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SKILLS ACTION PLAN

LOW CARBON ENVIRONMENTAL GOODS & SERVICES

Produced by Community Energy Plus on behalf of Cornwall Development Company

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CONTENTS

1. Introduction	4
2. Challenges 1-3	11
CHALLENGE 1: ADDRESS THE ISSUES IDENTIFIED WITH CURRENT LEARNING AND SKILLS PROVISION	11
CHALLENGE 2: COORDINATION OF AVAILABLE LCEGS PROVISION	11
CHALLENGE 3: INCREASED AWARENESS OF AVAILABLE SKILLS AND TRAINING PROVISION	12
3. Stage 1 Proposal – The Green Skills Portal	14
4. Challenges 4-8	22
CHALLENGE 4: ACCESS TO EFFECTIVE BUSINESS MENTORING	22
CHALLENGE 5: FUTURE PROVISION	22
CHALLENGE 6: DEVELOP GREEN APPRENTICESHIP	23
CHALLENGE 7: THE STEM CONUNDRUM	23
CHALLENGE 8: THE LCEGS SECTOR CONUNDRUM	24
5. Stage 2 Proposal – Green Skills & Innovation Partnership	25
6. Enhancing STEM	31
7. Cornwall’s network of Green Centres of Excellence	34
8. Events	40
9. Timeframe	43
10. In Conclusion	47

LIST OF TABLES

Table 1 - Proposed Actions - Summary	8
Table 2 - Challenges 1-3	9
Table 3 - Challenges 4-8	10
Table 4 - Initial work streams and sub-sector workgroups for the GSIP	26
Table 5 - Cornwall's Network of Green Centres of Excellence	36

1. INTRODUCTION

Using the information collected in the Evidence Base for the Low Carbon Environmental Goods and Services Sector, this Skills Action Plan sets out how best to support the improvement of skills needed by the LCEGS Sector over the next fifteen years, with detailed proposals for actions in the first two years of the plan.

EVIDENCE BASE

CURRENT EMPLOYMENT PROFILE

The Evidence Base produced some key findings in relations to skills, which this plan responds to.

Staff in the sector are very **highly qualified** reflecting the specialist nature of much of the work. Our survey suggests that about 60% of the qualifications held are in STEM subjects or are directly relevant to the sector.

As you would expect for such a highly qualified workforce, the **mean average pay is greater than the full time average for Cornwall as a whole**. The mode average of £30-39k is probably the best guide as to what the majority of well qualified staff in the sector are earning.

As with other major group industries for UK STEM (science, technology, engineering and maths) there is currently a **gender imbalance** towards male employees. There is some suggestion that this is reducing for the younger generation. This Skills Action Plan has been conceived with a desire to close that gap.

SKILLS REQUIREMENTS AND GROWTH

The Leitch Review recognised that “low carbon skills” should be at the centre of the overall drive to improve skills. **Just as all businesses will need to take part in the transition to a green economy, all workers need to have skill sets that will enable businesses to achieve their environmental and sustainability goals.**

However the **UK as a whole is lacking the necessary skills** to compete successfully in an increasingly globalised market – this is the case for the LCEGS sector as for many others.

In Cornwall and The Isles of Scilly, a **19% growth rate in the local LCEGS workforce** is anticipated over the next 1-2 years. The sector is projected to employ an additional **750 people** during that period.

However our research found that in Cornwall and The Isles of Scilly, a number of factors are likely to combine over the next 10 years to produce a **substantial skills and employee deficit** that could greatly limit the sectors ability to grow and develop successfully.

The skills required by the sector are a mixture of job or sector specific skills, and generic skills. Skills needs identified include marketing, PR, sales and the funding or structuring of apprenticeships.

SKILLS PROVISION AND TRAINING

There are a **wide and growing range of LCEGS skills provision** options across C&IoS. Many of the providers are currently expanding or investing more in this area.

While current skills training provision is broadly comprehensive in terms of both sector specific and industry wide skills coverage and content, there are **some issues with the cost, emphasis, length and timing of courses.**

There is also evidence that young people are currently **not being given enough advice or training about green skills.**

Businesses in Cornwall in general are **ready to embrace training** in the context of future growth and investment. The most common request for support from the public sector was funding for training.

Businesses reported that the **process of finding the “right” training** for a particular individual or a business can be complex and time consuming, with providers often in competition with one another to fill courses.

Six recommendations have emerged from the research as follows:

- **Address issues with current skills provision,**
- **Coordinate available skills provision,**
- **Raise awareness of available skills provision,**
- **Extend the current business mentoring system,**
- **Work with pioneering businesses to assess potential longer term skills needs,**
- **Develop a green Apprenticeship framework.**

APPRENTICESHIPS

Currently the only apprenticeship that meets the needs of the renewable sector is the newly produced wind turbine apprentice technician.

The role of apprenticeships in offering routes to employment is currently being prioritised by the government through new funding packages to encourage take up amongst small businesses. Apprenticeships will be available alongside degree and postgraduate courses,

providing a comparable **higher level alternative route** from the traditional academic route through education into employment.

SKILLS ACTION PLAN

Given that the term Low Carbon Environmental Good & Services is not one that many of the businesses we spoke to would automatically identify themselves with, we have **defaulted to the term 'Green Business' as a term that has higher resonance.**

Broadly the evidence collected in this study shows that businesses operating within the Low Carbon Environmental Goods and Services categorisation are very **optimistic about their future growth opportunities.** However, under this wide umbrella grouping there are clearly business **sectors that need support and focussed attention to capitalise on the potential they predict.** We believe that the proposals that are outlined match the ambitions for growth within the sector, but appreciate that further consultation and engagement is necessary in order to achieve the participation and commitment of business owners and workers.

While some sub-sectors are more mature, predominantly in the Level 1 Environment category, and so should be able to address and fund their own skills requirements, many of those in the **Renewable Energy and Low Carbon categories can be seen as still emerging and require support to develop and grow.** The future development of low carbon and environmental goods and services, in both mature and emerging sectors, depends on access to an ever-widening and deepening pool of talent and innovation.

The proposals set out in this section are based on the premise that the **focus of future investment has to be on improving the skills of the people working in these businesses and promoting higher skills development, rather than investment in infrastructure and 'big ticket' building projects.** Some of the development activities proposed will require building space, and we propose that existing assets are utilised to build upon and achieve greater productivity from recent infrastructure investment in Cornwall.

This Skills Action Plan is unashamedly written from the perspective of businesses and industry operating in Cornwall. We believe that the Green business sector, as is the view held in other sectors, desire a **closer relationship with the education institutions** in order to help shape the provision of skills development and training to align with their present and future growth plans.

Some elements of the plan and the changes proposed will take time to bear fruit and so the plan seeks to **engage with learners of all ages**.

While this plan has been conceived as a stand-alone proposal we are mindful, having seen the equivalent Skills Action Plans for the Aerospace, Space and Food & Drink Manufacturing and Processing sectors, that there are areas where there is potential for considerable overlap and mutual benefit across these sectors and more widely. We believe that the **potential for collaboration across sectorial definitions has always been a feature in the Cornish economy** and has been productive, and so as this plan is considered, we would recommend specific effort is made to identify and utilise these linkages and cross-over benefits.

We recognise that within the context of the LEP's Economic Strategy, the **prioritisations made within the Employment & Skills Board's strategy will be highly influential** and this plan will need to be shaped and further informed by this process.

Below is a summary table of proposed actions. The challenges identified and suggested responses contained in this report are summarised on the following two pages.

