

¹ <http://www.google.co.uk/url?url=http://www.networkrail.co.uk/cp5-delivery-plan/cp5-enhancements-delivery-plan.pdf>

² TEU is the abbreviation of "Twenty Foot Equivalent Unit". Containers are typically 20' (1 TEU) or 40' (2 TEU) long.

in new plant and improved data collection / monitoring. Copies of DPWS's Energy and Environment Policies can be found at appendices 1 and 2.

10. **Straddle Carriers:** The most significant impact on local air quality is due to heavy plant known as a straddle carrier used to move the containers within the terminal. Modern straddle carriers use a large diesel engine [similar to a HGV] as the primary power source. Consumption on the most recently purchased plant is typically 18-19 litres per hour and engines are fitted with a selective catalytic reduction (SCR) system in order to lower NOx concentration in the diesel exhaust emissions. DPWS has also trialled hybrid straddle carriers and has recently participated in a feasibility study with DP World to convert straddle carriers to run on dual fuel. This introduces gas into the combustion process, reducing diesel consumption and emissions significantly. The next stage is a full conversion trial evaluation [SCC has submitted a grant application to Defra to assist with the study] which if successful potentially paves the way for change, however, implementation costs are significant, particularly in infrastructure changes and gas storage. The trial is linked to the potential for LNG capability on the Port estate [see section on ABP Measures] and DPWS is involved in ongoing discussions with a supplier.

Hauliers

11. Hauliers operate under strict operating conditions and are allotted specific driving hours before required rest breaks. ABP believes it is not in the interest of hauliers to operate in peak hour traffic flows, where driver times are effectively used up whilst sitting in traffic, however, the Council may wish to confirm these observations with haulier operators directly. We would suggest that numbers of HGVs operating within peak hour traffic times constitutes a small percentage of the overall number of vehicles.
12. The large companies handling the majority of container haulage jobs at DPWS have invested in trucks that meet the most stringent emission controls, partly because to do so is more cost efficient and partly because they need to be able to service the London area.

13. Older trucks are typically used by one-man truck owners, acting as subcontractor for the larger companies. However these small companies play an essential role in providing a flexible supply of trucks in busy periods. Southampton would be at a disadvantage compared to other ports in the UK without this supply.
14. The haulage sector may be able to provide detail as to the extent of companies operating HGVs able to run on LNG fuel.

Container Vessels

15. **More modern vessels:** The design of container vessels has gone through a huge development since 2009 and today they are much larger and also far more fuel efficient, with systems that allow engines to be tuned to accommodate different fuel types as they travel around the globe. Modern reference figures for ship emissions in ports are available, for example, from the Port of Long Beach / Los Angeles who have been working with Starcrest Consulting Group, experts in emissions inventories and forecasts. DPWS has seen many calls of newly built and much larger vessels over the last two years and size increase was one of the primary drivers for the development of the SCT5 berth (which was officially opened on 31st March 2014). Today over 50% of the containers handled at the terminal are shipped on vessels of over 12,500 TEU, most of which have been built between 2012 and 2014.
16. ABP also understands that one of the short sea ro-ro operators, UECC, has recently ordered two new build vessels that will be deployed on the routes to and from Southampton from 2016. These will be LNG fuelled vessels, the first of their type.
17. **Sulphur reduction regulation:** The International Maritime Organisation³ has long recognised that emissions generated by burning heavy fuel oil can be reduced. Under the MARPOL⁴ regulations, limits have been set to the sulphur content of the marine fuels that can be used within European waters and ports. All vessels (with very few exceptions) entering a 'Sulphur Emissions Control Area' (SECA) are subject to these requirements. The Port of Southampton is located within a SECA. From 1 January 2015 fuel oil burnt within the SECA cannot contain

³ The United Nations agency responsible for the safety and security of shipping and the prevention of marine pollution by ships

⁴ International Convention for the Prevention of Pollution at Sea from Ships

more than 0.1% m/m sulphur (since 2010 the level was set at 1.5%). The Maritime and Coastguard Agency is responsible for the enforcement of the regulation in England. It is expected that the more refined fuel also will mean reductions in NOx and particulates.

