

Supporting Innovation & Low Carbon Growth Programme

National Net Zero Skills Centre Of Excellence Outline Business Case

October 2023

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LIST OF ACRONYMS

Acronyms	Description
AMPF	Advanced Manufacturing Production Facility
NNZS	National Net Zero Skills Centre of Excellence
EAMPF	Enhanced Advanced Manufacturing Production Facility (<i>AMPF incorporating the NNZS</i>).
SBCD	Swansea Bay City Deal
SILCG	Supporting Innovation and Low Carbon Growth Programme
BEP	Baglan Energy Park
PTWEZ	Port Talbot Waterfront Enterprise Zone
SBCR	Swansea Bay City Region
SBCD	Swansea Bay City Deal
NPTCBC	Neath & Port Talbot County Borough Council
OBC	Outline Business Case
PBC	Programme Business Case
RLSP	Regional Learning & Skill Partnership
NPTCBC	Neath Port Talbot County Borough Council
RD&I	Research, Development & Innovation

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2		Letters of Support
	1	RLSP – Jane Lewis
	2	SWIC/Industry Wales – Dr Chris Williams
	3	Swansea University – Prof. Dave Worsley OBE
	4	Swansea University – David Warren
	5	Celtic Freeport – David Gwynne
	6	Net Zero Industry Wales – Ben Burggraaf
	7	SILCG Programme Board Chair – Nicola Pearce
	8	GCRE – Simon Jones
	9	Cardiff University – Hywel Thomas
	10	University of South Wales – Jon Maddy
	11	Neath Port Talbot College – Kelly Fountain Vice Principal
	12	NPTCBC - Education Department
13	UWTSD – Richard Morgan	
3		Benefits Register
4		Risk Register
5		PBC (May 2021)
6		EAMPF Procurement and Design & Build Gantt
7		SILCG IAAP

EXECUTIVE SUMMARY

As part of the development of the Supporting Innovation and Low Carbon Growth ('SILCG') programme, a SILCG Programme Business Case ('PBC') was submitted and approved by UK Government on 20th August 2021. Within this approval was the outline plan for an Advanced Manufacturing Production Facility ('AMPF') as one of seven SILCG programme projects. Over a period of time and a result of further engagement with industry, academia and other stakeholders it was decided to develop the AMPF project further, and that the working title for this project would be the Enhanced Advanced Manufacturing Production Facility ('EAMPF').

The AMPF is one of the seven interlinked projects of the SILCG programme and aims to develop an industry led hybrid building providing a range of production units with open access shared specialist equipment, supporting start-up companies and indigenous business growth in the innovation and manufacturing sectors, linked to energy and renewables. It is a collaborative development between government, industry and academia based on the 'proving factories' concept (late TRL level to MRL level).

Through continued consultation it was identified that the EAMPF should not only continue to deliver the original AMPF project (*with no changes from the original project as described and approved in the SILCG PBC*) but that it should be 'enhanced' by including a 1,000 sqm **National Net Zero Skills Centre of Excellence** ('NNZS') to the project – aimed specifically at preparing the national, regional and local labour markets for the transition to a low carbon economy, addressing existing skills gaps, and equipping them with relevant skills for the medium and long term.

This OBC seeks approval of the addition of the National Net Zero Skills Centre of Excellence to the original Advanced Manufacturing Production Facility project. (*Forming the Enhanced Advanced Manufacturing Facility or EAMPF*).

As mentioned above the original AMPF project is unchanged from the initial SILCG PBC. **Whilst this OBC sets out the business case for the NNZS, it also describes the EAMPF project in its entirety (both AMPF and NNZS combined) as they are intrinsically linked, will be co-located, and are both set within the same economic, social and technological context.**

The logic model shown on the following page sets out the objectives, inputs, outputs, outcomes and impacts for the NNZS.

National Net Zero Skills Centre of Excellence logic model



STRATEGIC CASE

The SILCG programme has been developed to deliver sustainable growth and job creation in the Swansea Bay City Region, with a targeted focus on the Port Talbot Waterfront Enterprise Zone area. The programme aims to create the right environment for innovation and new technologies to support the creation of a decarbonised and innovative economy.

The programme's **vision** is: ***to deliver low carbon, sustainable and inclusive economic growth for the region.***

The SILCG programme has evolved since the original 2017 Swansea Bay City Deal, and has been developed in response to a number of key drivers: the two reviews of the Swansea Bay City Deal in 2019, Welsh Government climate change emergency, the macro economic situation, and current local, regional and national strategies.

