

# Status report of the University of Exeter

LP8 – University of Exeter

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## 1. BASIC FACTS OF ADRESSED POLICY AREA

Cornwall is located in the southwest of England. Cornwall had a population of 549,400 in 2015. The population of Cornwall is slowly increasing and is changing demographically, with a growing elderly population. The largest residential area is the Camborne, Pool and Redruth Community Network Area, with around 59,400, although technically Truro is Cornwall's only city with a population of 21,000 in 2013. The trend of outward migration is reversing, with people perceiving that living in Cornwall provides a higher quality of life. The expansion of higher education provision in Cornwall and improving employment prospects are benefitting Cornwall and altering migration patterns. A study by independent economic analysts, Oxford Economics, indicated that the University of Exeter and Falmouth University (Falmouth), who share and jointly manage the Penryn Campus in Cornwall, contributed £491 million to the economy of Cornwall and the Isles of Scilly between 2002 and 2012.

Despite all the changes, Cornwall remains one of the poorest regions in the UK and Europe, with the Gross Value Added (GVA) per head of population being around 25 % below the European average. In the 18<sup>th</sup> and 19<sup>th</sup> centuries, the metalliferous mining region in Cornwall of Camborne-Pool and Redruth, had one of the highest land prices in the UK at the time. The wealth at this time was created by tin and copper mining that helped fuel the industrial revolution in the UK. The last metalliferous mine, South Crofty, closed in 1998. China clay extraction and quarrying, however, continue across certain areas of the region.

Exploration projects for tin, copper, lithium and tungsten are underway, including:

- Strongbow Exploration – South Crofty site (the last metalliferous mine to close in 1998)
- Strategic Minerals PLC - Redmoor tin/copper/tungsten project with a 23km<sup>2</sup> exploration licence
- Cornish Lithium – exploration work to look at the commercial viability of extracting lithium from 'brines' carrying lithium-rich hot water.

China clay (kaolin) extraction in Cornwall currently employs around 1000 people working for Imerys, with around 1 million tonnes of kaolin produced every year. They currently have over 20 active sites in Cornwall. The UK is the third largest producer of china clay in the world after Brazil and the USA. China clay is used to make ceramics, in paints, plastic, rubbers, cosmetics, pharmaceuticals and in the production of paper and cardboard:

<http://www.imerys.com/scopi/group/imeryscom/imeryscom.nsf>

Cornwall has a long history of mining and has which has encouraged the development of SME's. The Cornwall Mining Alliance (CMA) was established in 2016 to bring together the cluster of expertise Cornwall has across the mining sector:

<http://www.cornwallminingalliance.org/>

Companies operate in the following areas within the CMA:

- Geological
- Mineral processing
- Mining engineering and surveying
- Environmental and social
- Energy
- Software and digital
- Analysis and testing
- Research and training
- Contractors and supply chain
- Professional support services
- Mines and quarries
- Mining heritage

Currently the CMA has 82 members, most of which are SME's or micro-businesses. Camborne School of Mines, University of Exeter, and the CCMM have been instrumental in the development of the CMA as a mining cluster and continue to be integral to the training of mining industry professionals at a global level.

Since 2006, Cornwall and West Devon has had UNESCO World Heritage Status for its unique mining heritage and landscape. Mining heritage tourism is important in Cornwall. The World Heritage site incorporates 19,710 hectares over ten areas, crossing from Cornwall into Devon. By size, this makes it the largest World Heritage Site in the UK, balancing the needs or multiple land owners and management interests.

Cornwall and the Isles of Scilly are uniquely positioned to develop uses of renewable energy, and the growth of the renewables sector in the UK has led to the development of renewable energy businesses based in Cornwall. Besides wind, solar, and geothermal heat generation, there is research on marine renewable energy ([www.fabtest.com](http://www.fabtest.com), [www.wavehub.co.uk](http://www.wavehub.co.uk)) and a deep geothermal project ([www.geothermalengineering.co.uk](http://www.geothermalengineering.co.uk)) working to develop power generation at United Downs in Cornwall.

