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## United Kingdom: A&P Falmouth, case study

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### About

Case study name:

[The greening of industries in the EU](#)

Country:

United Kingdom

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100-499

Sectors:

Shipbuilding

*A&P Falmouth is the largest ship-repair complex in the UK, one of four ship repair facilities of the A&P Group. Recently the company has expanded its fabrication and engineering services to the renewables industry. This case study analyses the effect of this on vessel conversion and manufacturing practices for wave energy devices. The latter did not have significant impact on the amount of jobs and job quality, but it was accompanied by some anticipation and management approaches which are rather well transferable in the industry. This case study was prepared between February and March 2012.*

### Introduction

**A&P Falmouth** is the largest ship-repair complex in the UK, located in Cornwall in the south-west of England, and employing around 350 permanent staff and many more casual workers. A&P Falmouth offers a complete range of marine repair services including onsite engineering, electrical, paint and fabrication services and links to all other specialist contractors. It is one of the four ship repair facilities of **A&P Group**, a privately owned company founded in 1971 and employing approximately 500 permanent staff. A&P Group is also increasing its role in the marine renewables industry, including vessel conversions, vessel decommissioning, and the fabrication of offshore wind structures, wave and tidal devices and marine access systems.

According to a recent [renewable energy report](#) (2.53Mb PDF), the UK was the second most attractive European country, and fourth most attractive in the world, for future activity in the renewables market. A recent wind energy study estimates that offshore wind supplies around 1.5% of the UK's net electricity production, and is likely to grow to around 17% in 2020. Meanwhile the wave and tide power-harnessing industry, according to [recent study](#), could provide as much as 20% of UK electricity consumption. Thus the UK is well-positioned to be one of the leading renewable energy markets.

This case study focuses on renewables related to A&P Falmouth's ship conversion and wave energy device manufacturing practices. A&P Falmouth is one of the first UK ship repair companies to engage in the renewables market. Thus this case study illustrates how shipbuilding companies could make use of new greening opportunities and what effects this may have on quantity and quality of jobs.

### Drivers and motivations

Climate change is affecting the development of the ship repair industry in the UK by creating fledgling markets and raising standards for environment protection.

The company's main motivation for moving into ship conversion and wave energy projects was to explore business opportunities arising from climate change. A&P Falmouth is one of the first UK shipbuilding companies diversifying from ship repair into marine renewables. Peter Child, A&P Falmouth Managing Director, stated: 'We believe that A&P Falmouth has the supply chain and professional expertise available to provide total support to the offshore marine industry of the future.'

The company's activities in wave energy have been stimulated by a favourable financial framework. The UK's national innovation agency, the Technology Strategy Board ([TSB](#)), has provided financial support for three wave energy projects. The TSB has provided 50% co-financing for design and engineering of wave energy devices for other companies, A&P Falmouth's potential clients.

Financial initiatives from the UK government could also support successful entry to the growing renewables market. For example, the Department of Energy and Climate Change has recently proposed offering five Renewables Obligation Certificates (ROCs), a market mechanism to increase the uptake of renewables per MWh for marine and tide energy, increased from the current two ROCs/MWh. This could raise the demand for related A&P Falmouth services.

The financial and economic crisis did affect the company by reducing its overall turnover. However it also encouraged the company to diversify into the renewable energy area, although without receiving public support.

## Green business practices

Engineering and fabrication work in renewables is very similar to the traditional work carried out by the company. Because the company's traditional market was stagnant, its management decided to enter the fledgling marine renewables market.

A&P Falmouth has already converted some vessels for the renewables industry. In 2010 the company converted a deep seismic vessel, owned by Gardline Geosciences, into a geotechnical survey vessel with a 40 tonne, 3.5 metre wide 'moonpool' and state of the art technology. The 87-metre vessel was used for surveying the sea bed. Rechristened 'Ocean Discovery', it will be used in the offshore renewable energy industry to conduct geotechnical investigations of the seabed to support the deployment of offshore renewable energy technologies.