The SILCG programme is a place-based approach, focused on the Port Talbot Waterfront Enterprise Zone ('PTWEZ') area of Port Talbot (this includes Harbourside, Baglan Energy Park and Baglan Industrial Estate) but will have a regional, national and UK wide impact. The programme is based on both need and opportunity - building on the region's skilled workforce, excellent transport links, a growing RD&I, energy and advanced materials knowledge and expertise base and is within the South Wales Industrial Cluster (SWIC)¹.

The SILCG projects are aligned to supporting the green industrial revolution and have been developed and will be delivered in partnership with government, industry and academia. The SILCG programme will promote low carbon, sustainable and inclusive growth for the region through a number of interlinked projects developed in partnership between Neath Port Talbot CBC, Swansea University and University of South Wales. The programme provides a range of specialist facilities to support collaboration and commercialisation of RD&I activities from scaling up to late TRL levels, SME development, and inward investment – supporting knowledge retention in the region. The programme will be a catalyst for further public and private investment, including supporting a transition to a green/low carbon economy.

¹ <https://www.swic.cymru/>

Key Strategic Policy Alignment

UK STRATEGY	WALES STRATEGY	REGIONAL & LOCAL STRATEGY
UK Net Zero Strategy: Build Back Greener 2021	Net Zero Wales 2021	South West Wales Economic Delivery Plan
UK Clean Growth Strategy	Net Zero Skills Action Plan	NPTCBC Decarbonisation & Renewable Energy Strategy.
Green Industrial Revolution	Wales Innovation Strategy	RLSP Employment & Skills Plan
Build Back Better: Our Plan for Growth	Well Being of Future Generations Act 2015	CJC Corporate Plan

Strategic Drivers Summary

The strategic drivers at UK, national, regional and local levels outlined in the business case are clearly aligned and support the development of proposals focused on low carbon economic growth. In particular:

- **UK and Welsh Governments recognise the importance of decarbonisation to ensure economic growth is sustainable;**
- **There is a clear need to move towards renewable energy sources to increase efficiency and reduce costs, and for the public sector to exemplify this;**
- **Strategic imperatives to foster innovation and entrepreneurialism in high-value RD&I-based opportunities;**
- **The creation of high-quality jobs is a clear link through all policy levels, as is a desire to provide training and development solutions to upskill existing workers in preparation for the transition to a low carbon economy.**

- The overall cohesion of strategic drivers supports the rationale of developing the EAMPF/NNZS project. Moreover, the catalysing effect of this project is anticipated to deliver significant benefits, developing a base of expertise in a critical field that brings together research and industrial applications with the physical infrastructure that will generate inward investment and start-ups, support the sustainability of indigenous businesses, and create a supporting network of training and job opportunities in a talent pipeline.
- The vision is that the EAMPF (AMPF and NNZS) along with the other SILCG projects, will establish Neath Port Talbot and the region as an ecosystem delivering a diversified and sustainable cluster for innovative low carbon growth.

Case for Change

The Investment Objectives for the NNZS are outlined below and support the delivery of the over-arching SILCG programme, align to UK, national and regional priorities, and describe what we wish to achieve in terms of targeted outcomes.

Stakeholder workshops were held between August 2020 and September 2023 to discuss and agree the Investment Objectives and long-list to short-list options for the investment. (See Appendix 1).

The following Investment Objectives were agreed with corresponding baseline suggested measures:

	Investment Objective	Measures	Total Measures
		NNZS	EAMPF
1	To support the delivery of the SILCG programme, by constructing an Enhanced Advanced Manufacturing Production Facility and associated National Net Zero Skills Centre of Excellence by 2027.	<ul style="list-style-type: none"> • 1,000 sqm training facilities developed by 2027. • 15 Jobs Created by 2033. • 29 Jobs accommodated by 2033. 	<ul style="list-style-type: none"> • 5,000 sqm of hybrid production & training facility developed by 2027. • 113 Jobs created by 2033. • 140 Jobs accommodated by 2033.