Economically, Cornwall is still heavily dependent on agriculture and tourism as the two main sectors. Tourism reportedly contributes about 24 % of Cornwall's Gross Domestic Product (GDP), supporting around one in five jobs. Connectivity and the installation of superfast broadband has helped Cornwall develop over the past five years. Cornwall has a growing number of digital technology businesses, with growth in this area being one of the highest rates in the country.

## **2. ADDRESSED POLICY INSTRUMENT**

As an economically deprived area in the UK, Cornwall has received European Regional Development Funds (ERDF), worth around Euro 438 million in the current round of funding. European Social Funds (ESF) is also worth an additional Euro 166 million. Both funding streams are aimed at creating smart, sustainable growth. Within the context of the REMIX project, the Policy instrument being addressed in Cornwall is the Local Enterprise Partnership European Structural and Investment Fund Strategy.

The Cornwall and Isles of Scilly Structural and Investment Fund Strategy has an emphasis on the following:

- Research Development and Innovation into the Smart specialisations areas
- Superfast broadband
- Low Carbon Economy
- Promoting Sustainable Transport and Removing Bottlenecks in Key Network Infrastructures
- Climate Change
- Protecting the Environment and Promoting Resource Efficiency
- Institutional Capacity
- SME Competitiveness (PA03) i.e. Businesses above 250 Employees and Micro Businesses

## **3. CURRENT STATUS ON IMPLEMENTATION OF POLICY**

**INSTRUMENT (e.g Operational programme or Smart specialisation implementation activities, related local, regional and international projects)**

The concept of smart specialisations in Europe is about developing specialist skills in areas with the right economic opportunities, environment and human capital to facilitate growth. Cornwall and the Isle of Scilly Local Enterprise European Structural and Investment Fund (SIF) identified three key activity areas: our future economy (including smart specialisations), growth for business and conditions for growth. The Future economy includes smart specialisations identified as 'Agritech', 'the Digital Economy', 'E-health', 'Marine Technology', and 'Space and Aerospace'. There is no mining smart specialisation, however, there are many synergies identifiable between the future development of mining projects and the digital economy smart specialisation in Cornwall.

#### **4. STAKEHOLDER GROUP AND STAKEHOLDER GROUP ACTIVITIES DURING THE PROJECT**

Stakeholder meetings will be organised in-line with the schedule as stated in the approved REMIX project proposal. The first meeting was held on 23.5.2017 in Goonhilly, Cornwall. This meeting was an event to promote the uses of satellite technology within the mining industry through the Catapult network. The event was used to promote the REMIX project (refer to Figure 1 and Figure 2):

<https://sa.catapult.org.uk/news-events-gallery/events/applications-of-satellite-technologies-in-the-mining-sector-workshop/>

The Cornwall Mining Alliance:

<http://www.cornwallminingalliance.org/>

The event at Goonhilly was attended largely by stakeholders from Cornwall, with over thirty delegates. Some people from outside the region also attended, including representatives from Anglo American, the British Geological Survey (BGS) and the University of Portsmouth.



**Figure 1: Elizabeth Adey from the University of Exeter talking to a stakeholder about local challenges facing the mining sector at the first REMIX event held in Cornwall.**



**Figure 2: University of Exeter REMIX exercise to gauge the opinions of local stakeholders on challenges in the mining sector in Cornwall.**

The University of Exeter asked the following questions at the event to get some feedback on what people perceive are the key challenges facing the mining industry in

Cornwall and how the industry can successfully grow. Comments made have been included below alongside the questions:

**1. What policy changes could enhance the development of mining projects in Cornwall?**

**Planning related comments:**

- Commitment to types of development likely to be permitted.
- A planning framework.
- Policy changes to improve public consultation processes and actively bring locals on-board.
- Cutting planning red tape to allow projects to get off the ground/secure funding quicker.
- Develop Cornish policy that promotes mineral development that delivers social benefits and has minimal environmental impact.
- Simplification of policy and general support.

**Education and awareness comments:**

- Education, awareness, knowledge for local people.
- Funding support for research and development activities.
- Improve public awareness of the source of raw materials – education and awareness.
- We need the LEP to recognise the mining sector directly.