Table 1 - Proposed Actions - Summary

Proposed Action	Summary
Green Skills Portal	<ul style="list-style-type: none"> • A simplified, one stop-access route to learning. • Membership organisation for businesses. • Establishment timescale – 2014-2017
Green Skills and Innovation Partnership	<ul style="list-style-type: none"> • A space to Inspire, Innovate, Research and Co-Create solutions for new and improved skills. • Creating placements, redesigning training and apprenticeships, and developing funding alternatives. • Establishment timescale – 2014-2017.
Enhancing STEM	<ul style="list-style-type: none"> • Connecting businesses with local schools to increase awareness and aspirations with regards to the sector. • Creation of a Vocational Award in STEM Skills aimed at 14-24 year olds. • Establishment timescale – 2014-2017.
Green Centres of Excellence	<ul style="list-style-type: none"> • Using existing resources to improve collaboration across the county by establishing a network of Green Centres. • Network to include clusters of resources in Penryn & Falmouth, Hayle, Wheal Jane, Camborne and St Austell. • Establishment timescale 2014-2020
Events	<ul style="list-style-type: none"> • A programme of events and opportunities to showcase the sector. • This includes maximising the opportunities provided by existing events, and facilitating new activities. • Establishment timescale 2014-2017.

CHALLENGES 1-3

Table 2 - Challenges 1-3

Challenge 1	Challenge 2	Challenge 3
Address the issues identified with current learning & skills provision.	Coordination of available LCEGS provision	Increased awareness of available skills & training provision
<ul style="list-style-type: none"> • The need to address the gap between business skills need and current skills provision. • There are issues with access to that provision - cost, focus and technical emphasis, length and availability of courses all need to be examined. • This requires a long-term, strategic solution. 	<ul style="list-style-type: none"> • The process of finding the “right” training for a particular individual or business, can be far from straightforward and time consuming. • Providers are in competition with one another to fill courses. • This can lead to conflicting interests with businesses, to the detriment of LCEGS skills needs. 	<ul style="list-style-type: none"> • Work is needed on promoting and marketing the available training for the Green business sector in C&IoS, focussed on presenting why the sector is a viable and valuable career option for students and young people.
<p>Stage 1 Proposal - The Green Skills Portal - a simplified, one-stop access route to learning.</p> <p>This will provide:</p> <ul style="list-style-type: none"> • A one stop shop for Information, Advice, Guidance for Green Skills • A clearinghouse of skills knowledge • Connections & linkages for businesses to identify shared needs and to present to providers the case for the provision of specific courses • Brokerage and assistance in identifying the right options for learners from a business’ perspective • Identify barriers to access and to work as an advocate with stakeholders • Facilitation of short courses • Facilitation of rapid response training options • Connect Green businesses with local schools to increase young people’s awareness of and aspirations for the sector and to encourage consideration of Green career options. • Coaching for business owners and employees on skills development • Mentoring - development of B2B linkages • Business Skills Needs Gap analysis 		

CHALLENGES 4 - 8

Table 3 - Challenges 4-8

Challenge 4	Challenge 5	Challenge 6	Challenge 7	Challenge 8
Access to effective Business Mentoring	Future Provision	Develop Green Apprenticeship	The STEM Conundrum	The LCEGS sector Conundrum
<ul style="list-style-type: none"> Extending the current business mentoring systems available through the colleges and universities would be valued by many Green SMEs. There is a need to address some of the industry-wide and generic “growing pains” experienced by those businesses that are developing and expanding. 	<ul style="list-style-type: none"> For the sector to attain its growth aspirations, an assessment of the potential longer term skills needs of the sector is needed, in close liaison with those who are at the forefront of developing the relevant technologies. Employers cannot be expected to know what their skills needs will be in an emerging industry. 	<ul style="list-style-type: none"> There is a desire to take on apprentices, but there are difficulties in finding suitable candidates. Various concerns were expressed around finding young people with appropriate practical skills and basic science understanding, together with “green” interests. 	<ul style="list-style-type: none"> In the LCEGS sector as with other industries in Cornwall, there is a need for: <ul style="list-style-type: none"> Staff with general STEM skills Engineers Leadership and management skills More engineers and managers, for example are needed, but they also need them to hold core economic, social and environmental training and values. 	<ul style="list-style-type: none"> Cornwall is not fulfilling the potential provided by its USP, and not yet competing on the international market for sales or for talent. Some businesses are not aware of the opportunities, or see themselves as ‘outside the sector’ when it comes to training and support.
<p>Stage 2 Proposal – The Greens Skills and Innovation Partnership - The Green Skills & Innovation Partnership (GSIP) provides a space to: INSPIRE, INNOVATE, RESEARCH and CO-CREATE solutions for new and improved skills.</p> <p>Core Activities of the Green Skills & Innovation Partnership</p> <ul style="list-style-type: none"> Provide a space for the formal and informal interaction between business & industry and education providers and the public sector Facilitate a programme of Work Placements for 16+ learners Facilitate sector specific apprenticeships Collaboration to operationalise the Skills strategy at sub-sector levels and across key themes requires a co-ordinated approach. 				

2. CHALLENGES 1-3

CHALLENGE 1: ADDRESS THE ISSUES IDENTIFIED WITH CURRENT LEARNING AND SKILLS PROVISION

An over-riding theme from businesses is that they are looking for closer alignment between their need to address skills shortages and gaps, against existing skills and training provision at all levels.

While the current provision in skills and training is broadly comprehensive in terms of both sector specific and industry wide skills coverage and content, there are issues with access to that provision – the cost, focus and technical emphasis, length and availability of courses all need to be examined.

The training providers we spoke to all emphasised that they “*respond to employers’ needs*” and engage closely with local businesses; however, a number of specific and important gaps in provision were identified.

A number of immediate ‘fixes’ can be considered that require minimal cost to address, but a more strategic solution is also suggested in order to respond to the concerns businesses raised, including:

- Consideration should be given to subsidised courses/training for Green businesses;
- Coordination and/or brokering of Green skills training between employers to reduce the costs and time spent arranging training and addressing the gaps in provision;
- Revising course content with employers contributing as “editors” to focus it on their specific needs;
- Address the evening/daytime division between availability and delivery.

CHALLENGE 2: COORDINATION OF AVAILABLE LCEGS PROVISION

There is relevant Green training provision available for businesses in C&IoS, both from colleges and universities and the private sector. However, this in itself produces a challenge, as the process of finding the “right” training for a particular individual or business, can be far from straightforward and time consuming.

A contributing factor is that providers are in competition with one another to fill courses, and so their communication channels are shaped to feed potential students into their institution and their training options. For employers and employees this can be off putting

and they can find it “*difficult to wade through*” the variations in order to be certain that the product they are offered is what the business actually needs.

Providers are aware that getting appropriate access to companies to fully assess needs can be difficult when the perception could be that their motivation is to simply fill spaces on established courses, rather than providing tailored training for learners. Businesses will be reluctant to engage if they think that an approach from a provider will only be to “*sell their own product.*” A senior manager, who has previously been involved in identifying training provision for businesses, also indicated that previous ESF/SFA programme targets contributed to a distortion of information, advice and guidance (IAG) support, for example by setting output measures with an over emphasis on achieving level 2 or level 3 courses.

CHALLENGE 3: INCREASED AWARENESS OF AVAILABLE SKILLS AND TRAINING PROVISION

Work is needed on promoting and marketing the available training for the Green business sector in C&IoS, focussed on presenting why the sector is a viable and valuable career option for students and young people.

This needs to be directly linked to where to go in Cornwall to get information, advice and guidance on Green skills and training and what career paths these skills lead to. There is significant activity already happening in this area which if brought together and presented more coherently could achieve higher profile; for example:

- **Cornwall College** has excellent facilities for Renewable Energy technologies training at its Camborne, St Austell and Saltash campuses,
- The on-going refurbishments at the **Marine School at Falmouth**
- **Truro & Penwith College’s Sustainable Leadership** programme is contributing to the development of a cohort of ‘Green minded’ entrepreneurs.

