

**Sellafield's Role in the Socio-Economic Development of West Cumbria -  
12459**

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**ABSTRACT**

It would be hard to imagine what West Cumbria, a remote area in the North West of England, would look like without the huge Sellafield nuclear complex.

The site is owned by the Nuclear Decommissioning Authority (NDA) and managed by Nuclear Management Partners (NMP), an international private partnership consisting of URS from the United States of America, AMEC from the UK and AREVA from France.

Today some 10,000 people work at Sellafield with many more employed through the site's supply chain, a large percentage of which is located directly in West Cumbria.

The Government, through the NDA, has committed around £1.5 billion a year for the next three years as we at NMP bring our vast global expertise and experience to deliver substantial improvements to the clean-up mission there.

Of this total budget, more than £800 million a year is spent in that supply chain and around 30 percent of that goes directly to firms in West Cumbria.

But the dependency on the nuclear industry is immense and, with the site now entering an extensive decommissioning programme, the threats to jobs, and therefore the local economy, is severe. While Sellafield provides wealth, there are areas of deep deprivation and worklessness.

Consequently, Sellafield Ltd, NMP and NDA have partnered with the local community leaders and politicians to form Britain's Energy Coast, a strategic regeneration body driving economic improvements and projects to deliver a vibrant economy for West Cumbria, long into the future.

While the threats to our economy are real, the opportunities are potentially transformational. The UK is on the brink of a nuclear renaissance and, if we are successful through the Energy Coast programme, West Cumbria will become the hub, not only of the nuclear industry, but also of green energy production in the UK, with obvious benefits to our local economy.

But to achieve this, Sellafield and its new owners are having to change the opportunistic ways of the past to provide a new strategic mode of socio-economic contribution to deliver a sustainable future for the local community.

The results so far have been impressive, with over £56m being committed to socio-economic projects, but the long term aim is to achieve £116m investment through public/ private partnership. Sellafield is fundamental to this goal.

## INTRODUCTION

Sellafield is the economy of West Cumbria. A bold statement, but surprisingly accurate.

West Cumbria, located between the Irish Sea and one of England's most beautiful and popular tourist attractions, the Lake District, has many attractive features, including the lake districts deepest lake and highest mountain and the Georgian fishing port of Whitehaven. However, due to the nature of the lake district separating West Cumbria from the main motorway and rail networks, the tourist trade in the area is limited and, since the closure of the last remaining deep coal mine and steelworks in the 1980's, employment in West Cumbria has been heavily dependent on the nuclear sector. Today, other than Sellafield, industry is almost negligible.

Consequently, West Cumbria is a European Union assisted area and, in fact, has been in receipt of some form of government employment measure since the 1930's. It contains some of the worst levels of economic and social deprivation in the north-west of England.

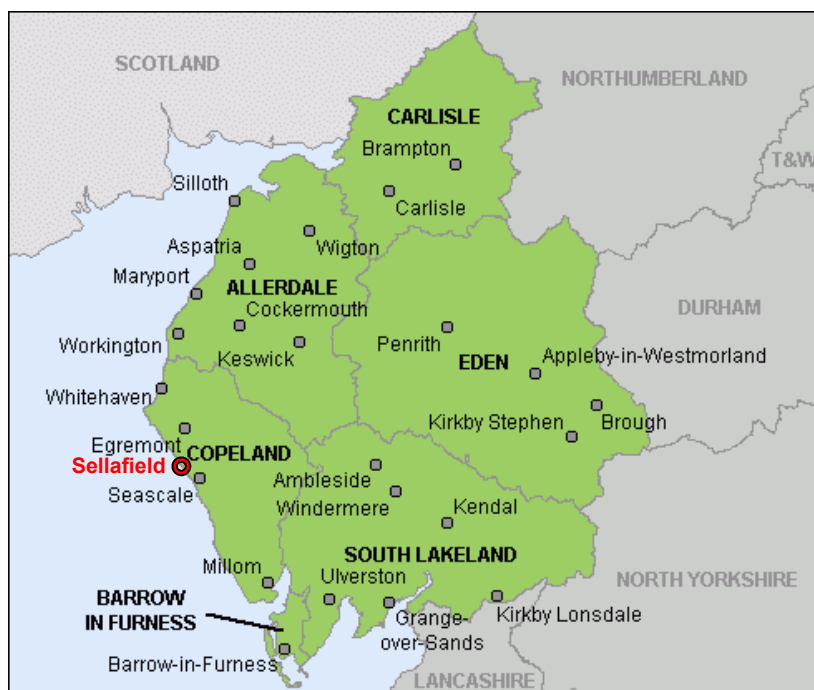


Fig 1. Geography of Cumbria [Fig 1]