2.	<p>To deliver industry led, net zero skills training and development.</p> <p>Upskilling the local/regional/national labour markets with appropriate skills to enable transition to a net zero economy, whilst supporting the development local and regional low carbon projects by 2033.</p>	<ul style="list-style-type: none"> • 50 Training courses per annum delivered by 2033. • 3,500 individuals trained by 2033. 	<ul style="list-style-type: none"> • 50 training courses per annum delivered by 2033 • 3,500 individuals trained by 2033.
3	<p>To establish as a central hub for national RD & I activity. Using the state of the art facilities to increase the number and quality of low carbon businesses in the region, promoting further investment and innovation, by 2033.</p>	<ul style="list-style-type: none"> • Investment attracted £50m + public /£5.5m Private by 2033. 	<ul style="list-style-type: none"> • Investment attracted £50m + public /£9m Private by 2033. • 15 SMEs accommodated

The potential impact of the NNZS to address the strategic policy drivers and deliver the outcomes articulated by the Investment Objectives is wide ranging.

The case for change seeks to establish a robust case for change with a clear understanding of:

- *What we are seeking to achieve – the **Investment Objectives**;*
- *What is currently happening – the **Existing Arrangements***
- *What is required to close the gap between what is happening now (Existing Arrangements) and what we are seeking to achieve (Investment Objectives) the **Business Needs**.*

*In this way the case for change is established on the basis of **need**, rather than simply a contention that a project is a ‘good thing to do’.*

The Existing Arrangements and Business Needs were considered in the context of the EAMPF and five keys areas were determined;

- **Regional Productivity**
- **Manufacturing**
- **Academia & Research, Development & Innovation**
- **Sector Clustering**
- **Green Skills**

Regional Productivity Summary

Existing Arrangements	Business Needs
Regional GVA per employee below UK average	Diversify the economy (industrial and manufacturing base), increase productivity and stimulate recovery by supporting the steel and metals industry and the decarbonisation of industry, alongside encouraging existing innovation clusters to further develop.
Economically active below UK average	Support the supply chain associated with the industrial and manufacturing base.
Skills levels poor in comparison to other regions of Wales and UK.	Develop skills in the region to support existing and developing industry.
Reliance upon foundational industries	Targeted investment required to arrest decline in regional economic performance.

Manufacturing Summary

Existing Arrangements	Business Needs
Concentration of Manufacturing in South West Wales in the Steel and Metal sector.	Maintain and improve the competitiveness of the SBCR steel and metals industry.
TATA a significant employer (c.4,000 employees) likely to be affected by technological change.	Support industry, academia and government collaboration through applied research.
NPT has a large manufacturing and engineering base with 18% of total employees employed in the sectors.	Improving skills of workforce in AME sector. Reducing existing skills gaps.
26% of advanced manufacturing and engineering establishments ('AME') in Wales reported existing skills gaps.	Preparing regional and local labour for the skills required for the manufacturing sector as the economy/sector transitions to low carbon.

Academia, Research, Development & Innovation Summary

Existing Arrangements	Business Needs
Strong academic presence regionally has led to hubs for innovation and skills development.	Support maintenance and growth of market share in the steel and metals industry by ensuring the UK and SBCR remain leaders in steel innovation, advancing RD&I and decarbonisation.

Research and development activities in NPT play a key role in creating conditions for business growth, and ensuring long term resilience.	Encourage public / private sector investment in appropriate facilities.
Key research facilities such as GCRE, TWI, and SWITCH.	Address the practical needs of RD&I that support commercialisation through spinouts, high growth start-ups and indigenous business growth – providing appropriate infrastructure and collaborative space for industry and academia, including flexible office/laboratory, industrial premises, and classroom facilities for learning/training.
Wales lags behind UK in terms of RD & I funding leveraged.	There is a need to facilitate the spin out and product development (from universities) which will be supported by increasing the stock of a range of modern commercial/industrial premises, and in relation to this proposal, the development of the EAMPF.

Sector Clustering Summary

Existing Arrangements	Business Needs
Strong RD & I clusters around BEP, Swansea University, University TSD, include SPECIFIC, ESR, and CSER.	There is a need to develop clean growth ‘mini clusters’ and net zero industry clusters. The South Wales Industrial Cluster (SWIC) has recently been awarded funding from UKRI to develop a net zero industrial cluster in South Wales, which includes Port Talbot ² . The SILCG programme will support the delivery with its interlinked programme of projects, and in particular the EAMPF which will be a central pillar of this support.
Key emerging cluster development opportunity – Floating Offshore Wind.	Build on strong existing innovation clusters fostering further collaboration between government, industry and academia.
Freeport Status in Port Talbot.	Support maintenance and growth of market share in the steel and metals industry by ensuring the UK and SBCR remain leaders in steel innovation, advancing RD&I and decarbonisation

² <https://www.ukri.org/news/ukri-announces-winners-of-industrial-cluster-competition/>

