



ExxonMobil
Chemical

A newsletter from the Fawley Site

JANUARY 2010 Issue 14

www.exxonmobil.co.uk

You can now also see
Community Matters online at:
www.fawleyonline.org.uk



(left to right) The Central Project Management engineers Steve Chard and Jason Wharton and Venture Manager Trevor Green at Fawley's new security gate.

Ring of Steel at Fawley

Anyone planning to enter Fawley Refinery without authorisation now faces enough security barriers to stop James Bond in his tracks! Drawing on the expertise of ExxonMobil's Global Security department, a series of upgrades have been installed at Fawley over the past 18 months.

The key change has been the erection of a continuous electrified perimeter fence along with a sophisticated intruder detection system. The fence encloses the entire site and is split into zones so that, if a breach occurs, the security officers can identify exactly where it has happened.

Fawley is one of the first European sites to use the 'smart' fence. "It's been described as a ring of steel!" says Venture Manager, Trevor Green. Because the refinery includes a site of special scientific interest (SSSI) - the saltmarsh on our foreshore, the project engineers and environmental advisers cleared their plans with local authorities, councils and the Environment Agency. They also consulted the police, MI5 and ship and port authorities about the security enhancements. We planted three trees for every one we had to cut down.

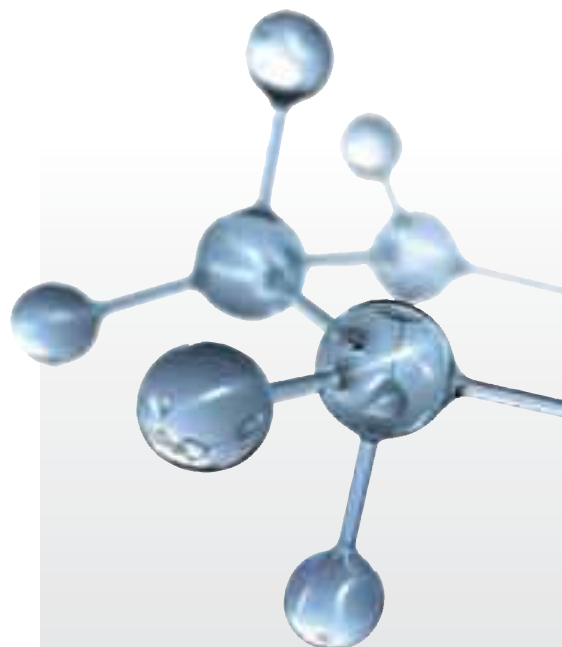
Complete protection

"The fence route cuts into potentially sensitive areas and runs just above the high-tide mark," continues Trevor. "The terrain has been a challenge. It's hilly with lots of trees and reeds and varying ground conditions. There are various obstacles in the ground - such as cables and pipes - that aren't detailed on drawings and we also had to avoid nesting sites. It has taken a lot of effort by our field engineers to keep the construction flowing smoothly and safely."

The improvements are huge, as the previous chainlink fence covered half of the site. Trevor explains: "Part of the foreshore area wasn't previously protected, nor were the railway and a number of footpaths and access routes. Security would pick up the occasional trainspotter in the middle of the night and someone once swam across Southampton Water and found themselves lost at a Fawley substation."

The full suite of changes at Fawley includes additional lighting and CCTV surveillance, an intercom system, a high-tech Security Monitoring Centre, improved vehicle access control, new ID passes and card-controlled turnstiles and barriers.

COMMUNITY MATTERS



Safety in numbers

More than 200,000 man hours have been spent on enhancing the Fawley site's security measures, which now include:

- A 12.5km electrified fence
- 155 CCTV cameras
- 72 gates, including 22 turnstiles

WELCOME TO OUR JANUARY 2010 EDITION OF COMMUNITY MATTERS.

If you would like to know more about us or have any queries, please ring 02380 892511 and ask for Community Affairs

Photography by Ian Jackson & ExxonMobil Employees
Produced by Francesca Toma
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A Single-Cell Oil Well?

Researching the potential of algae-based fuels

Can algae someday make the fuel that fills the tanks of our cars and trucks?

It's a question that could make a difference to our energy future and our environment. And today, two companies are making a major new effort to help find the answer.

Scientists already know that certain algae produce oils that can be converted into diesel and other fuels. What we don't know is whether we can make affordable, large-scale quantities of algae fuel.