As shown in Figure 1 above, the County of Cumbria consists of 6 Boroughs – Carlisle, Eden, South Lakeland, Barrow-in-Furness, Copeland, in which Sellafield is located, and Allerdale. It is Copeland and Allerdale that are known collectively as West Cumbria.

In the five major local towns of West Cumbria (Whitehaven, Workington, Egremont, Cleator Moor, Cockermouth), it is estimated that 22% of the total workforce are direct employees of Sellafield Ltd [1].

The expenditure based on operations at Sellafield spreads beyond the nuclear sector as it also impacts services (transport, hotels, restaurants etc), construction, chemicals and engineering. Even where the employment is not directly related to Sellafield activity, it is highly dependent on the spending power that is created by it, whether in the supply chain or from nuclear employees spending their earnings locally.

The issue is particularly acute in the Borough of Copeland, which is home to approximately 70% of the Sellafield direct workforce, totalling just over 10,000. Accounting for the additional jobs provided through the local nuclear and engineering supply chain, more than 47% of the working population of the borough are directly reliant on Sellafield for their income [2].

The UK nuclear industry, and in particular Sellafield, offers very well paid jobs. In 2010, the average salary at Sellafield was £41,000, which compares very favourably with the average income in the UK which was £33,000 per annum. This made Copeland one of very few English boroughs north of London with an average salary of over £36,000 [2].

In addition to this, Sellafield spends more than £240m per annum in West Cumbria through the local supply chain (approximately 30% of the £800m plus supply chain spend stays in West Cumbria). Sellafield provides 40 per cent of the area's Gross Added Value [1].

However, away from Sellafield, the local economy paints a very different picture. A number of towns and wards (defined by local political constituencies) are classified as “considerably more deprived than the England average” on the Index of Multiple Deprivation, all with high rates of worklessness. Polarisation of quality of life is more evident in West Cumbria than in most parts of the UK. There are a greater number of people classified as “wealthy achievers” (29.6% versus 24.7% nationally), as a direct result of Sellafield, while there are relatively more classified as “hard pressed” (25.1% versus 20.6% nationally). This inequality means that unemployment rates vary dramatically across West Cumbria, with more than 20% of the population of 7 wards claiming out of work benefits [1].

While Sellafield historically through to modern day has had a significant positive effect on the local economy, the decommissioning programme at Sellafield has posed a great threat to West Cumbria over recent years. With such a high dependency on Sellafield, and in particular the high levels of staff employed in the world famous reprocessing areas of the site, the prospect of job losses of such high value was, and is, a considerable concern to the Local Authorities.

An independent study carried out by consultants in the early 2000's into the potential impact on the local economy through the decommissioning of the site, predicted job losses of up to 8,000 people by 2014, when the reprocessing facilities were due to close. This report sent shockwaves through the local community and central government alike. How could the local economy survive in the long term?

The realisation had struck that West Cumbria could not continue to depend on Sellafield for employment and that the economy would need to be diversified. This would take a unified approach across the community.

### **The historic Sellafield approach**

Over the years, the main contentious issues associated with Sellafield focussed around environmental discharge issues and the spectre of having one of the world's largest nuclear inventories and most complex nuclear sites sitting within less than two miles from the nearest village and only ten miles from the main town of Whitehaven.

In the early days of the UK nuclear industry back in the 1950's and 60's, Sellafield was perceived to be steeped in secrecy and lack of communication. However, by the mid 1980's a vibrant "open and transparent" policy had been introduced by a particularly forward looking Chief Executive. A new purpose built visitor centre became the most visited indoor attraction in West Cumbria and the public were invited on organised bus trips round the site (a practice that would sadly cease after 9/11).

