

Canolfan Arloesi Gwlân Wool Innovation Centre

Tir Glas is a new sustainability initiative for UWTSD in Lampeter focused on a community of thinking and experiential learning. Tir Glas currently has three main strands of education and research:

Food-Timber-Enterprise

Lampeter is based in a rural community with sheep farming being the dominant agricultural industry, there is a potential for wool to become another main strand for Tir Glas.

Hidden in Plain Sight: The Worth of Wool

Wool is an intrinsic part of the Welsh landscape. Right now it is seen as a waste product but things are beginning to change with innovations and research opportunities.

This resource is right in front of us, in huge amounts!

Here are things that Tir Glas could achieve:

- Wool based compost as a product for Tir Glas to sell to generate funding
- Wool as a carbon sequester as a novel area of research
- Traditional and short course education as a way to empower local producers
- Resilient sheep farming methods that become part of the climate solution instead of the climate crisis!



Replication: Educational Opportunities in an Educational Institute

Tir Glas already has plans for creating a degree scheme, however we can do so much more with the colleges under UWTSD. With working farms under Tir Glas, we can engage in theory and practice by teaching about the history of wool (and its myriad uses) as well as teaching shearing and wool handling in both higher and further education.

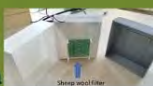
- Short courses on wool handling and shearing open to the public and supported by British Wool
- Integrating wool handling into college courses
- Wool and sheep based seminars in both new and existing modules at UWTSD.



Slow Thinking: How can we use wool in non textile areas?

When most people think of wool they think of textiles like jumpers and carpets. But is that really the only use for wool? Wool has many properties that make it a sustainable material for many products that already exist. Researching unusual uses for wool will open up new research areas such as:

- Wool in hydroponics
- Wool as a carbon sequester
- Wool as a solution to water contamination



The Fast Second: Improving whats out there.

There are already several companies with innovative wool products. Many of these products are unique, enabling Tir Glas to use the fast second to develop an improved product. By further developing products that utilise "waste" wool, Tir Glas can increase the the value of wool for local producers

- Wool Biocomposites
- Wool based compost
- Lanolin based preservatives



The approaches I use to develop aspects of Tir Glas focus on using a resource that producers and consumers ignore. Wool was an important part of the Welsh economy for many decades but has now become a waste product. There is not a resource in Wales that is more “hidden in plain sight” than wool! Wool has become prey to an everyday illusion (Chabris, 2009). It is believed to be worthless as a raw resource and has, therefore, become worthless! Once we have identified wool as a valuable resource, we need to work out how to increase its value. In order to develop wool products that can be economically viable, we need to employ slow thinking (Kahneman, 2013). When thinking of wool products, we instinctively think of textiles. There is little point in looking at Welsh wool from a textile perspective for many reasons, primarily because merino wool is the softest and is produced in large amounts overseas (eg Australia and New Zealand). What other properties of wool can be harnessed into a viable product or research opportunity?

Wool is receiving a lot of attention at the moment as a sustainable solution to many environmental issues. Some producers have already identified the properties of wool that can be exploited in novel areas, so Tir Glas can employ the fast second (Markides & Geroski, 2005). Pure wool insulation, wool biocomposites and wool-based compost are all products with a high retail value but low market coverage. Wool-based compost in particular is an area where new research is opening up new areas for product design and marketing, including research into the variable levels of carbon and nitrogen in wool (RBST, 2023). Exploring these research avenues will create partnerships with institutes such as Bangor Biocomposite Centre and Farming Connect.

For wool to become an integral part of Tir Glas, it will need to replicate the key areas of UWTSD, namely education as well as research. Tir Glas can take advantage of the network of colleges and universities under UWTSD to increase wool knowledge at as many levels as possible. The idea of replication is generally used as a way of being influenced by something already in the world (a piece of art, a product etc.) and developing those ideas into something new (Kleon, 2012). However, in the context of The Wool Innovation Centre for Tir Glas, we are using replication internally, that is to replicate the systems, processes and aims of UWTSD to ensure a seamless integration.