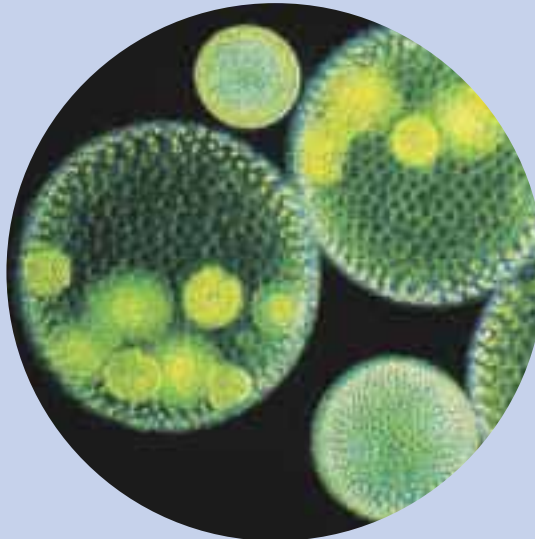
That's why ExxonMobil has teamed up with biotech firm Synthetic Genomics Inc. in a long-term project to research and develop next-generation biofuels from photosynthetic algae. Founded by genome research pioneer Dr. J Craig Venter, SGI is a leader in genomic-based energy and environment solutions.

Our goal is to produce a commercially scalable, renewable fuel that is compatible with today's petrol and diesel.

Why algae? Biofuels made from algae could be transported and used like today's conventional fuels, therefore

avoiding the expense of creating an extensive new infrastructure.

Algae-based biofuels also have potential environmental advantages, as they absorb carbon-dioxide – the main greenhouse gas – and convert it to



*A microscopic view of algae.
Courtesy of Synthetic Genomics Inc.*

useful products, like oils and oxygen. As a result, algae fuels could reduce greenhouse gas emissions.

Also, while today's biofuels made from plants like corn and sugar cane are an

expanding energy source, they impact global food supplies by requiring fertile land and fresh water. Algae production has no such requirement and could yield more than three times more biofuel per acre compared to other biofuel sources.

If research and development milestones are met, we expect to spend more than US\$600 million on this project.

Meeting the world's long-term energy needs while also protecting the environment will require integrated solutions that include developing all economic energy sources. In the years to come, oil and natural gas will continue supplying the majority of our energy because they are scalable, affordable and versatile. But alternatives and next-generation fuels – like those made from algae – could play important roles.

Getting algae fuel from the lab to the local petrol station will be a tremendous undertaking – one that could require decades of work by experts in engineering, chemistry, biology and an array of other scientific fields.

But if our efforts to turn these single cells into "oil wells" are successful, algae-based fuels could help meet the world's growing energy demand and help reduce emissions.

A Breath of Fresh Air!

Have you ever wondered how we try to ensure that the refinery's operations won't have a deleterious effect on the air quality in the local area? It's not easy to predict this. In the past, we either looked back at our previous performance or responded to the external sulphur dioxide monitor or asked a consultant to model the potential effects of our activities for us.

Recently, however, Fawley's Environment Group acquired a piece of state-of-the-art software. This will enable them to model the emissions from the refinery's stacks (the tall chimneys) – particularly sulphur oxides - and to predict air quality for short term and long-term operations.

The computer model includes information from all of the refinery stacks, including their flows, temperatures and qualities. Information on site operations allows us to produce sulphur oxide projection figures. The model also takes a year's worth of meteorological data (for example, wind direction and strength). The technology used is complex and also takes into account the



The air quality monitoring model at Fawley Village Hall

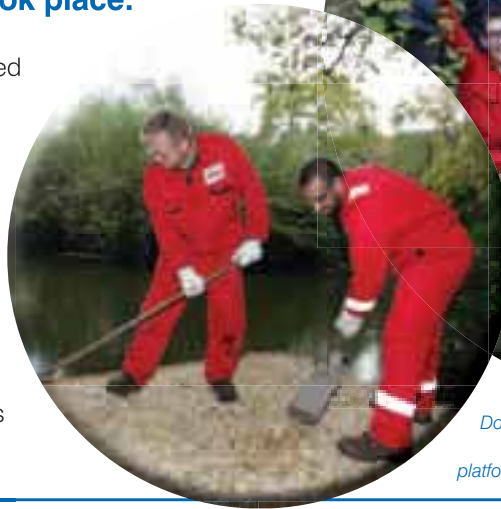
topography of the local area; for example, the 'roughness' of the surface and the effects of buildings.

Environmental Engineer Chris Hall comments: "We can now predict with much greater accuracy how our operations will affect air quality. This detailed information really helps us to ensure that we can maintain good air quality in the area around the refinery."