Sellafield had opened itself to the local community and had started to provide financial assistance to the Local Authorities. Village Halls were built and town centre streets refurbished, all supported by funding from Sellafield. But the request for financial help came more wide and varied, from local youth organisations, sports teams, charitable organisations and private businesses, until most of West Cumbria had learned to head for Sellafield when any financial help was needed for almost anything.

Socio-economics had become an opportunistic and uncoordinated. There were no strategic drivers and most donations, as generous as they were, were based around short term pacification of stakeholders needs and wants.

Coupled with the prospect of the declining workforce at Sellafield as described above, this was not a sustainable proposition for West Cumbria.

## **METHOD**

In 2005, the Nuclear Decommissioning Authority was established by the UK Government to take over the ownership of the various sites and facilities previously owned by British Nuclear Fuels Ltd (notionally a private sector company, but funded by its one single shareholder, the UK Government).

NDA established Site Licence Companies to manage and operate the sites, a model clearly based on the US DoE experience and then competed the ownership of the Site Licence Companies.

The Sellafield competition was competed by the world leading organisations in nuclear decommissioning and clean up, with many US based contractors involved. In the summer of 2008, the preferred bidder was announced as Nuclear Management Partners (NMP).

### **NMP's Approach**

Since taking over the Sellafield contract in 2008, working closely with NDA, NMP has adopted a much more strategic and inclusive approach to socio-economics.

The NMP approach was not to come in with all its international experience and tell West Cumbria what was good for it. Nor was it to act in an opportunistic manner by responding to a random series of individual requests for help. NMP's declared approach, agreed with NDA, was to work with an advisory board consisting of representatives of Local Authorities, local economic development organisations, NDA itself and the private sector businesses to develop an integrated, inclusive and strategic portfolio of transformational projects that would have long lasting effects on the economy.

This was to be supported by a donation of £20m from NMP's profits over the first 5 year contract period in addition to the £3m donated by NDA annually and a further £3m donated through Sellafield Ltd (funded by NDA).

While NMP recognised that a more strategic approach was needed with funding being directed at major transformational projects, it also recognised that without the nuclear funding, many of the local charities and community organisations could not survive.

For this purpose, NMP engaged the Cumbria Community Foundation to assist with allocating its charitable donations of £500k per annum (additional to £20m socio-economic fund).

The Cumbria Community Foundation is an organisation with a successful track record of optimising charitable contributions in the local area. It supports 118 local groups and over 100 individuals directly (bespoke training and opportunities to enhance life chances and aspiration). In total more than 49,000 people have benefited from the work of CCF with the involvement of more than 750 volunteers.

### **The Energy Coast Master Plan and Formation of Britain's Energy Coast Board**

In response to the issues facing West Cumbria, the two local Members of Parliament commissioned an independent study to establish a "masterplan" for the future of the economy. The objective of the masterplan is ....

By 2027, West Cumbria will be a confident place that prides itself on its strong economy, providing opportunities for all and offering a lifestyle of choice

It is built on 4 key principles.....

1. Britain's Energy Coast - An industry leading energy sector
2. Connected West Cumbria – Successful linkages and networks
3. Innovation and Motivation – People and enterprise that aspire to succeed
4. Quality of Life, Quality of Place – An appealing offer to work, live and play

In 2009, the Britain's Energy Coast Board was formed to oversee the implementation of the plan and "to lead the transition of West Cumbria into a diverse economy that will flourish in a low carbon future"

The Energy Coast Board is a public-private partnership consisting of the Nuclear Partners (NDA, NMP and Sellafield Ltd), Local Authorities, independent private sector members and local communities. It has strong partnerships with other agencies seeking regeneration and economic development of West Cumbria (e.g. Chamber of Commerce, Invest in Cumbria, Britain's Energy Coast Business Cluster and Britain's Energy Coast Campus). The Board members have excellent knowledge of the local economy and business with strong industry links.

The Board has secured support throughout different layers of Government and is working to enable investment in new nuclear missions, renewable energy generation and the responsible use of energy by households and businesses.