Further initiatives that could be developed include:

- **Utilising a single PR/marketing point.**
- **Linking local unemployed people to low-carbon jobs and training opportunities.**

It should be recognised that when designing solutions to promote the Green skills agenda, the model needs to address not only **WHAT** is provided, or **HOW** it is communicated, but **WHY** potential learners are seeking a career in the environmental sector. Many of the business owners implicitly or explicitly communicated the reason why they work in the sector – a motivating passion that is more than a satisfying job or the desire to make money, rather they made choices about their career because of concerns about humanity’s impact

on the planet and wanting to make a positive contribution to our collective sustainable future. There is therefore often a strong **vocational element** in the motivations of people working in the sector, *“it is more than a job.”*

We therefore submit that **a single co-ordinated point of entry, a dedicated portal providing access to and detailing all relevant Green training and provision** would simplify the process and ease employers’ time and access issues. This will be particularly helpful for SMEs who, in general, have more limited resources given that capacity for planning and decision making for training, HR and similar issues tend to be located higher in their management chain than in larger organisations.

3. STAGE 1 PROPOSAL – THE GREEN SKILLS PORTAL

The Green Skills Portal (GSP)¹ will provide a **simplified, one-stop access route to learning**. It would operate as a **membership organisation for businesses**, i.e. whilst some services will be provided on a “free at the point of access” basis, access to other services will require payment of a membership fee. Parallels to previous and existing models are described below.

THE CORE OFFER OF THE GREEN SKILLS PORTAL

1. **A one stop shop for Information, Advice, Guidance for Green Skills**
 - a. IAG to be impartial, independent and transparent, not linked to specific providers

2. **A clearinghouse of skills knowledge**
 - a. Providers can make known to businesses
 1. courses that are currently available
 2. potential courses that could be considered
 - b. Businesses can communicate to providers
 1. specific need requests
 2. their current general training demands,
 3. what they need in next 12 months
 - c. Potential service users/learners get a source of easily accessible information, and can communicate their interests and appetite for skills development

3. **Providing connections & linkages for businesses to identify shared needs and to present to providers the case for the provision of specific courses**
 - a. While individual businesses will be aware of their own specific needs, they are likely to be unaware whether the equivalent needs exist elsewhere, and the ability to pool specific need requirements would help providers respond

¹ The name used here is a placeholder at this stage, subject to consultation, but reflects the ambition of Cornwall-wide programme. In an earlier iteration of this proposal we did consider the option of titling this, the Green Cornwall Skills Portal, potentially linking this work with an established brand with which sector already identifies.

- 4. Brokerage and assistance in identifying the right options for learners from a business' perspective**
 - a. Information Diagnostics and Brokerage (IDB) Assessors to proactively work with businesses
- 5. Identify barriers to access and to work as an advocate with stakeholders**
- 6. Facilitate short courses**
- 7. Facilitation of rapid response training options**
 - a. Evidence was collected of businesses responding to sudden demands from customers, and local skills provision unable to respond in appropriate timeframes. In one case, for the business to respond to their customer's demand, training was sought in London, after local supply options were unable to respond within a six month period. While this may always be the case for highly specialised demands, the ability to map and react in a coordinated way to demands that require a very short turnaround supply would be welcomed
- 8. Connecting Green businesses with local schools to increase young people's awareness of and aspirations for the sector and to encourage consideration of Green career options.**
 - a. Should also include outreach and educational activities – see action on STEM below
- 9. Coaching for business owners and employees on skills development (making the case for skills development beyond the core business activities).**
- 10. Mentoring - development of B2B linkages**
- 11. Business Skills Needs Gap analysis**
 - a. We propose the use of free Skills Audits of businesses to identify needs (but not using the standard "business assists" model, as it often is too restrictive). This should happen before attempting to match personnel to courses.
 - b. We would challenge the effectiveness of free training as it is not a long-term sustainable model. We remain concerned that the previous rounds of EU funding have led to a plethora of funded offers that have raised expectations that all in-job training can be accessed at no cost.

- Paying members of the GSP would access discounted/subsidised training as a benefit of membership.
- c. An element of the support package must consider the 'hidden' costs of training, specifically the additional cost of covering a learner's absence from the workplace and the consequent disruption to business productivity – this is a particular issue for SMEs, where a regular absence over a period can have significant impact and may prevent offers of training being taken up. Alternative models that allow for less emphasis on 9am – 5pm delivery would be welcomed
 - d. Be a general business information resource, with a possible e-newsletter and social media disseminating policy changes, funding opportunities, training tips (e.g. marketing advice).

The overall offer must cover at least level 1 - level 6 course provision and include routes for level 7/8 learning options. Some previous funded skills development programmes have been too limited in this respect and caused frustration for businesses that wanted to access support but couldn't identify a match to their needs; over-emphasis on lower level qualifications will not be appropriate in the context of a high growth agenda.

DELIVERY

While much of the above can be delivered through web-based resources, it is important to stress that the Green Skills Portal is **more than a web platform**. It is critically important that such an IAG/IDB service has the ability to offer **face-to-face and telephone support**. Accordingly the GSP should have a **small team of full-time advisers to deliver the service, led by a Project Manager**, with a proven track record of working with businesses to identify and develop their skills. The role of the GSP Advisor is to act for the benefit of the business and the learner, rather than to represent the providers; that said, the advisers will need to be clear that on occasion the learner's aspirations may not match with the business' requirement for skills development and some balancing and brokering of those points of tension will be required.

Management of the GSP could be via the Cornwall Learning Partnership as an established provider. However, we anticipate that some businesses may feel this will lead to an overly public sector bias in provision and other models, using lessons from the alternatives noted below, could be developed.

KEY STAKEHOLDERS / ADVISORY BOARD

There are a range of agencies interested in promoting various aspects of the Green Skills agenda, and to bring a point of focus to their respective interests we propose that the Green Skills Portal has an Advisory board drawn from the following:

1. **Cornwall Chamber of Commerce**
2. **Federation of Small Businesses**
3. **Business Leaders for Low Carbon Group**
4. **LEP Employment & Skills Board (to ensure alignment with ESF/SFA programmes)**
5. **Learning providers**
 - e. HE
 - f. FE
 - g. Commercial providers (e.g. SWAAT)
 - h. Schools – both Cornwall Association of Secondary Headteachers (CASH) and Cornwall Association of Primary Heads (CAPH)
6. **University of the 3rd Age (possibly providing a potential source of mentors)**
7. **Unlocking Potential**

COMPARABLE MODELS

A number of key pointers for the development of this modal can be drawn from the following

- **Environmental Skills Network (ESN)**
The model which provides a direct comparison with the Green Skills Portal is the ESN, effectively combining both the environmental and skills agendas. ESN was highly successful in facilitating access to training across Cornwall from 2008 until 2011 (see LCEGS Evidence Base, Section 2.2.1 – Background and History for more detail). It enabled companies that were already in the Green sector to access generic business skills training and also assisted companies outside the LCEGS sector to access specific environmentally focussed resources.

A change in the funding mechanisms with the Skills Funding Agency stopped further delivery.

ESN was particularly successful in compiling packages of skills support for learners and businesses. A number of the businesses that derived particular benefit got involved because of the clarity ESN was able to bring to identifying appropriate support and who had been previously “*overwhelmed by the offers of business assists*”. ESN’s advisors were able to identify the skills gaps and then pull together

packages of support that were sourced from several providers from within and outside Cornwall, as appropriate.

ESN was a 'semi-transparent' membership organisation. Membership fees were incorporated into the costs of initial training offers to individuals and so some companies were unaware that they were part of the network, and so the wider benefits of the network were not developed.

- **Cornwall Marine Network (CMN)**

Established in 2002, the Cornwall Marine Network is dedicated to improving the prosperity of Cornwall's marine sector via a series of sector specific initiatives. Paid-for membership is offered to businesses with a clear marine focus, and Associate membership to indirect, support organisations. CMN's offer includes support in Marketing, Training, and Networking to improve profitability and encourage growth through quality and innovation; they have a growing emphasis on marine-related apprenticeships. The annual CMN Marine Guide and Directory is a significant resource and inclusion in the Directory is seen as an immediate benefit for participating companies through raising their profile, even before other benefits are secured.

www.cornwallmarine.net

- **Unlocking Potential / Unlocking Cornish Potential**

Unlocking Cornish Potential as a mechanism for graduate recruitment has proven highly successful. A dedicated Senior Business Development Manager in Environmental Technologies has enabled a number of successful graduate placements across the sector, and is valued by those companies who have been able to access the service. The recruitment portal is valuable when creating new posts or for vacancies. Unlocking Potential's business support offer is still developing and potentially, will contribute to the generic skills needs but a specific environmental skills and awareness focus remains a gap.