18. Ship to Shore Power for Vessels: This has been a topic that has been raised a number of times over recent years. It is, however, a complex issue that has to recognise the international nature of the shipping lines using the Port. The concept is relatively simple. When a vessel arrives at the Port it currently uses its auxiliary engines to generate power for its operations when alongside. If a vessel could “plug” in to the Port’s electricity grid then in theory, the emissions generated by the vessel would be removed. There are numerous difficulties with this idea, all of which would need to be overcome. Firstly, the Port’s internal network is not sufficient to deal with this demand. Secondly, there is no international standard for connectivity. Thirdly, vessels do not routinely berth at the same location within the Port in order to maximise any opportunities. Fourthly, many vessels calling at the Port may switch routes at short notice. The investment required in order to provide ship to shore power would be many tens of millions on the Port side and the equivalent from the shipping lines. The use of low sulphur fuel or LNG, as discussed earlier, may deliver equally satisfactory results within a much shorter period of time. Would also require vessels being regulated to mandate they use facilities if provided as many would not want to if costs increased, would need to be consistently applied across all ports to prevent it becoming a local disincentive to vessels calling at Southampton.

ABP Measures

19. ABP is engaged in advanced talks with a LNG company to establish new premises on the Port estate to supply predominately HGVs but potentially all types of vehicles with LNG fuel, which will consequently reduce individual vehicle emissions. ABP believes that if this project can be delivered this would be very advantageous for the City, hauliers and port users alike. The site identified for this location is in the Western Docks near to the container terminal operation which has the advantage of no additional road miles generated on the public highway network.

20. ABP is conscious of its energy utilisation and has in place an energy strategy to better understand demand and consumption patterns. It has recently completed works to the

distribution warehouse located near the container terminal, operated by logistics operator, Import Services. The works are on target to achieve BREEAM “excellent” rating due to its carefully chosen design and construction processes and practices. This £3.7million project includes over 3,200 solar panels on its roof and is forecast to generate some 800,000 units of sustainable electricity (KWh) every year and will generate over 75% more energy than the warehouse consumes. The remaining energy will contribute to the other users on the Port’s private electricity network.

Residents Survey Results

21. ABP is aware that the Council has carried out a survey of local residents’ views and opinions on air quality within the City. A number of the responses included comments on the Port. ABP and DPWS have taken this opportunity to comment on those specific matters that have not been addressed above within this document.

22. **Tree Planting:** This has been the source of internal debate within ABP for a number of years. Whilst there is a general desire to include planting, particularly on the Port’s boundaries, a landscape strip around the perimeter would decrease the amount of available space within the Port. The Council will be aware of the constraints on available space within the existing port area. Reluctantly, therefore, it is concluded that creating a landscape buffer would be in practice difficult to implement, not least because much of the area is subject to lease arrangements with the Port’s customers. Additionally the presence of trees can bring its own difficulties in terms of maintaining security in that trees have the potential to allow the means to trespass onto the Port estate and ‘contamination’ to cargo by means of bird activity and falling leaves or branches.

23. **No Idling:** Whilst ABP is unable to verify haulier activity, we believe that it may be common practice for hauliers to switch off their engine if there is a likelihood of the vehicle remaining stationary for anything more than a short period of time. Fuel costs are a significant part of haulier costs, and we believe that the adoption of a no idling policy makes good economic as well as good environmental practice.

24. **HGV Routing:** Hauliers, in ABP's experience, tend to use information provided by their employer or from satellite navigation systems or local knowledge and the City Council has a schedule of strategic freight routes. A Freight Quality Partnership, which is a voluntary agreement between the haulier and the City Council, may be a way forward if it is perceived there are particular issues that require addressing. Transport for South Hampshire (TfSH), who it is understood have also been asked to contribute to the Panel's inquiry, comprising the region's local authorities published a Freight Strategy in 2009 outlined a series of measures and actions in order to produce improvements. TfSH is better placed to provide an update on the status of the Strategy. Given the date since publication, it may be opportune to review its content <http://www3.hants.gov.uk/tfsh-freight-strategy-2009.pdf>.