### **Britain's Energy Coast Strategy**

Britain's Energy Coast is leading the transformation of West Cumbria's economy into a low carbon future. This will be achieved by:

- **Speaking Out (Advocacy)** for investment in new nuclear missions, renewable generation and the wise and responsible use of energy by our households and businesses.
- **Bringing Together (Facilitation)** the investors, suppliers, regulators, public agencies and West Cumbria's community to harness the commitment and resources required to build a low carbon economy.
- **Invest Britain's Energy Coast Funds (Intervention)** in overcoming obstacles to development, energy efficiency programmes, re-skilling the workforce to participate in new industries and deliver our mission with enthusiasm.

### **Re-Organisation of West Cumbria's Economic Development Organisational Structure**

Historically, there was a vast range of organisations associated with economic development in West Cumbria. From Local Authorities to charitable organisations, there was no shortage of people committed to improving the future of the area. However, there was a high degree of confusion and lack of clarity of roles and responsibilities between the organisations.

The introduction of Britain's Energy Coast brought with it an opportunity to rationalise the structure of development organisations in West Cumbria and, in 2010, the three major organisations, West Cumbria Development Fund (the historical conduit for nuclear sector funding into economic development projects) West Cumbria Development Agency (business start up support, managed workspace and inward investment) and Westlakes Properties (who develop and manage commercial properties on the Westlakes Science Park near Whitehaven), were merged into Britain's Energy Coast.

### **The Nuclear Partners**

NDA, NMP and Sellafield Limited, now collectively known as the Nuclear Partners, are working to a socio economic charter that underpins everything that they do publicly in West Cumbria, giving clarity to stakeholders.

Between the Nuclear Partners, approximately £10m per annum is provided to the Energy Coast. A senior project manager from Sellafield has also been seconded to Britain's Energy Coast as the Chief Executive of the organisation.

At the outset of the Energy Coast initiative, approximately £10m was also provided by the North West Development Agency, however, under the new coalition Government, all regional development agencies were dissolved in 2010.

This left Britain's Energy Coast with significantly reduced funds and, yet again with complete reliance on the nuclear industry for the funding of socio-economic funding.

### **The Nuclear Renaissance in West Cumbria**

In 2009, a consortium known as NuGen, comprising GDF Suez and Iberdrola secured land directly adjacent to the Sellafield site for the purpose of building new nuclear reactors. This site was one of eight announced by Government as part of the National Policy Statement for Energy. NuGen is now in the process of preparing detailed plans for developing the site, with a final investment decision being set for 2015. If planning consent is given and a decision to invest is undertaken, it is anticipated that a new power station will be commissioned in 2023

UK Government policy is that long term storage of nuclear waste will be in a deep geological repository. The target date for such a repository becoming operational is 2029. To date only three local authorities in England - Cumbria County Council, Allerdale Borough Council and Copeland Borough Council – have expressed an interest in hosting such a repository.

Meanwhile, Sellafield has been chosen as the home of a £250m National Nuclear Laboratory that is being managed by a consortium of Battelle, the University of Manchester, and Serco, a UK support services group.

The University of Manchester's Dalton Nuclear Institute has just completed a £20m investment in an education facility linked to Sellafield's British Technology Centre, which conducts research into nuclear reactor operation, new build, fuel processing and decommissioning programmes. Energus, a £21m energy academy providing training for the nuclear industry, was opened in 2009 in Workington.

Harnessing local nuclear expertise could transform the boroughs of Copeland, and Allerdale into centers of excellence for energy technologies, ranging from nuclear decommissioning, to offshore wind farms and tidal power.

The initiative could also play a role in the UK's response to the challenges of climate change and energy security. Locally, it has the potential to create significant numbers of jobs and boost Cumbria's economic performance. NMP is taking an active role, working with Britain's Energy Coast, to provide the expertise needed to act as a catalyst for this.

However, upgrading the poor road and rail access to the area remains an urgent priority, as does the need for a new 400kV electricity transmission system to connect any new nuclear plants to the national grid.