- **Cornwall Learning Academy (CLA)**

The courses offered by CLA are strong on coaching and mentoring skills but not so much emphasis has been put on generic business skills, e.g. business planning or financial management. It is not a membership organisation and from the business perspective the perception of CLA's offer is that it tends to a public sector view of business, which is understandable given its background and delivery structure.

- **Regen SW**

The Devon based off-shoot from the Regional Development Agency, reformed itself into a not-for-profit company with a subscription-based membership,

currently with over 260 Members. Building on its former role, it has good links into the Renewable Energy and Energy Efficiency agenda, both regionally and nationally. It is not specifically a skills focussed organisation, giving more emphasis to business collaboration and project management. Subscription membership allows some initial general free access to information, but paying membership fees gives access to the latest sustainable energy news, input into policy consultations, and reduced entry to Regen SW highly valued events.

www.regensw.co.uk

- **Business Pulse**

As a web-based portal that already exists to support businesses in Cornwall through the LEP, Business Pulse must be mentioned in this overview of equivalent models. While still at an early stage, awareness of the facility remains low and navigation on the site is problematic. Assuming that ease of access and being able to quickly identify support options is the priority, as a 'one-stop shop', Business Pulse is not yet the **first point of call** for skills or other business support. The Green Skills Portal model does replicate some aspects of the Business Portal and so some streamlining of service offers may be achievable, but the key difference with the GSP proposal is the addition of IAG/IDB advisors to directly support businesses.

www.business-pulse.co.uk

- **Environmentjob.co.uk**

The Environmentjob.co.uk website provides a clear illustration of the breadth of the green sector and the skills and employment trends within the sector. As a recruitment portal it is a good example of the ability of an established brand to effectively match employees and job-seekers. Their ability to publicise training, courses and events, not directly linked to specific recruitment shows how a web presence that users will bookmark and return to frequently, with prompts from regular email digests, can add value to the core offer. The site is funded through paid for advertising of vacancies.

www.environmentjob.co.uk

In reviewing these alternative provisions, we are aware that the challenge will be “Are we proposing a duplication of existing provision?” Our view is that while the Green Skills Portal may do some things that can be accessed elsewhere, **by bringing the varied elements described in the core offer together as a coherent single one-stop shop, this will achieve a greater effect than is currently being delivered;** the closest match to the Green Skills Portal in the alternatives described above, was the Environmental Skills Network which ceased operations in 2011 and its closure was due to changes to funding and not because of lack of business engagement or demand for its services. The Green Skills Portal offers the opportunity to take the best of what has and is offered by these other models, but to keep

the focus on skills and training for businesses in the Green sector and for businesses outside the sector who need green skills to support their growth.

We consider that a core service is relatively easy to establish and at a low cost can quickly achieve meaningful results.

- As investment comes forward through ESF financing route, in the medium term the aim would be to do more in order to unlock further skills growth.
- Establishment timescale: 2014-2017.
- Potential funding: ESF to set up and member fees to maintain and create a self-sustaining operation.

Interactions between the Green Cornwall Skills Portal and businesses are likely to be relatively short term and infrequent, as and when specific skills requirements occur. Therefore some thought needs to be given to a more substantial engagement facility for businesses to consider skills development and there are a number of further challenges within the sector that have been identified.

GREEN SKILLS PORTAL - INVESTMENT

RESOURCES NEEDED:

Personnel: 1 FTE Communications Officer, 1 Project Manager/ IDB Advisor (minimum), 1 FTE IDB Advisor (ideal), 1 FTE Administrator.

Website – Search facility, member log-in area, news/ information alerts, adverts.

Overheads – Office costs, marketing, expenses.

INDICATIVE COST:

£10,000-15,000 Business planning and consultation

£6,000-7,000 Website creation

£200,000-300,000 Annual cost

INVESTMENT REQUIRED:

Seed-funding from ESF/ERDF to set up service and implement business plan

Annual income from membership fees (sliding scale based on business size) and advertising revenue/ referral fees from education providers

ESTABLISHMENT TIMESCALE: 2014-2017

ESF/ERDF OUTPUTS:

300 – 600 participants (1-2 FTE IDB Advisor/s)

125 – 250 enterprises supported (1-2 FTE IDB Advisor/s)

WIDER ECONOMIC BENEFITS:

- Businesses spend less time searching for courses (increased productivity)
- Businesses find the right courses for their needs
- Businesses better equipped to provide new services/ enter new markets
- Increased take up of local training provision (benefit to providers)
- Carbon savings from a reduction in travel for out of county training

4. CHALLENGES 4-8

CHALLENGE 4: ACCESS TO EFFECTIVE BUSINESS MENTORING

Extending the current business mentoring systems available through the colleges and universities would be valued by many Green SMEs.

A refreshed focus would be beneficial to address some of the industry-wide and generic “**growing pain**” issues that are being experienced by those businesses that are developing and expanding. The common themes that were identified were skills in:

- Management and leadership development
- Accessing and changing governance for a growth agenda
- Human resources management
- Public relations and marketing
- Business administration and support issues
- Financial management issues
- Regulatory issues
- Accreditations

CHALLENGE 5: FUTURE PROVISION

A common complaint from businesses is that the current system of skills provision is too target/demand led, while purporting to be employer led.

This results in a short term focus, i.e. responding to the current demand and what business skills needs are perceived to be now. A strategic focus is missing in this provision.

For the Green sector to attain its growth aspirations, **an assessment of the potential longer term skills needs of the sector is needed**, in close liaison with those who are at the forefront of developing the relevant technologies, for example, by collaborating with the designers and manufacturers of future RE equipment. Current employers do not, and arguably cannot be expected to know what their skills needs will be in an emerging industry. A longer term collaboration and assessment with industry experts and insiders would help to refocus future planning and hence provision.

CHALLENGE 6: DEVELOP GREEN APPRENTICESHIP

Several employers noted their desire to take on apprentices and the difficulties they have in finding suitable candidates. Various concerns were expressed around finding young people with appropriate practical skills and basic science understanding, together with “green” interests. **The development of a cross sub-sector "green" apprentice / renewables apprentice role**, based on researching similar initiatives elsewhere in the UK to share best practice, would help to address this issue and assist in achieving an increased awareness of Green business opportunities in schools and colleges.

CHALLENGE 7: THE STEM CONUNDRUM

The research informing the LCEGS, Space, Aerospace, and Food and Drink studies is in general agreement that these respective industries, and industry in general, need more and better:

- Staff with general STEM skills
- Engineers
- Leadership and management skills

For the Green sector in Cornwall the common view is that we do not just need more or better engineers and managers, we also need them to hold core economic, social and environmental training and values. Not only should they be engineers who work in the Green sector, to really make a difference they need an empathy with the wider Green agenda, that is, that they are Green Engineers.

The Challenge:

- HMG policy is that it is the role of the LEP to articulate the demands of business for skills and knowledge and to communicate this to the education and training providers
- This implies that colleges and universities are essentially public sector bodies that should respond to the demands of business
- The SME base in Cornwall may create the demand for in-work vocational training, but it does not create demand for higher education
- Colleges and universities are businesses in their own right and their primary demand, at least to undergraduate level, comes from the students who are their customers
- Colleges and universities do not consider there is sufficient demand from students for primary STEM related courses
- The STEM performance in school is very respectable, but even so, by the time young people reach the age of 18, very few are interested in STEM careers

- The promotion of STEM in school, needs to begin before secondary school
- This is a long term process and requires the integration of STEM teaching, careers advice, work experience, effective outreach from colleges and universities into schools and a major collaborative exercise with the business community who ultimately will have to offer attractive jobs within the Green sector

CHALLENGE 8: THE LCEGS SECTOR CONUNDRUM

Cornwall is blessed with all the assets it needs to develop and promote renewable energy technologies (wind/wave/sun) set within a natural environment that attracts international interest.