Appendix 1



Energy Policy Statement

1. General statement responsibility

This policy acknowledges the importance of energy as a necessary resource for meeting the organisation's objectives but further recognises the need to reduce energy consumption and harmful emissions. To enable this the company is committed to responsible and efficient energy management in buildings and by utilising plant and equipment efficiently to minimise consumption, waste and cost.

In addressing this the Company will:

- incorporate energy efficiency measures, including alternative and emerging technologies, into all new and refurbished facilities through best practice in energy efficient design, the selection and sizing of plant and equipment, systems and other energy infrastructure.
- maintain all plant and equipment, and control and manage systems and energy infrastructure in such a way as to minimise energy use and wastage.
- monitor and report on the Company's energy consumption and identify and implement opportunities for improved energy efficiency.
- pursue the use of renewable and alternative energy sources to supplement conventional energy sources.
- address our obligations as a member of the global community including compliance with corporate goals and targets, legislative requirements and minimising our impact on the environment.

2. Implementation

The policy will be implemented to achieve our desired aims in a cost effective manner, in line with overall business objectives, as set out below:

- reducing the amount of pollution, including CO₂e emissions, caused by energy consumption.
- investing in a continuous programme of energy-saving measures to reduce energy consumption including regular energy audits.
- safeguarding the achieved reductions by monitoring performance indicators.
- raising the awareness of employees, contractors and other stakeholders on energy conservation matters.
- having energy consumption data available for all buildings and plant.
- reviewing routine maintenance, including major replacements against an energy efficiency checklist to ensure that opportunities to switch fuels, install controls or improve thermal standards etc. are taken.
- benchmarking all new construction against published standards.
- ensuring equipment purchasing policies consider energy consumption for the purchase of all items of equipment and be fully compliant with current best practice.
- evaluating new technologies that target reductions in energy consumption / emission reductions where appropriate.

3. Scope

The scope of this Energy Policy is to ensure we give proper consideration to our energy management and environmental responsibilities in all tasks associated with the import and export of full and empty shipping containers including all movements and storage.

All staff are expected to work towards the aims of this policy and co-operate with management in its execution throughout the workplace.

Chris Lewis
Managing Director

Date

21/2/13

Appendix 2



Environmental Policy Statement

1. General statement responsibility

This policy is based on our Company recognising its role in providing guardianship of the environment which is considered essential in achieving our Vision and shared values and is in the best interests of employees and stakeholders.

2. Implementation

We shall comply with all applicable UK legal requirements and the DP World Health, Safety and Environment policy. If any differential exists the more stringent requirements will apply. In the absence of legislation, activities will be conducted in a manner consistent with industry best practice where this is established.

In addition, insofar as is reasonably practicable, the Company will:

- Seek to minimise, as a result of its activities, any adverse environmental impact and where possible produce environmental benefits. Actively encourage all employees, contractors, visitors and others associated with our business activities to adopt a similar approach.
- Commit to continual improvement in environmental performance and the normalised reduction of emissions to air, land and water together with preventing pollution, reducing waste and conserving resources.
- Operate a suitable management system and set environmental objectives and measurable targets
- Implement changes aimed at continually improving environmental performance, managed through an Environment Steering Group consisting of senior management representatives.
- Provide appropriate resources in the form of equipment, information, instruction, training and supervision for all employees, contractors and visitors, sufficient to meet this policy.
- Communicate this policy via notice boards and Intranet to all employees and via the Company's web site to other stakeholders.
- Have arrangements in place for employees to suggest environmental improvements.
- Raise awareness on environmental matters with staff and stakeholders.
- Review and update the policy as necessary or at least annually, to reflect changes in business activities, facilities, legislation or other requirements.

3. Scope

The scope of this Environmental Policy relates to all tasks associated with the import and export of full and empty shipping containers including all movements and storage.