**SME development:**

- Cross sector development.
- Support to mining related SME's.

**Digital Economy comments:**

- Digitise the assay records in the Cornwall records office and put on ArcGIS.

**2. Smart and green mining policy. What does it mean to you and how does it look in Cornwall?**

- Very little. I don't know. Please define.
- The future. Development of new materials which are not dependent on mining metals.
- Link to natural capital. Education and work.
- Utilisation of existing facilities e.g. site waste from Imerys (china clay) area.
- Continue inter-regional policy development despite Brexit!
- Embedded mining, agriculture, multifunctional landscapes and planning.

**3. How can the facilities and expertise developed in Cornwall be utilised in the global industry?**

- Already a hub of knowledge based on CSM and mining related businesses. Funding and policy objectives to support further growth.
- Centralised team to combine the expertise in the CMA.
- To run more training sessions.
- Virtual knowledge export.
- Exemplar of post-mining land use and best practice enhancement in mine closure.
- Education – importance of minerals and mining in economic development.

**4. What will create growth in mining related businesses in Cornwall?**

**SME network development comments:**

- By ensuring that Cornish businesses remain at the forefront of tech developments i.e. vis CMA/CSM Association.
- Greater collaboration via the CMA.
- Development of a mining hub.
- Collaboration to maximise impact and access new commercial opportunities.

**Digital Economy and Technology related comments:**

- Developing digital skills base.
- Development of new technology.
- Link to other sectors, other technologies, maximise opportunities to develop industry and capability.
- Leadership, transfer with other industries.
- Company collaboration to promote technological diversity and expertise.

**Education comments:**

- Mining apprenticeship degrees through CSM.
- An acceptance that mining is a network of non-mining skills.
- Access to a funding stream to promote interdisciplinary collaboration (R & D and commercial opportunities).
- Investment and confidence.

From the comments listed above, it is apparent that many stakeholders consider that real development opportunities and synergies exist where the mining sector can gain a knowledge from other industries, such as through technological developments. This is where the overlap in Cornwall with the smart specialisation in the Digital Economy is important.



## 5. OBJECTIVES SET FOR THE IMPROVEMENT OF THE POLICY INSTRUMENT AND ACTIVITIES THAT WILL BE DONE TO ACHIEVE THE OBJECTIVES

Cornwall has a long history of mining and has a supportive environment to encourage the development of SME's. There are, however, potential areas of conflict to challenge the development of new mining projects in Cornwall. Whilst Cornwall has safeguarding policy in place for minerals, since 2006 Cornwall and West Devon has had UNESCO World Heritage Status for its mining heritage and landscape (see Figure 3). The Mineral Safeguarding Policy in Cornwall has recently undergone extensive consultation from a wide stakeholders based down in Cornwall. Cornwall may not at present have operational metalliferous mines, although it still has an extensive china clay and quarrying industry. It also has exploration work to open old metal mines and to develop new sites. The challenge for Cornwall is therefore to balance land use needs and protection; safeguarding minerals for future use from various types of developments and maintaining conditions that allow and encourage the development of mining projects and related businesses, whilst protecting the mining heritage. The CCMM supported the development of Cornwall and the West Devon area as a UNESCO World Heritage Site, although recently they raised concerns at a government paper that suggested major mining developments should not take place in World Heritage Sites.



Figure 3: Wheal Coates engine house located near St Agnes in Cornwall's World Heritage Site.



The REMIX objectives in Cornwall will be to address how the challenges identified above can be resolved in a beneficial manner. In addition, how growth in the overall mining sector can be encouraged will also be reviewed, particularly relating to the development of the SME sector. This will link in to the digital economy smart specialisation in Cornwall, reviewing how mining projects can successfully digitise and build capacity relating to the development of new and innovative technologies.