Businesses are highly skilled and qualified in science and engineering but appear to be generally less well endowed with the skills of leadership, management, commercialisation, marketing and sales.

According to our research at least, exports form a minimal part of business activity (accepting the caveats identified in the research).

From our research, some businesses are very aware of the knowledge exchange and business support programmes of the universities, while others are totally unaware of what is available. It is also apparent that for some businesses there is a perception that they are “outside the circle,” and are not of interest to those offering business support.

The general perception of many businesses (rightly or wrongly) particularly at Board level, is that the universities are reluctant to cooperate with them.

In order to address these challenges in a strategic and robust manner we propose the formation of a new entity, the **Green Skills and Innovation Partnership**.

5. STAGE 2 PROPOSAL – GREEN SKILLS & INNOVATION PARTNERSHIP

Stage 2 is the element of this plan that will take longer to develop.

The **Green Skills & Innovation Partnership (GSIP)**² provides a space to:

INSPIRE, INNOVATE, RESEARCH and CO-CREATE solutions for new and improved skills.

The Green Skills Portal described above is assumed to sit within and form a critical element of the delivery of the wider partnership.

- a. **The Business Leaders for Low Carbon (BL4LC) provides a model**
- b. **The principle should be that placements are co-designed by receiving businesses, students and education providers.** This can thus counter the tendency for business not to see the opportunities that work placements provide – there can be a view that placements are imposed from the training perspective rather than developed in collaboration with the business.
- c. Refocus the KTP and business engagement activities of universities away from simply identifying research opportunities for academia and starting up spin offs from research, to **greater participatory development.**
- d. **Redesign / co-design training opportunities** – to include short and long course options, MOOCs, distance learning, and other new learning models.
- e. **Enable proliferation of Action-based learning using the AIR/ESI models.**

A linked **series of activities** are required to develop the Apprenticeship agenda

- f. **Development of Frameworks**
Businesses and training providers to address the wide gaps in the existing frameworks for Green skills – see section 7.5.
- g. Once frameworks are established and agreed, **provision of appropriate training opportunities need to be created to enable delivery of frameworks** (links to GSP work).

² Again, the name is acting as a place holder and further development is likely to give rise to alternative titles.

- h. **Develop new funding alternatives.** With full funding for apprenticeships only available for under 19s, businesses identify a real barrier for 20+ learners. The GSI Partnership need to develop a cross-sectorial collaboration involving the public, private and education sectors to unlock funding opportunities.
- i. **Work is also needed to ensure that apprentices are ready for working environment.** Potential learners need to be prepared, understanding the responsibilities they will carry and the expectations put on them, and aware of basic health and safety requirements and workplace protocols. For SMEs they need to be confident that they are taking “a known quantity”, otherwise if things go awry as small employees will be much harder to engage with if further opportunities arise. Preparation for higher level apprenticeship could follow the model established by Unlocking Cornish Potential’s Gateway programme, offering intensive short term work experience.
2. From the key themes identified in the research, along with the SMART specialisation themes set out in the EU SIF, the table below outlines a possible starting point, acknowledging that the groups (possibly as task and finish groups) will change as new opportunities and growth occurs.

Table 4 - Initial work streams and sub-sector workgroups for the GSIP

WORK- STREAMS	Apprenticeship Development	Smart Energy	STEM	Research & Innovation/ Higher Skills	Centres of Excellence Network
SUB-SECTOR WORKGROUPS					
Buildings/ Energy Efficiency					
Marine Renewables (potential link to MOR group)					
Microgeneration					
Geothermal					
SMART could sit as a sub sector workgroup or work-stream					
Etc...					

- a. Work-streams and sub-sector workgroups have been provisionally indicated, but an **engagement process with the business community** to establish exactly what is needed is essential.
- b. Membership of groups should be structured to reflect what is valued in terms of business to business interaction, links between business and academia (and consequently students/learners), and links between business and the public sector.
- c. The key topics of each work-stream is likely to include:
 - i. Barriers to skills
 - ii. Opportunities through collaboration
 - iii. Horizon scanning / future proofing skills
 - iv. Creating a breeding ground for innovation

Figure 1 - Green Skills & Innovation Partnership



The Partnership structure should be **flexible and open** to allow multiple interactions and the easy flow of innovation and information.

Initial membership in the partnership will be primarily similar to the stakeholders for the Green Cornwall Skills Portal as representatives of key parts of the sector, working to enable

the active participation of individual businesses. In addition key representatives from the public sector and voluntary, community and social enterprise sectors can be included as relevant.

A Partnership Hub team needs to develop the above Core Activities but should also facilitate sub-sector partnership development.

From similar partnership delivery models one important area that should be considered is whether to fund the participation of businesses. Skills and Training providers tend to make space in diaries, if attendance relates to their core roles, but for businesses the value of participating has to be balanced with the value of their time elsewhere, earning income for their business. While investment of time in the development of skills is important for businesses that want to grow, is a Skills-Only focus for the partnership enough to attract and maintain their participation? By placing **equal emphasis on skills and innovation**, the growth of the sector could be developed in the same way as the examples below illustrate.

COMPARABLE MODELS

- **Cambridge Clean Tech**
(www.cambridgecleantech.org.uk)



Cambridge Cleantech is a membership organisation supporting the growth of environmental goods and services or “cleantech” companies in the Greater Cambridge area. Led by the local business community, Cambridge Cleantech aims to encourage joined-up clustering and self-support. Among their objectives, they seek to

- Promote collaboration between higher education, the scientific and research community and the cleantech business sector in Greater Cambridge
- Co-ordinate, support and promote commercial opportunities for its members
- Make the links between investment finance and skills
- Identify specific sub-sector market failures and create corresponding sector initiatives and support

In 2010, the Greater Cambridge Cleantech Strategy & Action Plan, made the business case for this business support organisation. Today, Cambridge Cleantech’s 280+ members benefit from a range of business support services from access to finance, to contract opportunities and support for start-ups.

Key lesson: With a clear vision, businesses working together and supported by the public sector and academia, can create a self-supporting organisation that promotes growth in existing businesses and generates a space for new businesses to flourish.

- **Cornwall Sustainable Energy Partnership (CSEP)**

Launched in 2001, the UK's first sub-regional sustainable energy partnership, Cornwall Sustainable Energy Partnership (CSEP) was operational until 2009. The cross-sector partnership brought together over 50 key organisations to develop policies and active sustainable energy programmes. Member organisations included all the Local Authorities, Health Trusts and Housing Associations, plus businesses, community groups and voluntary and community sector organisations. A series of sectorial and thematic task groups were set up to take individual actions and projects forward.

Key lesson: In proposing the creation of GSIP, we are aware that a criticism can be levelled that this proposal revisits familiar work that was ended in 2009. However, we believe the CSEP model, while not perfect, does offer valuable lessons in how cross-sectorial collaboration in Cornwall can achieve results that attract national and international recognition, and more importantly, provide a mechanism to promote the growth and proliferation of specific sub-sectors. The purpose of comparison with CSEP is to highlight how specific attention to sub-sectors can unlock significant growth opportunities.

GREEN SKILLS AND INNOVATION PARTNERSHIP - INVESTMENT

RESOURCES NEEDED:

Personnel: Min. 2 FTE Partnership Hub team/ Facilitators.

Website – Include events, news etc. in Green Skills Portal content.

Overheads – Office costs (use existing), marketing, expenses.