## **Current Energy Coast Projects**

Though Britain's Energy Coast is a relatively new organisation, it has already achieved significant success in delivering transformational projects in West Cumbria, funded by the Nuclear Partners

1. A Container Handling Facility and associated infrastructure work has been constructed at the Port of Workington. This allows the Port to be the only container handling facility between the Clyde in Scotland and the Mersey at Liverpool and opens up a trading route between West Cumbria and continental Europe. This has created 10 direct jobs initially at the Port and will create further business including a freight forwarder and warehouse, bringing further jobs at the Port. This clearly provides enhanced viability for West Cumbrian businesses, potentially bringing a significant number of indirect jobs to the area and it is expected that a further investment of £13m will be gained from private sector leverage.
2. Construction Skills Centre at Lillyhall near Workington. This is a 4000 m<sup>2</sup> new facility that will train a minimum of 280 people per year to meet the increased future skill needs in West Cumbria and broaden provision to include renewable engineering and sustainable building practice. It is scheduled to open January 2013 and will directly support 32 jobs.
3. Pow Beck Community Sports Stadium (Figure 2) – The main professional sport in West Cumbria is Rugby League. Through Britain's Energy Coast, a new community stadium is to be built in Whitehaven that will be home to the local rugby league and soccer teams. Consequently, Whitehaven has been chosen to host two matches in the 2013 Rugby League World Cup. The stadium, which will stage more than 50 new community events per year, will support 110 jobs in the short term (construction) and 80 jobs in the longer term.
4. Albion Square office development in the centre of Whitehaven (Figure 3) - This is the key regeneration project identified by Copeland Borough Council. The office will be leased to the NDA for inhabitation by 800 Sellafield personnel. This should be available 2013/14 and will bring a significant increase to the footfall in the town centre, with obvious benefits to local retail and catering businesses. This project is seen as being the catalyst for the regeneration of Whitehaven town centre.
5. A renewable anaerobic digestion plant at Silloth (north west Cumbria). This will be a national show plant for the technology and will encourage the development of a local supply chain and jobs in West Cumbria.
6. Destination Management Tourism scheme for West Cumbria. To boost the under developed visitor economy, enhancing expansion, job creation and economic regeneration in this sector. It is expected that this initiative will grow the visitor economy by £15m over 3 years, creating 180 jobs.

7. Whitehaven Festivals – A series of social events, the main one being the annual Whitehaven Maritime Festival that brings seven million pounds into the local economy each year.



Fig. 2 Artist's impression of the Pow Beck sports stadium



Fig 3. Artist's impression of the Albion Square office development

### **Attracting Additional Funding**

While investment of £10m per annum from the Nuclear Partners is a considerable commitment by any standards, it is not sufficient to deliver the full programme of Energy Coast projects.

Again, the move to a strategic approach has delivered benefits, in the form of match funding. Under the old BNFL socio-economic model, donations were made in an isolated manner. However, by operating through Britain's Energy Coast, high levels of match funding is being achieved through private investors and developers.

For the £32m of Nuclear Partners funding currently committed to Energy Coast projects, a further £56m has been leveraged from external funders, including a Government Regional Growth Fund (RGF) award of £5.7m. This RGF funding itself is expected to leverage a further £32m of external funding.

Such has been the success of the Energy Coast that the Board is now in discussions with a major investment organisation based in London, with prospects of further significant capital expenditure in the area.

### **The Effects of Accelerating Decommissioning**

In the early 2000's, an independent study predicted that when the reprocessing work on the Sellafield site came to an end (then predicted to be around 2014), there would be a huge reduction in employment on the site. In those days, the working model was that the historic facilities on the site would be placed into a care and maintenance regime, with the costs of decommissioning be spread over a number of years. However, with the introduction of the NDA and the new site management of NMP, the decommissioning programme has been significantly accelerated.

To put this in context, the site budget in 2011, at £1.55bn, is 50% higher than it was in 2005 when NDA was formed. The additional funding is being utilised to accelerate clean up and decommissioning of the legacy 1940's to 1960's facilities on the site.

The impact of this on employment levels is of course very positive. Figure 4 below shows the indicative manpower profile predicted in the original study compared to the new range being predicted in the recently issued Sellafield plan.

The manpower profiles in the new plan clearly give a much more stable platform for West Cumbria to build its future on.