## **6. ONGOING OTHER ACTIVITIES TARGETING TO THE IMPROVEMENT OF THE POLICY INSTRUMENT DURING THE PROJECT (e.g. projects, support for governance, S3 linkage/implementation, structural change)**

The team from the University of Exeter has already actively started getting feedback from local stakeholders in Cornwall to identify what people view as the key challenges that the mining industry faces in Cornwall and how we can promote growth within the sector. We will ensure that the new level of understanding we gain from people's perceptions and responses to our stakeholder engagement exercises will be fed back to Cornwall Council, including both the Mineral Planning team who develop mineral related policy and departments who influence the wider strategic planning across the region. This will allow the project to have an opportunity to influence and strengthen governance in Cornwall. It will also help provide essential feedback on how people perceive the SME mining sector can be allowed to develop in Cornwall. We will ensure our stakeholders from Cornwall Council and the Cornwall Development Company help us disseminate information on upcoming funding calls that may be useful to the mining sector in Cornwall. This will directly relate to dissemination of information available on funding calls relating to S3 linkages to the smart specialisations in Cornwall.

## **7. SME ENGAGEMENT TO REMIX/STAKEHOLDER GROUP ACTIVITIES DURING THE PROJECT**

SME engagement of REMIX by LP8, University of Exeter, will be implemented through stakeholder meetings (formal meetings held twice a year and through regular informal consultation) as part of the project. Information will also be disseminated through established networks like the CMA. It is acknowledged that the CMA does not include all stakeholders relating to the mining sector in Cornwall and that our project outreach needs to be through a variety of channels. The next stakeholder meeting in Cornwall

has been arranged for September 7<sup>th</sup>, to coincide with a hundred year celebration for the Cornish Chamber of Mines and Minerals (CCMM):

<http://www.ccmm.org.uk/>

<http://www.cornwallminingalliance.org/a-celebration-of-cornish-mining-thursday-7-september-2017/>

The University of Exeter will present about REMIX at the event and undertake further engagement with mining related stakeholders in Cornwall.

The CCMM was established to develop and protect strategic mineral interests relating to challenging economic conditions and regulatory challenges. The CCMM is actively involved today, working closely with mineral developers in the region and regulatory bodies, acting as a statutory consultee for the development of local mineral planning guidance and legislation.

Today, the CCMM helps:

- Assist and enhance co-operation between mineral developers and experts
- Promote responsible exploration and sustainable development of mineral deposits
- Provide input on planning, environmental and mining regulations
- Help in identification of mineral ownership and historical records
- Enhance the approach to mine sites and mineral interests within the land planning and development processes
- Aid governance and awareness of our mining heritage, landscapes and geological assets
- Provide a sign-posting service to link local experts and channel resources to projects in the southwest and further afield.

The University of Exeter will hold a peer review site visit in Spring 2018 for other REMIX partners and stakeholders.

## **8. CLUSTERS, INSTITUTIONS AND REGIONS LINKED TO REMIX PARTNER (others than REMIX PPs)**

The UK mining sector is all very closely linked. In West Devon, the Wolf Minerals Hemerdon Project opened its Drakelands Mine in September 2015 to produce tungsten and tin, the first new metalliferous mine in the UK for 40 years. It has very close links to Cornwall and has heightened interest in the development of mining in Cornwall. Elsewhere in the UK, there is a gold mine opening at Cononish in Scotland, and York Potash has received planning permission for a new underground mine in

Yorkshire, northern England. The aggregates industry is a major player in the UK and well organised and represented through the Mineral Products Association, UK Minerals forum, and CBI Minerals Committee. The metalliferous mining sector can join these organisations. There is also a Mining Association of the UK (MAUK),, representing the non-energy industrial mineral underground companies The UK is a member of the Extractive Industries Transparency Initiative (EITI). The UK is also in the process of developing a 'UK Minerals Strategy', which will outline how the UK can safeguard mineral resources and supply, in addition to a number of other social, economic and environmental objectives:

[http://www.mineralproducts.org/documents/MPA\\_UK\\_Minerals\\_Strategy.pdf](http://www.mineralproducts.org/documents/MPA_UK_Minerals_Strategy.pdf)

Consultation for the UK Minerals Strategy closed in April 2017, and work to finalise the strategy is under way.