Reference List

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SOLIDWOOL



SolidWool is a new company developing furniture from wool resins. Shearing sheep is a necessary part of caring for them as they can get diseases if left in full fleece. Wool has dramatically lost value in the last 3 years (though it has been going down for decades) and finding innovative ways to use this resource has become an important issue.

SolidWool is using wool from mountain sheep, which is typically seen as "low quality". If they can add value to the lower end of the resource, it will help boost the commercial viability for wool and encourage farmers to keep traditional breeds instead of switching to easy care, wiltshire horn or merino.

Patagonia



Promoting "Slow" Fashion

In a plea to get consumers thinking more about sustainability, Patagonia marketed their latest apparel with a caption that states "Don't Buy This Jacket". Considering the company is based in America (where cultural identity is closely linked to consumerism), the advert received a significant amount of attention.

Patagonia often advocates against fast-fashion culture. In 2015, they partnered up with eBay to create a marketplace for their customers to buy and sell unwanted Patagonia apparel. The partnership was nicknamed the "Common Threads Initiative", and provided its customers with advice on how to repair their clothes as to reduce waste.

In the nine months following the ad, sales increased by approximately 30%. Some people attribute this to positive brand awareness, whilst others say it's basic reverse psychology.

S- Substitute. Patagonia has substituted standard purchasing habits by partnering with eBay to create a second-hand marketplace for their products. This is a creative way of gaining more customers through marketing to a lower budget.

C- Combine. By combining original products and a repair service, Patagonia has added value to the company. By having a repair service as part of their business, they have created more jobs and established brand loyalty that will last throughout the lifespan of the garment.

A- Adapt. Patagonia has adapted to their consumer base by selling books about activism and environmentalism alongside their outdoor products.

M- Modify, Magnify, Minify. Currently, Patagonia creates outdoor products for men women and children. Could we minify their products to be suitable for pets?

P- Put to other uses. Patagonia uses their products and marketing to support environmental-based activism. This is not a direct "put to another use" of their products, but

rather another use for their consumer engagement. People come to the website to buy a jacket but then sign a petition or join a campaign.

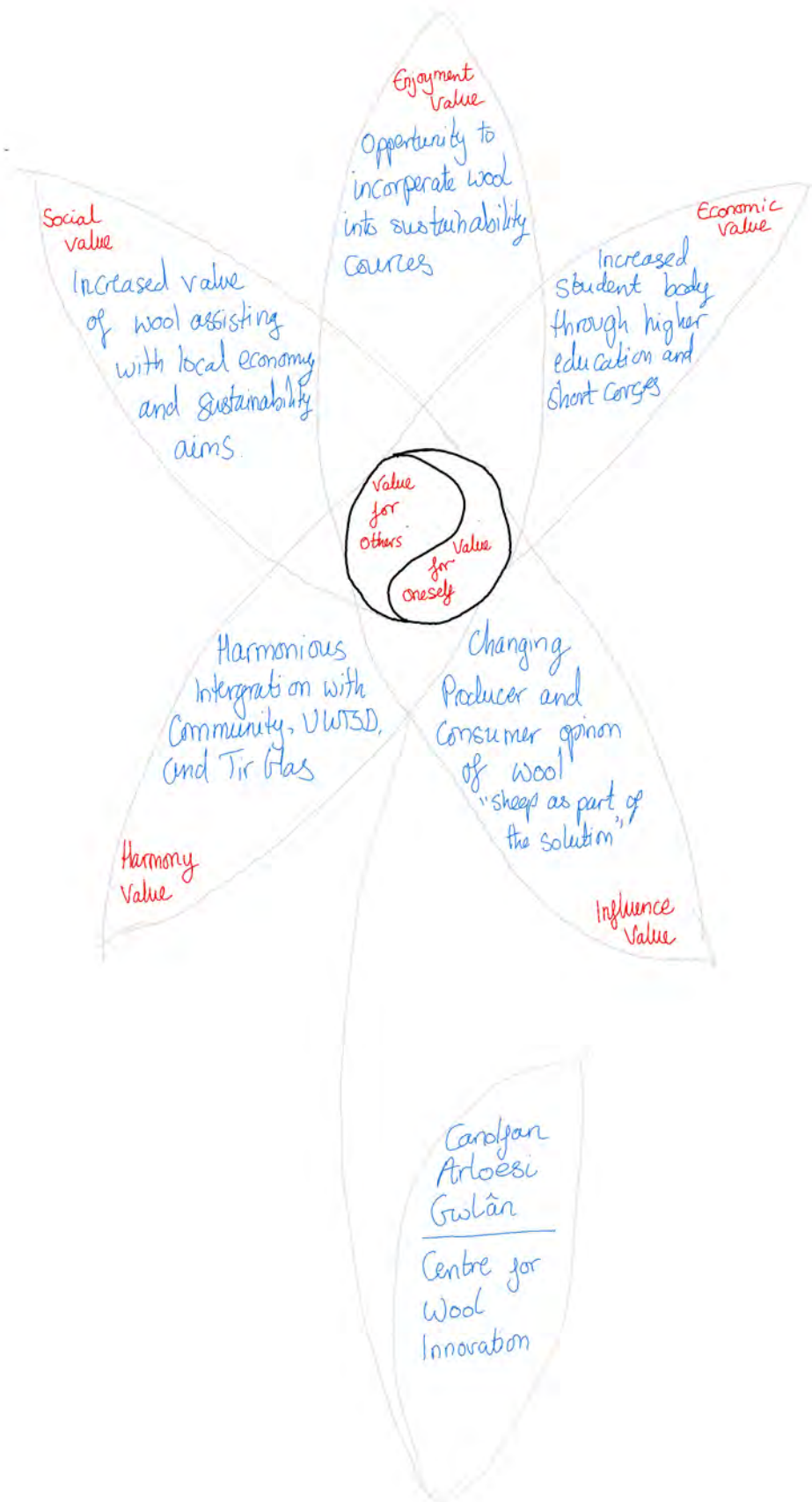
E- Eliminate. Can we eliminate the use of new material altogether? For example, using natural fibres that have been recycled from unwanted clothes to create new products. Many industries that recycle clothing back to its fibrous form are based in the global south. By working with such companies, Patagonia can further promote its green agenda.