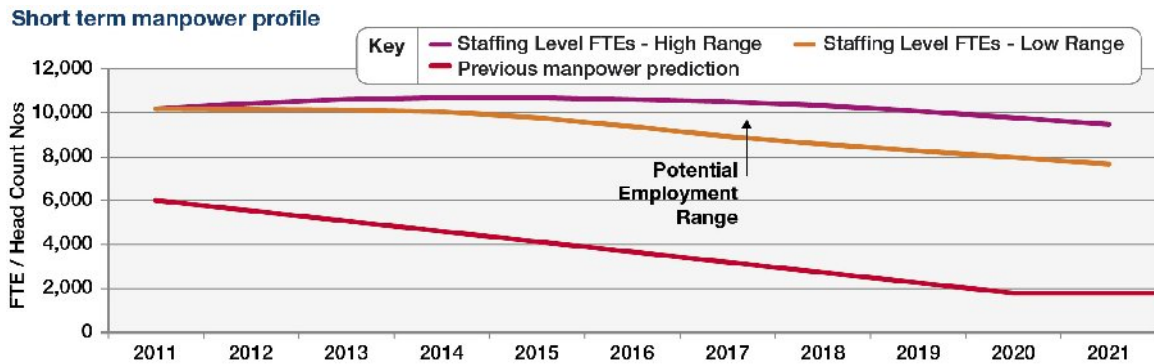


Fig. 4 Sellafield Employment Profiles

## Supply Chain

Sellafield is also taking a new long term strategic approach to its supply chain procurement activities, which accounts for over 60% of the site's total expenditure.

By moving away from the historic short-term contracting model we are moving to one embracing industry best practice of developing long-term collaborative

relationships with supply chain organisations. The new contract arrangements will provide an effective solution for accessing high quality capability from the supply chain, and will ensure that it is deployed alongside the Sellafield Ltd capability in the most effective way.

Programme/Project level partnering, or collaborative working, with the right organisations at the forefront of their field is a proven way to further increase 'best practice' at Sellafield. This way of working has been proven to provide efficiencies on programmes/projects elsewhere in nuclear and other industries in respect of cost and schedule as well as underpinning quality and safety.

The awarding of longer-term contracts provides better security of demand for the supply chain which in turn drives knowledge forward and provides socio-economic benefits through investment in people, technology and infrastructure.

NMP, NDA and Sellafield have an expectation that suppliers will contribute socio-economic benefit to West Cumbrian communities to the maximum that would be expected in the delivery of a contract.

To achieve this, we are building 'anchor tenant' (key Tier 2 and 3) organisations locally, which will allow suppliers and contractors to take up long term leases promoting local infrastructure and development. This will have the effect of allowing these anchor tenants to further a nuclear knowledge based economy in West Cumbria to grow a Cumbrian business hub and to create an eco-system for socio-economic development.

The long term aim is that by attracting major supply chain organisations into West Cumbria, through the letting of long term contracts, these organisations will form collaborations with the local small to medium sized organisations and, based on the expertise gained at Sellafield, create a centre of excellence in nuclear engineering in West Cumbria. This will move the local supply chain from being focussed on and dependent on Sellafield for future business to being a supply chain base for national and international work in the nuclear renaissance.

## **RESULTS - from threat to opportunity**

Sellafield Ltd, under the new management of NMP, has taken a very different approach to socio-economics than had previously been the case. The old opportunistic approach, with little co-ordination has been transformed to proactive, strategic and integrated approach, with full engagement of our customer, the NDA and the local community.

As a consequence of this, a programme of transformational projects is being delivered through Britain's Energy Coast West Cumbria, an organisation funded and provided with resource through the Nuclear Partners.

Additionally, the acceleration of the decommissioning programme at Sellafield and a new approach to supply chain engagement is providing West Cumbria with a sound platform to build for the future.

An economy previously bound by the threat of significant reduction in employment in its only major business is now looking to exploit a potentially prosperous future based on new nuclear missions in the region and potentially significant investment from private funders.

However, this is not without risk. If Government were to reduce its support to the Sellafield clean up mission or if there was a major incident on the site, then the very cornerstone of the Energy Coast Masterplan would be undermined.

Sellafield and NMP are therefore under no illusion about the vital importance of their safe, reliable and predictable operations at the site of the world's largest nuclear inventory.

## References

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- [2] UK Office of National Statistics ([www.statistics.gov.uk](http://www.statistics.gov.uk)), May 2010