In 2011 A&P Falmouth installed [100 tonne blade racks](#) on two vessels owned by Seajacks International, used for installing and maintaining offshore wind turbines (see Figure two). The racks allow vessels to carry massive wind turbine blades to offshore wind farms. Both vessels will be used for the construction of a major offshore wind farm in the Irish Sea.

in the development of three TSB-supported wave energy projects, collaborating with major wave energy technology developers. In these projects, A&P Falmouth provides extensive engineering and fabrication services to help determine the most effective and cost-efficient ways to produce wave energy devices. The devices will be tested at [Cornwall's Wave Hub](#) and [FaBTest nursery facility](#).

A&P contributes to climate change mitigation through other more general measures such as energy saving. For example, it replaced the system providing its docks with compressed air for power tools with a more energy-efficient model, and installed a new energy-efficient pump for one of its three dry docks. The company is certified to ISO 9001 (quality control), 14001 (environment) and 18001 (health and safety) standards. It aims to minimise the environmental impact of its activities: so, for instance, under the ISO 14001 standard, it has internal targets to reduce fuel oil/ water/ electricity consumption (in absolute terms) by 10% year on year. Such targets bring not only environmental benefits, but also reduce fixed costs for the company. Finally, in 2011 A&P Falmouth began to report its carbon emissions for core energy sources (electricity and fuel) as required by its Carbon Reduction Commitment (CRC) and pay a fixed tax for each tonne of CO<sub>2</sub> above the allowed limit.

## Anticipation and management of the impact of green change on quantity and quality of jobs

### Impact on quantity of jobs

The impact of selected green business practices on the quantity of jobs is not significant.

The company has hired two specialists to explore opportunities in the renewables market. The strategic outlook revolves around wave, tidal and offshore energy and also around a supply chain of local companies (such as how to position the company in relation to others working in the industry).

Secondly, while ship conversion and wave energy device manufacturing did require the creation some additional jobs, the staff establishment is in constant flux. The number of additional jobs varies greatly with each project and most are short-term with very different workloads – the same people may work on several projects in one day.

Some data is available for the Seajacks International ship conversion project. According to the company's estimates, the two-month project demanded up to 100 new jobs under fixed term subcontracts. Most of these jobs were for skilled workers (for instance, engineers, electricians, steel workers, plumbers, painters), including sub contractors in the company supply chain. In addition, the project involved around 60–70% of all A&P Falmouth staff (mostly dock workers). However, according to the respondents, since ship conversion projects for renewables do not require any new specific skills, the jobs done remained the same. This is simply a new market for already existing skills.

The company does not anticipate the creation of new jobs but it does expect an increase in job security. However, staff working in renewables provide useful insights for the company management on trends in that market and helps them to better estimate the resources needed in this area. Overall, number of jobs in the company could increase if there are positive developments in the renewables market, such as the endorsement of the proposal to increase the number of ROCs for marine and tide energy.

To manage additional labour, the company relies on long-term agreements with about 15 specialist firms with skills in fields such as steel fabrication and engineering, engine work, plumbing work, painting or electrics.

### Impact on quality of jobs

#### Skills development

Selected ship conversion and wave energy device projects are mainly based on fabrication and engineering work. Fundamentally, fabrication and engineering work in renewables, such as the conversion of ships to serve offshore wind farms or the fabrication of prototype wave energy devices, is very similar to the traditional tasks of routine ship repair or ship conversion. Work in renewables is simply a new market for already existing skills. Dock workers such as painters, plumbers or engineers do not have to possess any specific knowledge.

The overall training policy of A&P Falmouth is the continuous training of their existing staff, mostly through ad-hoc and on-the-job internal training. Each year all employees in the company must be assessed and any training needs identified. These are addressed in cooperation with education and training providers. For example, a number of adult trainees were up-skilled in cooperation with local college while the company provided practical training for them.

A&P is also seeking industry specific knowledge from academia, participating in the Knowledge Transfer Partnership (KTP) programme implemented by TSB, and which helps business to improve competitiveness and productivity through the better use of knowledge, technology and skills. It involves cooperation between business, university and recently qualified graduates.