Net Zero Skills Summary

Existing Arrangements	Business Needs
Net Zero Skills action Plan sets out Welsh Government strategy for development.	Ensure industry has a clear path and understanding of their support network, promoting availability of upskill and reskill pathways.
Current provision is sporadic and patchy, focussed mainly on 'traditional' sustainability skills.	Additional funding for specialism and skills developments – particularly in relation to decarbonisation, which needs to be addressed in collaboration with the Skills and Talent Project within the SBCD portfolio.
Little coordination of industry led skills training and absence of flexibility in delivery method.	Develop skills for current and future regional employer's requirements, engaging learners with industry and showcasing the exciting opportunities.
Limited skills directed at local development programmes – Freeports / FLOW.	Sector perception improvement.
SBCD Skills barometer has identified current skills provision across SW Wales.	A central hub delivering industry led green skills development.
Significant skill gaps across the AME sector as well as low carbon / green industries.	A flexible green skills delivery strategy, that enables skills pathways to be designed to consider new and emerging methods and technologies as they become apparent.

Potential Scope

This section of the Strategic Case starts the process of considering the potential scope of the project based on the changes required to satisfy the identified business needs and deliver the Investment Objectives (outcomes).

Scoping activities will continue throughout the development phase of the project to inform the business case, and a related needs analysis for the advanced manufacturing industry in the region with the focus being inclusive of:

- **New Technologies** – Differentiating between the educational offer available and working well, the educational offer available which needs improvement and finally the educational offer which is yet to be developed all based around employer need.
- **Stakeholder Perception** -The way forward and how they can be involved.
- **Staged implementation strategy** – Trying to meet the overall need of employers.
- **Legacy** – How will the strategic plan include funding not just for capital investment but for day-to-day activity in management of such an innovation centre.
- **Knowledge Flows** – Availability of Existing Local Provision, Progression, Levels, Skills Transfer, Qualifications, Outcomes and Curriculum content.
- **Talent and Skills Development** – Demographic Challenges and if companies have responded to the challenges with relevant recovery actions already, discussing the implications of such actions.

The proposal is the development of an industry led, hybrid facility offering specialist facilities to commercialise RD&I (proving factory concept) supported by industry led skills provision to complement FE/HE provision in the region.

There are a number of similar hybrid production/training facilities located around the UK. In section 1.5 the similarities between the EAMPF proposal outlined in this OBC, the CATCH facility in Humberside and the National Manufacturing Institute Scotland ('NMIS') in Glasgow are examined in greater detail.

Both facilities have proven successful since their inception and the parallels between their operation and the model brought forward by the EAMPF are striking.

The EAMPF will create a hybrid, industry led production and training centre supporting the diversification of the regional economy, creating value added jobs and a working environment where manufacturing and innovative businesses can flourish and where products can be commercialised, thus increasing the GVA of the region. **The NNZS will be recognised as a national centre for the delivery of the key 'green skills' required to equip the labour market in Wales for transition to a low carbon economy.**

The concept of co-locating the advanced manufacturing facility and the National Centre of Excellence for Green Skills has been developed from discussions and consultation with industry and academia, and learned lessons from similar facilities around the UK. The benefits of cross-working, sharing knowledge and expertise, and allowing both industry and academia to support and develop each other in a specialist and purpose built facility will have long term benefits for the region.

Key Benefits, Risks, Dependencies, Constraints

<p>Benefits</p> <ul style="list-style-type: none"> • A healthier, greener and more diverse economy through more productive, efficient and profitable companies. • Improvements to health and social well-being. • Improved and more resilient supply chains. • Reduce existing skills gaps in key economic sectors. • Prepare labour market across Wales with skills for transition to low carbon economy. • Increased potential to attract inward investment to the region. • Productivity gains including from commercialisation of R&D, using uplift in salaries of additional jobs to UK. • Commercialisation of new and improved products. • Safeguard and create employment opportunities. • Purpose built facilities to support existing and new economic clusters. • Providing skills and training led by industry. • Value of research, based on funding attracted from public funding sources • Increase academia and industry collaboration and innovation. • Clustering impact. • Establish the region as a leader in green skills development. 	<p>Risks</p> <ul style="list-style-type: none"> • Private sector funding contribution/s not realised in line with business case projections. • Slippage in delivery of programmes / projects against key milestones. • Project delivering all outputs and outcomes within the business case. • Increase in cost of construction. • Planning delays. • Land reparation. • Technological advances – difficulty in providing cutting edge facilities. • Failure to secure operator/tenants.
<p>Constraints</p> <ul style="list-style-type: none"> • Total funding package: Project budget based on the fixed funding agreement between NPTCBC and SBCD. • Capital Funding: Project budget being largely capital investment. 	<p>Dependencies</p> <ul style="list-style-type: none"> • Private Sector Engagement: The project cannot be successfully delivered without the engagement of and collaboration with the private sector and academia. • Ensuring added value with FE/HE skills courses.