Day of Caring

Fawley's 'Day of Caring' initiative involves ExxonMobil staff who give up a working day to participate in a local community project. Here are three of the projects that took place:

Holbury Pond - Twelve volunteers gathered at the main pond at Holbury Manor Park. Electrical Engineer Ed Harriss says: "This was originally part of a series of medieval fish ponds attached to Holbury Manor. Our task was to improve the footpath running around the edge; to complete three fishing platforms; and to clear an overgrown section of the island." By the end of the day, they had moved over five tonnes of aggregate, improved 100 metres of paths and cleared 25m² of scrub.



Doing the final touches to one of the fishing platforms at Holbury Pond



The new wheelchair friendly path to the classroom at Lepe Country Park



Lepe Country Park – A group was invited to Lepe Country Park to lay a gravel path, leading through the nature reserve to a new classroom. Tim Brunt from the Refinery Lab reports: "The Park Rangers had already dug out a rough path with a digger – all that was left was for us to manhandle 20 tonnes of gravel!" Once the path was completed, the team also put in posts for a new fence.

Forest Front Nature Reserve - A total of 13 volunteers helped out at the Forest Front Nature Reserve at Dibden Purlieu. They were split into two teams. The first was asked to clear gorse and other shrubs from an area to encourage the growth of heather. The second team was asked to clear trees and bushes to improve the openness and visibility of an area by the pond. Engineer Chris Taylor says: "At the end of a busy day, two Parish Council representatives took us around the site and explained their long term plans for the area, which has been designated as a Site of Scientific Interest."



Cutting down the shrubs at New Forest Nature Reserve



All of the volunteers agreed that the projects had been very worthwhile.

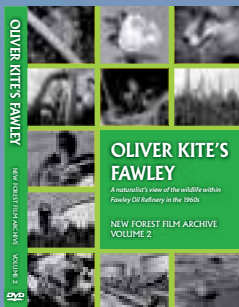
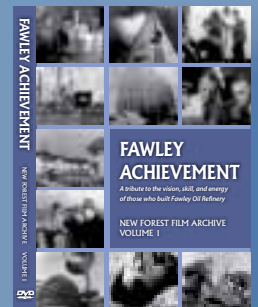
A Blast From The Past

Some old films of Fawley and the surrounding area have been given a new lease of life recently, after having been hidden away for years. They have now been put onto DVD and have been repackaged – and we are selling them to raise money for the New Forest Film Archive Project. All of the three films that are now available were shot in black and white during the 1950s and 60s.

The films are:

Fawley Achievement

Taken in 1951, this fascinating film covers the construction of Fawley Refinery, which formed a key part of the UK's post-war industrial development. This was an important event – so much so that the refinery was officially opened by the Prime Minister at the time, Clement Attlee.

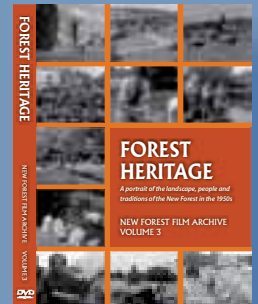


Oliver Kite's Fawley

The second film in the series presents a naturalist's view of the wildlife within the boundaries of the refinery, over four different seasons. Oliver Kite was a well-known naturalist and television presenter. He explores the wide array of wildlife at Fawley in 1968 – which included ponies, adders, a hunting fox and the refinery's own flock of sheep!

Forest Heritage

This short (21 minutes) film was commissioned by Esso in 1952. It takes a look at the landscape, people and traditions of the New Forest. The film (which includes a commentary from John Snagge and background music by Clifton Parker) provides an intriguing glimpse into the local area as the refinery was just starting its operations.



If you are interested in buying any of these DVDs, or would like more details about them, please visit the New Forest Centre website at www.newforestcentre.org.uk

competition

This month Community Matters is giving you the chance to win a dinner for two at Blaireau's, situated in the grounds of Careys Manor Hotel and SenSpa, Brockenhurst. This restaurant is one of the New Forest's leading brasseries offering an informal, entertaining and enjoyable French dining cuisine.



To have a chance of winning this month's fantastic prize please complete the short online questionnaire located at this website address - www.surveymonkey.com/s/B5Q7VGQ

Your views will help to shape our community programme enabling us to be a better neighbour so your participation would be hugely appreciated.



The deadline for completion of the questionnaire is Friday 19 February 2010.

A winner will be picked at random from all completed surveys. Entries are limited to residents in the 'Community Matters' distribution area and only one entry per person.

Thank you for your time!

NB. All entries will be used strictly for research purposes. This research is being carried out for ExxonMobil in collaboration with Bournemouth University. Data will be reviewed by a Bournemouth University student and supervised by a member of academic staff.