R- Rearrange or Reverse. Patagonia has reversed their marketing to tap into current feelings on sustainability and the environment by telling people not to buy their product, which resulted in an increase in sales.

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DOI https://doi.org/10.1007/978-981-10-0983-9_33



Enjoyment- By incorporating wool into the core educational structure, CAG will add enjoyment to agricultural, historical, horticultural, and sustainability courses provided by UWTSD. Wool as an embedded element in these types of courses is uncommon, so participants will obtain a unique set of skills and knowledge to take into their chosen careers. Active academic research will be focused on areas that can directly benefit local farmers and communities and will create enjoyment by creating opportunities for real-world changes.

Economic- The economic value of Canolfan Arloeesi Gwlan/Centre for Wool Innovation to Tir Glas will come from participation in short courses relating to shearing, wool handling and the history of wool, and as an aspect of further and higher education courses available on the college and university campuses. The education provided will in turn empower sheep keepers and farmers to get more value for their wool clip, creating an economically stable and resilient community.

Influence- Canolfan Arloeesi Gwlan/Centre for Wool Innovation is specifically focused on holding influence in the world of wool, including producers, manufacturers and end-use consumers. This will involve active research on innovative uses for wool with a focus on areas that address environmental issues, such as wool use in water treatment (Radetic, et al., 2003), to influence the narrative of “sheep are part of the problem” to “sheep are part of the solution”.

Harmony- Tir Glas is an ongoing project within UWTSD that has been in development for some time. As such, any new aspect must be able to integrate into the established aims and objectives. Canolfan Arloeesi Gwlan/Centre for Wool Innovation must have the same values of sustainability and the humanities at its core to work harmoniously within Tir Glas and UWTSD. Canolfan Arloeesi Gwlan/Centre for Wool Innovation will also require meaningful collaboration with the local community to promote knowledge growth and engagement with academia (c.f. Maas, et al., 2021)

Social- According to Lovell (2014), understanding the wants of the service users is a core value. Sheep farmers are looking to obtain enough money from the clip as what they paid the shearers. Many shearers are sheep farmers themselves, so this economic balance needs to be addressed on the consumer side (the value of wool). Canolfan Arloeesi Gwlan/Centre for Wool Innovation will add social value by providing educational opportunities and researching novel uses for wool.