In the case of A&P, it was the knowledge base partner, co-operating with the University of Exeter and a KTP associate employed by the university, and who had recently completed a degree course in renewables. The graduate is seconded to A&P on the basis of two-year cooperation agreement, building practical skills while transferring to A&P the academic knowledge about renewables which the company is seeking. The KTP associate mainly performs research tasks in wave, tidal and offshore energy fields and also consults company management on the relevant market trends and informs company decisions at a strategic level.

Part of the associate's salary is paid by the company, part by the university and part by the government through TSB, and also has a personal development budget financed by all three contributors and available for relevant training. In this case, the associate used a large part of the budget to obtain a commercial vessel pilot's licence to be able to visit the offshore sites and see devices in action. So far A&P has only one associate supported by KTP.

A&P Falmouth also cooperates with trade unions in providing environmental training for its personnel, organising a non-compulsory environmental course. Part of the course is 'internal', delivered by the company's trade union green representative, specifically trained in this area (he attends specific environmental two-day courses twice a year). The other part of the course is 'external', the [energy saving at work training session](#), and arranged by the South West Trade Union Congress Green Workplaces project and the GMB union for staff from different workshops and departments across the dockyard. It has led to the development of a long-term green culture of simple energy saving actions both in the company and at home.

The company is also working with other local universities, such as the University of Plymouth. It is involved in knowledge-sharing activities on renewables in the counties of Cornwall and Devon. In the future, A&P Falmouth hopes to attract students by offering renewable apprenticeships.

### Other job quality dimensions

As fabrication and engineering work in renewables is very similar to the company's traditional work, there are almost no effects of selected green business practices on other job quality dimensions. The only specific issue about renewables projects is that these usually include fabrication of large structures, such as the 100 tonne blade racks installed for Seajack International vessels, which need to be set up on vessels in a short period of time. Such ships have very high inactivity costs. This means that work intensity on renewables projects may be somewhat higher than on other assignments. However, company representatives did not specifically mention any significant effects of this kind, except for the high workload of staff in the project management department on these challenging projects.

The company is continuously communicating with its employees in the area of sustainability. For example, A&P Falmouth organises regular monthly briefings for its employees on such issues as new projects in renewables, health and safety, environmental awareness topics or environmental regulation changes.

### Role of public authorities

Company has not received any direct financial support from public authorities. It is involved in some publicly supported assignments such as environmental impact assessments or wave energy test facilities. However company is still very much interested in active role of public authorities as, for example, increased public support to other companies may increase a number of its potential clients. In the future company expects public authorities to increase funding, streamline the planning process so that the planned things can get done and provide consistent across the board regulation. [Research](#) shows that regulation, if applied more consistently, could boost private investments in renewables sector.

## Conclusions and recommendations

- Case study illustrates the move of ship repair company – A&P Falmouth – towards renewable market and, in particular, its vessel conversion and wave energy device manufacturing practices. It revealed that the main motivation behind this move was exploration of business opportunities. Favourable financial framework and initiatives of the UK government have also eased this process;
- Analysed practices did not have significant effects neither on quantity nor quality of jobs. In terms of quantity, it created couple of new green jobs and demanded some temporary additional jobs which could have been created by other (traditional) projects. In terms of quality, it had rather minor effects on skills development and work intensity;
- However the analysed practices have involved a number of noteworthy approaches to anticipate and manage greening: employees devoted for strategic outlook in renewables, successful multilateral partnership within Knowledge Transfer Partnership (KTP) framework or energy saving at work training sessions for employees, amongst other approaches, could be successfully adopted by other stakeholders in the shipbuilding sector;
- Case suggests that companies willing to successfully enter the market should not only provide high quality services, but also intensively cooperate with potential clients (e.g. in helping them to obtain public funding), heavily invest in strategic outlook and networking, make use of the available public schemes for greening (e.g. KTP) or, if not available – make the public case for them and actively involve employees. Company considers that a more consistent environmental regulation and additional financial support for their potential clients could further boost the promising new market.

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