Heads of Department and supervisory staff have responsibility for implementing this policy and all staff are accountable for compliance and performance.

Chris Lewis
Managing Director

A handwritten signature in black ink, appearing to be "CL" followed by a stylized flourish.

Date

27/2/13

Appendix 3

DP World Southampton: Corporate Responsibility

At DP World Southampton, we believe in being a responsible corporate citizen and making a sustainable difference in the community in which we operate.

Corporate responsibility is good for our people, our customers, our communities and our environment. We recognise that fully integrated corporate responsibility does not happen overnight and it requires change across systems, processes, people and behaviours. Our business involves long-term investments and sustainable development takes time to develop, integrate and build. The aim of our corporate responsibility approach is to integrate responsible business practices into our daily activities to bring about long-term sustained improvements that meet the needs of the communities in which we operate, both today and in the future

Our objective is to integrate responsible business practices into our daily activities, growing our business in a sustainable manner. Customers, suppliers and communities are key to our success and we work with them to identify sustainability risks challenges and develop partnership opportunities.

Our Four Quadrant Approach

Our corporate responsibility strategy is based on the four quadrants of community, environment, people & safety and marketplace which are applied to suit the local needs of the Southampton and waterside communities in which we operate.



Environment

Environmental protection and management is considered part and parcel of all our activities, with impact reduction initiatives being prioritized to direct resources to where the greatest environmental return can be realised.

We aim to minimise the environmental impact of our operations. Our focus is on reducing our resource consumption, preventing pollution, conserving biodiversity and managing emissions to preserve the world we live and operate in.

At DP World Southampton we place particular emphasis on significant environmental aspects such as the protection of controlled waters, fuel usage and storage, waste management, and the protection of wildlife and habitats. In an effort to maintain our role in protecting the environment, we continually evaluate improvements in technology and seek new opportunities to improve our performance.

We set quantifiable objectives and targets and monitor progress by reporting key environmental impacts of operations, the improvements achieved and targets for the future. Using the ISO 14001 environment management standard provides a clear framework for managing the progress of environmental objectives.

Some of our significant recent achievements / projects include:

- Mobile Plant upgrade program to improve energy efficiency / lower emissions
- Selective Catalytic Reduction of NOx emissions by addition of diesel exhaust fluid on new mobile plant
- Study on lowering emissions by using LNG/CNG as fuel for mobile plant
- 50% of site converted to low energy / LED lighting external lighting
- Offices and workshops converting to low energy / LED lighting
- Air conditioning upgraded to save energy / remove CFCs
- Remotely read intelligent electricity meters installed
- Monthly waste recycling rates of circa 90%
- Re-tread of mobile plant tyres
- Trade effluent treatment plant on site
- Water saving improvements in washrooms / toilets
- New fuel storage tanks installed

Community relations in action

Since 2011 DP World Southampton has donated or invested £65,000 in activities and organisations to support the local community and our environment.

	<p>St James Park. A £20,000 donation from DP World Southampton helped a social enterprise café in the city become a sizzling success. Upwards of 500 customers every day have been buying food and drink from 9am to 5pm at ParkLife in St. James' Park, Shirley.</p>
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Despite the industrial nature of our working environment, DP World Southampton's activities do not discourage wildlife. Foxes, rabbits, herons, buzzards are seen on occasions; gulls and oyster catchers have nested and we have set up bee hives and have nesting peregrine falcons that return every year. For the last two years, we have create a bespoke box and set up a web cam to monitor the falcons which are endangered. To date three chicks have successfully hatched and flown the 'crane' nest.

<p><i>Picture of bees and hives</i></p>	
<p><i>Picture of peregrine falcons</i></p>	

Numerous local schools, children and sports clubs have benefited from donations by DP World Southampton.



School equipment

A £2,000 cheque from DP World Southampton has bought booster seats and high-visibility fluorescent jackets for Shirley Warren Learning Campus in the city

No limits drop in centre

A £4,000 donation by DP World Southampton has been used to buy equipment for an internet café at three drop-in centres run by No Limits.