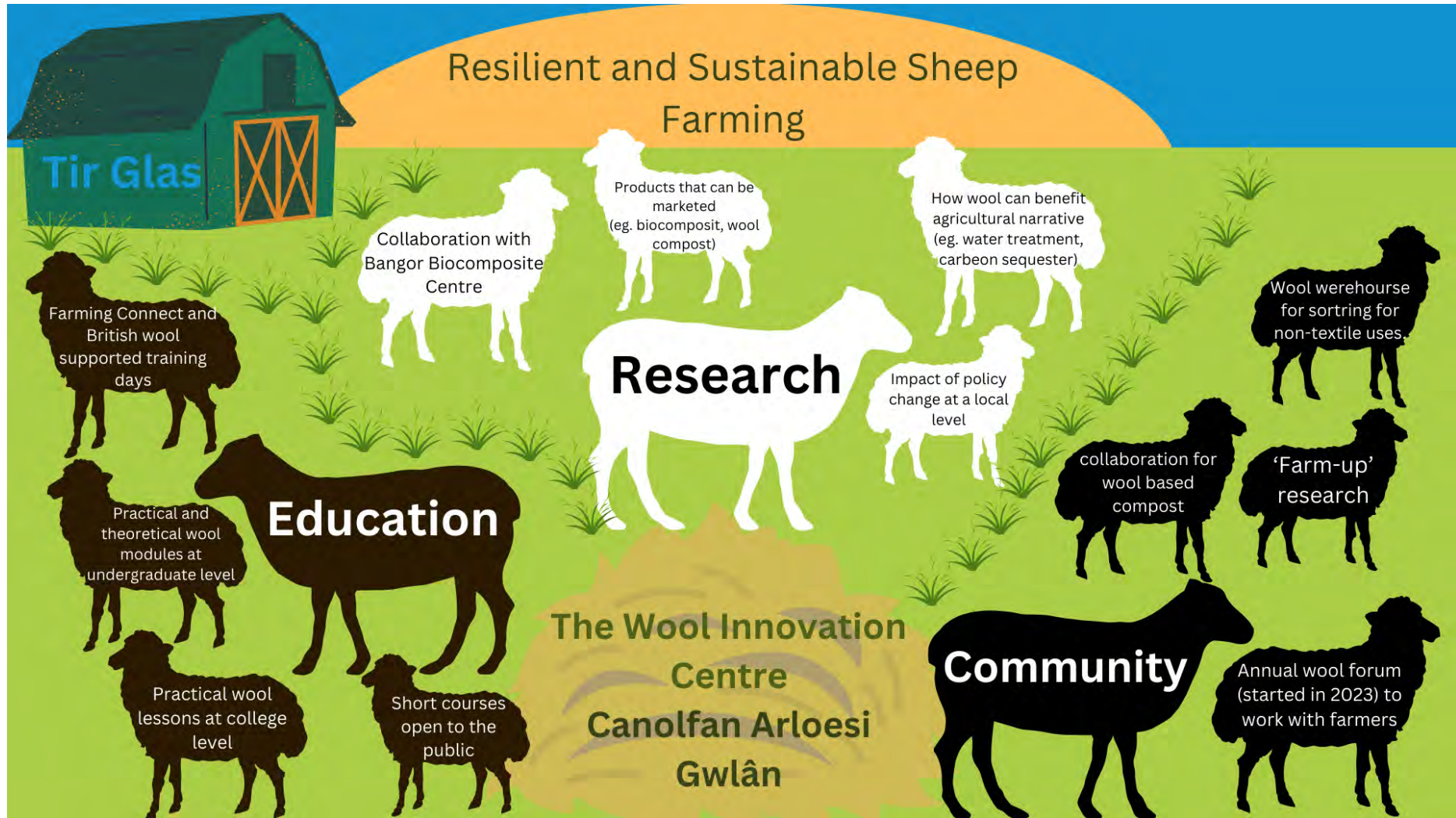
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Radetic, M., Jovic, D., Rajakovic, L., Thomas, H., & Petrovic, Z. L. (2003). Recycled-Wool-Based Nonwoven Material as a Sorbent for Lead Cations. *Journal of Applied Polymer Science*; 90. Wiley Periodicals, Inc. Pp 379-386.