INDICATIVE COST:

£10,000-15,000 Business planning and consultation

£100,000 Annual cost

INVESTMENT REQUIRED:

ESF/ERDF – for Partnership Hub team/ Facilitators and to implement business plan

Annual income from events (delegate fees/ exhibitors)

ESTABLISHMENT TIMESCALE: 2014-2017

ESF/ERDF OUTPUTS:

100 - 200 participants

50 enterprises supported

Unemployed/ inactive/ 15-24yr participants provided with work placements

No. of jobs created

No. of enterprises cooperating with research institutions

WIDER ECONOMIC BENEFITS:

- New opportunities through collaboration
- Research spin offs/ new enterprises created
- New Green Apprenticeship developed
- New courses tailored to the needs of local businesses

6. ENHANCING STEM

A significant activity of the Green Skills & Innovation Partnership should be to connect green business with local schools to increase young people's awareness of and raise aspirations to seek careers in the sector.

There is strong evidence of high quality sustainability learning already taking place within Cornwall, showcased at the **Cornwall Sustainability Awards for Schools 2013**, and the schools that are engaged in support programmes such as that offered by the **Ashden Awards**, and by **Eco-Schools**.

However, when considering the transition of students from secondary to tertiary level education it is clear that a disjunction occurs. There is also a need to proactively counter problems with Science, Technology, Engineering and Maths skills, where they are perceived to be subjects that are unpopular or not important for future careers option, particularly with girls; (one of the contributing authors of this study holds an engineering degree, and was particularly passionate to make the case for girls at age 18 to choose her discipline at undergraduate level).

While this proposal is not a criticism of current STEM engagement activities in Cornwall's classrooms, it is clear reading across the various Skills Plans that have been written as part of the emerging ESB Skills Strategy process, that **strengthening STEM is a recurrent theme where more action is required and this has a close link with the skills agenda being considered.**

Within the classroom there is clearly a need to strengthen partnerships with teachers and educators. It is recognised that many teachers, even those who teach STEM subjects, are unlikely to have worked within the Green sector and so an appreciation of the opportunities need to come from external sources. However, we propose that STEM activities also need to be taken **outside the classroom** and to make greater use of extra-curricular clubs and societies both within and outside the school setting.

We propose the establishment of a Vocational Award in STEM skills.

As a comparator for this proposal we consider that the closest equivalents to what we conceive to be the Duke of Edinburgh Award, CREST and Scouting/Cadet Corps training.

The STEM Award programme would be **aimed at 14-24 year olds** and would be structured in a similar way to the Duke of Edinburgh award, with a **number of levels indicating growing knowledge and attainment of skills and practical experience.**

The award programme would provide a structured, modular approach, focused on developing STEM skills with **opportunities for volunteering, development of practical skills, and hands-on experience of technologies.**

If this proposal were to be pursued and attract appropriate support and participation from students, parents, teachers and local businesses, we see no reason why this concept should remain a Cornish idea, and could easily be scaled to be of national significance.

- **CREST**

(www.britishtscienceassociation.org/crest-awards)



A British Science Association programme

Supported by the British Science Association, CREST Awards scheme is the largest national award scheme for project work in the STEM subjects in the UK. There are three different levels of project work (Bronze, Silver and Gold) that 11-19 year old students can complete. CREST Star is a separate scheme for Primary aged students and has a different format.

While a very positive contribution to this discussion, successful delivery is dependent on teachers willing to contribute significant commitment of their own time and resource (in an already pressured setting). Any option that is developed must be achieved in collaboration with existing teaching staff, but should not be seen as an additional burden on their responsibilities.

- **Scouting/Cadet Corps training**

We make the comparison with the Cadet Corps, not to suggest the creation of new uniformed youth organisation, rather to identify what the military cadet services do very well – working alongside, but distinct from the education sector, to inspire young people to consider career options and through providing them with a structured programme of activities over several years, give them the skills they will need to pursue those careers.

Many of these organisations depend on the voluntary commitment of ex-service personnel who have a passion to encourage the next generation to consider the routes to service they followed themselves; by engaging with experienced professionals young people are inspired, and those who show early promise are often set on a ‘fast-track’ route as a result of this engagement.

We believe that many senior figures within the green sector share the same level of passion and would be interested in contributing to a programme that encouraged a similar outcome, in terms of young people considering green careers.

ENHANCED STEM - INVESTMENT

RESOURCES NEEDED:

Personnel: 1 FTE Coordinator/ Careers Support Officer and Volunteer business mentors

Marketing

Overheads – Office costs (use existing), expenses.

INDICATIVE COST:

£50,000 Annual cost

INVESTMENT REQUIRED:

ESF for set up, Coordinator and marketing

Income from advertising, sponsorship and fee for vocational award and activities

In-kind value of business mentor time

ESTABLISHMENT TIMESCALE: 2014-2017

ESF/ERDF OUTPUTS:

No. of participants aged 15-24

WIDER ECONOMIC BENEFITS:

- More young people choosing green careers and courses
- Business skills needs met

7. CORNWALL'S NETWORK OF GREEN CENTRES OF EXCELLENCE

Given Cornwall's track record and aspiration, this section of our proposal looks to improve collaboration across the county to extract more from what already exists. We propose to "sweat the assets", through focussed branding based around the hubs or clusters of facilities that already have links into the green business sector. The purpose in strengthening the partnership approach is to capitalise on **using these existing resources and to create a sense of excitement and momentum that is shared across the green sector.**

We can point to various award-winning initiatives celebrated at the annual Cornwall Sustainability Awards in many different business sectors from Tourism, Education and Social Housing, to Food & Drink production and Social Enterprise, all of which can act as ambassadors for the promotion of Cornwall and its environmental credentials.

We propose developing this further through the establishment of an identifiable brand (similar to the Invest in Cornwall initiative), using the Green Skills & Innovation Partnership in conjunction with Visit Cornwall and the Chamber of Commerce to recognise the network of **Green Centres of Excellence.**

When considering what and where resources are located it becomes quickly evident that **we already have a number of clusters of resources, which offer a combination of visitor attractions, educational facilities and growing Green businesses.** Those described in Table 39 are perhaps the more obvious hubs which were identified in an initial scoping exercise, and more research would identify other centres with potential to be part of the network. On this note, we are conscious that what has been captured in Table 2, is predominantly located in central and west Cornwall, and east Cornwall is less well-represented, perhaps a reflection of decisions on investment in infrastructure in previous funding rounds.

By creating and coordinating activity around a **Green Centre of Excellence** our initial suggestion is that the purpose is to provide:

- **Localised, readily identifiable resources for schools, FE & HE** with clear access points to understand the growing opportunities in the Green business sector in a locality. For example, in St Austell the proposal at the Green Build Hub to showcase and test the latest innovations in sustainable building technologies, linked to the technical research conducted by the National Solar Centre and Eden's broad ranging offer, are part of a larger story of green business activity in the area.
- Raise wider **public awareness** – although most skills development work is targeted at those individuals most likely to benefit from specific training offers, a wider

conversation about Cornwall's green credentials is essential and potentially makes the promotion of skills training easier through communicating with parents, grandparents, wider family and community networks. The Green Centres of Excellence concept therefore provides a space in which stage events to showcase the opportunities can be located.

- **Low Carbon Playground for Visitors** - we have included in Table 2 several major tourist venues as an indication that, in the context of improving Cornwall's green skills, the tourism sector should also be engaged in this task. Given the contribution of tourism to Cornwall's overall GVA we suggest that our visitors should also be invited to take part in the Green Skills conversation – through linking enjoyment of the beauty and delights of the environment with learning how to live sustainably. We think there is opportunity to use holiday venues as spaces for people to encounter and explore low carbon and renewable technologies. For example, using the growing electric vehicle charging infrastructure to encourage tourists to get hands-on experience of electric vehicles, or to stay in holiday cottages with PV. Obviously, it would have to be fun and entertaining as much as educational, and the idea has parallel with Lord Reith's founding principles for the BBC - to educate, inform and entertain.

Given the location of the main clusters and additional centres we consider that there is potential to develop an educational and visitor engagement trail across Cornwall.