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The vivid vision is designed to show how Canolfan Arloesi Gwlân is not only part of Tir Glas, but also intrinsically linked to the environment and farming traditions in Wales. The mind map is rooted in farm-based imagery as the main beneficiaries of Canolfan Arloesi Gwlân projects will be those in the farming sector and a key aim is to integrate farms and academia.

Tir Glas is the barn, providing the structure for Canolfan Arloesi Gwlân and the other elements of Tir Glas: Tir Glas Food Academy, CWIC Welsh Timber and Building Performance Development Centre, and The Rural Business and Enterprise Centre

The sheep are the aims and objectives of Canolfan Arloesi Gwlân, grouped by core values of Canolfan Arloesi Gwlân. The use of sheep shows the potential for a greater number and variety of projects depending on what partners are involved. The larger sheep are the core values of Canolfan Arloesi Gwlân; education, research, and community, with the lambs showing projects and aims under the different values.

The feed is Canolfan Arloesi Gwlân itself. Canolfan Arloesi Gwlân provides space, expertise and opportunities to invigorate wool-related innovation and research. The people working, researching and learning at Canolfan Arloesi Gwlân are a vital component to growing and nurturing the ethics, values, and outputs of Tir Glas.

The vision for Canolfan Arloesi Gwlân, *sustainable and resilient sheep farming*, is in the sun on the horizon. The vision is a wicked problem, meaning it will be difficult to achieve because of its complex and interconnected nature, which is why the text sits on the horizon. It is unlikely that Canolfan Arloesi Gwlân will be able to completely solve such a complex problem, however, keeping it a part of the vivid vision will maintain the momentum and morale of Canolfan Arloesi Gwlân.

My vivid vision shows that farming and farmers are fundamental to Canolfan Arloesi Gwlân, and that benefiting these communities is a core value. While the overarching objective of *sustainable and resilient sheep farming*, is a wicked problem, my vivid vision shows how envisioning a solution to a wicked problem can drive Canolfan Arloesi Gwlân.

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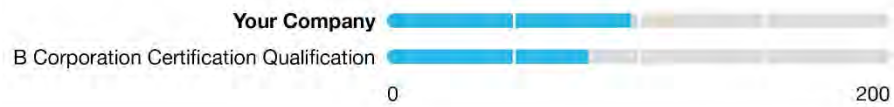


Overall B Impact Score

Centre for Wool
Innovation

For Fiscal Year End Date: 31 Jul 2023

97.0



Governance

QUESTIONS ANSWERED 20/20 OVERALL SCORE 4.1



Workers

QUESTIONS ANSWERED 40/40 OVERALL SCORE 16.4



Community

QUESTIONS ANSWERED 93/98 OVERALL SCORE 48.3



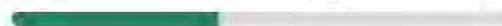
Environment

QUESTIONS ANSWERED 85/92 OVERALL SCORE 26.0



Customers

QUESTIONS ANSWERED 6/6 OVERALL SCORE 2.0



Dear Director,

Following our discussion on getting B Corp certification for the Centre for Wool Innovation, I am pleased to share the score of 97.0 with you. In order to qualify for B Corp certification, a company is required a minimum of 80 points out of a possible 200; as such our score of 97.0 means we are able to get a B Corp certification.

As you can see, we have scored high on both the community and environmental aspects of the assessment. I believe an important factor in this is our aim to produce long-term transformational change for the local community and environment. In order to improve this area further we must create a thorough and accessible environmental policy to ensure our environmental aims are replicated amongst partnership farms.

Despite achieving a score high enough to qualify the Centre for Wool Innovation for B Corp status, there is still plenty of room for improvement. If we are to apply for B Corp certification, we should aim to improve all areas with a particular focus on Governance and Environment.

I am pleased that we qualify for B Corp certification, however I believe we should identify areas in need of improvement and apply after completing another assessment. I suggest we have a meeting to review the B Corp application to ascertain what areas need improving and which stakeholders we will need to liaise with in order to enact the improvements.

Kind Regards,

Debby Mercer