Table 5 - Cornwall's Network of Green Centres of Excellence

Cornwall's Network of Green Centres of Excellence			
<p>Penryn</p> <ul style="list-style-type: none"> • Environment & Sustainability Institute • Academy for Innovation & Research • Tremough Innovation Centre • BF Adventure, Halvasso 			<p>St Austell</p> <ul style="list-style-type: none"> • Eden (inc. Geothermal development) • National Solar Centre • West Carclaze Technology Park • Green Build Hub
<p>Falmouth</p> <ul style="list-style-type: none"> • Marine School • Cornwall Marine Network • FAB Test • National Maritime Museum 	<p>Hayle</p> <ul style="list-style-type: none"> • Wave Hub • Marine Renewables Business Park 	<p>Wheal Jane</p> <ul style="list-style-type: none"> • Wheal Jane Group • Wardell Armstrong • EGS Energy 	<p>Camborne</p> <ul style="list-style-type: none"> • Heartlands • Camborne School of Mines • United Downs geothermal
<p>Additional Centres of Excellence could include:</p> <ul style="list-style-type: none"> • Establish a strong link with the Newquay Aerohub, and the synergies between Green STEM and Aerospace STEM. Also link with Hendra Holiday Park • The proposals in the Space Skills Action Plan for Goonhilly again suggest synergies between Green STEM and Space STEM • The proposed Wadebridge Innovation Centre • A link with sustainable farming based at Woodland Valley Farm, and Transition Ladock & Grampound Road • A link to sustainable food manufacturing with the Better Bodmin group, possibly using Lanhydrock as the visitor attraction 			



Wheal Jane

While readers of this study may be familiar with several of the clusters of activity referred to in Table 2, a more detailed explanation of the development of a proposal at the Wheal Jane site is likely to be helpful. (Bernard Ballard, the Managing Director of the Wheal Jane Group, provided the study's researchers significant time to explain his ambitions for the site). The description below also gives an indication of how other sites in the east of Cornwall may be identified and developed.

Background

Wheal Jane Mine was constructed in 1969 and started production in 1972 and at the height of production employed 450 people. In 1985 the mining industry was hit by a global crash in the price of tin and after a period of difficulty in 1988 there was a management buy-out. Carnon Consolidated improved the efficiency of the mine but the tin price never recovered, so in 1991-1992 the mine was closed. In 1998 the South Crofty Mine closed and a group of former employees formed the Wheal Jane Group (WJG). The Wheal Jane mine site was taken on as a liability as part of the agreement when they bought the companies from South Crofty's owners. WJG started with 25 employees and now has 53.

The Wheal Jane Group

The constituent parts of the group are

- Wheal Jane Ltd. – looks after the site, compliance, etc.
- Carnon Contracting – primary focus is civil engineering; set up to use their mining skills outside of the mining operations
- Wheal Jane Consultancy – mine searches and mundic testing. It owns a historic archive of 10,000 mine plans.
- Wheal Jane Laboratory – water and soil analysis, 90% of which is for overseas clients (mines)

The Big Idea for Wheal Jane

In 2001 WJG submitted a draft masterplan to Cornwall County Council to create a specialist earth science, mining and minerals park on the site. Planning approval was granted in 2011.

The Phase 2 **Earth Sciences Park** proposal will provide premises for a cluster of companies working in the earth sciences sector. It would fill the gap between start-ups hosted in the innovation/ incubator centres at Tremough and Pool, and their next steps into the commercial world through provision of 'grow-on units'.

The Renewable Energy Centre is envisioned as a potential learning and R&D into a range of technologies. The site currently has the first commercial scale solar farm to gain planning consent in the UK (1.4MW). While a planning application for a 1.5MW wind turbine was refused, planning has been granted for a mini hydroelectric plant (0.25MW). The process of decontaminating the water on site generates heat in the water and there is potential to extract that heat for the site. The mine shaft could also be utilised to provide geothermal heat (5MW potential) and WJG is in development talks with EGS. They are also exploring options for a gas/biomass plant which would produce 2.5MW electric plus heat. If these projects happen, the site will be producing more heat than it needs, so one idea they are exploring is the construction of greenhouses to utilise the surplus heat.

Up to 30 groups of students already visit the site every year from UoE, Falmouth and CSM. The site has good broadband connections and is of interest as a potential 'data storage bunker'. This also makes it interesting for a smart grid plug-in and play facility. CSM have proposed a 'fibre park' as part of the sites development plan. Overall WJG estimate that the site could potentially employ 350 people. Public sector support is needed and WJG are seeking capital grants towards the costs of constructing the new buildings.

Clustering

At the start of 2014, 140 people are employed at Wheal Jane, around 40% of which are graduates. Other companies/ tenants located at Wheal Jane are:

- SGS Minerals – started with 2 employees and now has 18. They plan to double in size.
- Wardell Armstrong – started with 18 employees and now has 45. They plan to expand.
- Veoila – has 3 employees providing water treatment services.

GREEN CENTRES OF EXCELLENCE - INVESTMENT

RESOURCES NEEDED:

Personnel: Green Skills & Innovation Partnership Facilitators

Marketing – Events, trail brochure, events, exhibition/ visitor centre (also promote via Green Skills Portal website)

Overheads – Office costs (use existing), expenses.

INDICATIVE COST:

£50,000 Marketing budget per site

INVESTMENT REQUIRED:

ERDF/ Invest in Cornwall – for marketing

Income from events (delegate fees/ exhibitors) and advertising

ESTABLISHMENT TIMESCALE: 2014-2020

ESF/ERDF OUTPUTS:

20 enterprises supported by coordinated marketing of their sites

WIDER ECONOMIC BENEFITS:

- Increased public interest in green careers, products and services
- Increased visitor numbers for green attractions

8. EVENTS

The brief indicated some thought should be given to events and opportunities to showcase the sector linked to any proposals that were put forward as part of the Action Plan for LCEGS skills.

Two existing event spaces can be readily used as they are already promoting the sector:

- **The Green Cornwall Show @ Royal Cornwall Show 2014**

In 2014 two established showcase opportunities are being merged. For several years the renewable energy sector has had a strong presence at the Royal Cornwall Show, under the badge of the Green Energy Village. 2013 also saw for the first time the **Green Cornwall Show**, itself the merging of Cornwall Council's **Renewable Energy Show** and Cornwall Sustainable Buildings Trust's **Green Build Show**. These separate events are being combined in 2014 as the **Green Cornwall Show @ Royal Cornwall Show**. Managed by Community Energy Plus, the event space in 2014 will be developed to showcase not only companies specialising in renewable energy, but companies and organisations from across the Green sector. Additionally, in 2014 space is being given to showcase and celebrate the UK's first rural Social Enterprise Zone. Given the commitment to sustainability that many Cornish social enterprises express, this is a positive collaboration.

- **The Cornwall Sustainability Awards and Cornwall Sustainability Awards for Schools**

The annual awards ceremony is now a well-established event, rightly celebrating the very best of sustainable business practice in the county. As the organisers point out, many of the winners of these awards go on to secure recognition for their innovation and environmental best practice nationally in their own sectors and within the wider environmental world.

However, we propose that **a new category** is included in future rounds of the award to celebrate the best in green engineering, giving an opportunity to our local businesses to showcase their technical excellence, in the same way that the sustainable construction sector is recognised.

Other regular events that should be considered as opportunities to raise the profile of green skills and the opportunities for businesses are

- **The Cornwall Home Show** – bi-annual shows in Spring and Autumn
- **The Cornwall Business Show** - annual event

A point for consideration is that, with the exception of the Sustainability Awards, the above all carry a cost for individual businesses to attend and showcase their wares. The attraction of the Green Energy Village for several smaller companies has been the facilitation and access to space at the Royal Cornwall Show at a lower cost, thereby reducing the financial risks involved in attending. A role for the Green Skills & Innovation Partnership could be to sponsor space at major events, including at **Regen SW's** annual **Marketplace** and **Green Futures** events, and major national events such as **EcoBuild** and **Sustainability Live** in order to allow member organisations to exhibit under the GSIP 'umbrella'.

NEW EVENT PROPOSALS

Falmouth Energy Week was a national annual 2 day conference and forum for the dissemination of cutting-edge ideas, and leading the transformation in decision-making and energy policy design hosted by the University of Exeter. The event attracted national participants, academics, representatives of influential public sector organisations and the business community. This was a valuable showcase and with appropriate sponsorship and organisation could form the inspiration for an equivalent opportunity. Businesses were keen to be involved if they could 'dip in' for half a day or a few hours, but were unwilling to commit two days; the constraint this places on the structure of a conference programme means that short thematic workshops for businesses should be focussed on one day. However, from experience of similar events we suggest a single day conference is unlikely to be sufficiently attractive for people attending from outside Cornwall, given travel costs. Therefore a programme over two days, like the Green Cornwall Show in 2013 or Falmouth Energy Week, has more potential. It should be noted that CSBT are proposing to hold a Green Build conference for the Building & Construction sub-sector in summer 2014, and there may be partnership opportunities to build on this event in future years.

Also to note is feedback from the Green Cornwall Show in 2013 that indicated that there was confusion about the target audience for such event. The previous Renewable Energy Show was specifically a trade show, as is Regen SW's Marketplace. If a primary focus of such an event is put on skills thought should be given to the timing of such an event in relation to college, university and school terms.

Big Marine Show – given the importance and growth of the marine sector within Cornwall's economy we are unsure why an equivalent to the annual London Boat Show has not been developed to rival the scale of the London event, especially noting the level of repeated success enjoyed by Cornish companies at the event. This would appear to be an opportunity that needs exploring further.

Reflecting the importance of engineering across the Skills Action Plans we would propose that a new **design competition** is considered, perhaps in association with AIR Falmouth, to

promote and showcase good design and best practice. We acknowledge that this is an idea in its very earliest outline.

EVENTS - INVESTMENT

RESOURCES NEEDED:

Personnel, Marketing, Venues, Awards, Overheads

INDICATIVE COST:

£20,000/yr	Green Cornwall Show @ the Royal Cornwall Show
£1000/ award	Cornwall Sustainability Awards
£10-20,000/ event	Falmouth Energy Week/ 2-day conference

INVESTMENT REQUIRED:

ESF/ERDF for event development costs and to offer subsidy for exhibition space and workshop fees for GSIP members

Income from delegate/ exhibitor fees, advertising, sponsorship

ESTABLISHMENT TIMESCALE: 2014-2017

ESF/ERDF OUTPUTS:

No. of participants (unemployed, employed, inactive, aged 15-24)

No. of enterprises supported

WIDER ECONOMIC BENEFITS:

- More people choosing green careers and courses
- Market development/ raised public awareness of business offers

9. TIMEFRAME

Principle actions that should be considered to operationalise this plan in the next two years:

ACTION 1 GREEN SKILLS PORTAL

1. Identify stakeholders who will actively shape development
 - a. Key lead partner should be from the LCEGS business sector
 - b. Establish direct link to LEP/ESB Board to ensure alignment with LEP Skills Strategy
 - c. Clarify possible linkages with Growth Hub proposal in EU SIF
2. Establish steering group
3. Consult businesses and stakeholders on concept and delivery options
 - a. Prioritise main offer options
4. Detailed development, including business plan
 - a. Consider collaboration opportunities with existing provision
 - b. Where is overlap with other provision
 - c. How does Green Skills establish distinct identity?
 - d. Identify areas of unnecessary duplication, areas of mutual reinforcement
5. Research and establish appetite for subscription membership
 - a. Level of benefit sufficient to justify subscription
6. Recruit Project Manager & Business advisors
7. Commission web platform
8. Launch web-portal and IDB service
9. Recruit founder members

ACTION 2 GREEN SKILLS & INNOVATION PARTNERSHIP

Using GSP as the development base:

1. Establish potential participants, sub-groups, work-streams
2. Set parameters of Partnership's focus
 - a. Is this just a skills partnership? Will this be sufficient to attract business participation and input?
3. Set Terms of Reference
4. Using this study as the baseline, consult on prioritisation of work programme
5. Potential initial work- streams: Actions 3- 7 below

ACTION 3 WORK PLACEMENT COORDINATION

1. Links established with UoE, UoP and KTP student placement facilitation
2. Identify key courses in FE & HE (both in Cornwall institutions and in UK) with opportunities for placements
3. Identify first phase of businesses wanting to use placements
4. Liaise with UK Research Councils to coordinate Masters and PhD study opportunities

ACTION 4 GREEN APPRENTICESHIP DEVELOPMENT

1. Establish work-stream in GSIP to develop range of green apprenticeships
2. Identify initial participants
3. Establish links with relevant national Sector Skills Councils
4. Gap analysis on existing apprenticeships
5. Development of first green skills apprenticeship framework
6. Initiate course development to support apprenticeship framework

ACTION 5 STEM AWARD SCHEME

1. Work with STEM in South West to structure award programme
2. Establish collaboration with key STEM promoters in Cornish schools
3. Seek sponsorship support
4. Recruit ambassadors and business mentors
5. Initial pilot of award programme

ACTION 6 GREEN CENTRES OF EXCELLENCE NETWORK

1. Conduct of audit of potential assets that could be part of network
 - a. Assets that can host permanent space for visitor focussed attractions
 - b. Non-college/school assets being used for educational activity
 - c. Local businesses with a Green narrative (potential link with Sustainability Awards and dataset they have collected of participating businesses)
2. Consultation and business planning
 - a. Conduct analysis of costs and benefits
 - b. Establish need & identify resource for a central coordination of network
3. Invite local partnerships to form with local lead partner to feed into central coordination
4. Establish the initial Showcase centres
5. Year 2 Branding and promotion

ACTION 7 EVENTS

1. Presence at Green Cornwall Show @ RCS 2014 or 2015
 - a. Develop a Green Skills presentation -
2. Cornwall Sustainability Awards –
 - a. Propose Green Engineering Category for 2014
 - b. Would design competition concept emerge from this?
3. Develop Green Skills Conference
 - a. Consult with Falmouth Energy Week organisers re. previous events
 - b. Consult with CSBT/Green Build and Cornwall Learning Partnership on options for collaboration
 - c. Engage conference organiser to coordinate planning
 - d. Secure sponsorship for event, programme
 - e. Establish theme(s), key audiences
 - i. Is this for educators, businesses, policy makers
 - ii. Is this for Cornwall only, or wider?
4. Sponsorship at regional, national events
 - a. Identify the key sector events and target audiences

10. IN CONCLUSION

This study of the Low Carbon Environmental Goods and Services sector has revealed that green business in Cornwall are very positive about their future. Perhaps running counter to the national view, locally, businesses that identify themselves as located within the wide-ranging environmental agenda are surprisingly confident about their growth prospects and have ambitious plans, with the potential of creating many more well paid, high quality jobs.

The sector is aware of the challenges we face, economically as part of the only Less Developed region in England, politically as a result of indecision and poorly focussed policy development, and in the face of the increasing impacts of a rapidly changing climate. However, we recognise that we are situated amongst some the best natural resources in the UK to develop effective solutions to these challenges, and Cornwall has the potential to be home to world-leading businesses that can tackle the global threat of climate change.

The study has shown that while some parts of the sectors are well-developed, others, particularly those seeking to create and develop renewable energy technologies and to help us move to a low or zero carbon future, are still at an early stage of development. These businesses need support and structural assistance to capitalise on that potential and to access the high level skills that will drive that growth.

The proposals we have made we believe reflect the aspiration and appetite for growth within the sector, addressing the gaps in provision to achieve a skilled workforce. If realised, the ambition we have identified would dramatically increase the potential for Cornwall to become the natural place to do green business.