<ul style="list-style-type: none"> • Term of the City Deal: The timeframe for the delivery of the project cannot exceed the term of the City Deal programme. • Resources: Resources available to establish and implement the project. • Need to find an appropriate operator. • Planning and development parameters. 	<ul style="list-style-type: none"> • Ensuring alignment to industry led skills requirements. • Ensuring alignment to opportunities and threats as they arise. • Requirement for operator to generate revenues in order to fund ongoing operations/courses.
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ECONOMIC CASE

The Economic Case section provides an updated perspective for the EAMPF project incorporating scope for the associated NNZS. (I.e. from AMPF in PBC to EAMPF). It is set in the context of the Supporting Innovation and Low Carbon Growth PBC, and in response to the Case for Change and broader Strategic Case. The ambitions to deliver against the SILCG programme have been built into the overarching PBC and project-level SOC, appraising (including revisiting) options against the Investment Objectives (developed as SMART in section 1.3.1).

The Economic Case considers the EAMPF in its entirety, rather than appraising the NNZS as a stand- alone operation. The rationale for combining this assessment is that the AMPF and the NNZS are intrinsically linked, both in terms of activity and their co-location, and thus the combined EAMPF project will generate economic output ‘more than the sum of its individual parts’. In other words, the two activities (AMPF and NNZS) will complement each other, leading to increased the economic impact of both activities by the fact they are working together/co-located.

Long List options

Long-list options were developed initially in October 2020 (SOC) and subject to comprehensive review within the PBC development in May 2021. Potential for alignment with the wider programme to maximise value for money, including risk management was a core part of this exercise.

Short List Options

Short-list Options were developed through a series of engagements with key stakeholders of Local Government, Industry (through Industry Wales, Net Zero Industry Wales and local industry), RLSP and academia (FE/HE) through to June 2023. This identified a Preferred Option along with Alternatives, appraised as summarised below, baselined against both Do Minimum and the earlier form AMPF (prior to SILCG programme) presented in the PBC.

Do Minimum: Reconfiguration of existing facilities and provider activities for alignment with EAMPF objectives.

Preferred Approach: Creation of Integrated Advanced Manufacturing Centre (i.e. AMPF + Skills Centre) co-locating Practice and Skills development.

Alternative (1): Development of single site with investment fund for distributed skills and practice activity (potentially managed through NPT/SBCR/partners).

Alternative (2): Distributed development through investment fund for practice and skills development (potentially managed through NPT/SBCR/partners).

Short List/Preferred Option Appraisal table

The table below sets out the economic output for (option 1) the EAMPF and also (option2) the PBC Benchmark, which captures the AMPF output only. This shows the economic additionality brought forward by the National Net Zero Skills Centre of Excellence. (Difference between option 1 and option2).

Options Summary	Do Minimum	Option 1 (Preferred) (EAMPF)	Option 2 (Alternate)	PBC Benchmark (AMPF)
NPSV	£0.56m	£32.5m	£29.3m	£29.6m
Public Sector Cost	£2m	£22m		£17m
BCR	1.3	2.54	2.2	2.2
Significant non-monetisable benefits	-	Widening access for careers in NZ sectors, ~3,500 individuals + PBC	-	Improved built environment
Significant unquantifiable benefits	-	Wider uplift of built environment Economy diversification (resilience)	Wider uplift of built environment Economy diversification (resilience)	Specific activities and products/services ³
Risk costs by type and residual OB	Delivery Risk £179k 20% OB	Delivery Risk £2.02m 20% OB	Delivery Risk £1.35m 20% OB	Delivery Risk £1.1m 20% OB
Switching values		23% reduction in benefits. (Delay/costs affect similarly)		

³ As noted in PBC Appraisal

The summary of the Preferred Option refers to the following implementation;

Scope	In line with demand projections, create an additional 1,000 sq.m centre for skills development, along with the already proposed ~4,000sq.m. facility for advanced manufacturing practice (Total integrated facility of 5,000sq.m). Innovation scope across targeted TRLs and skills from foundation to HE, with focus on applied.
Service Solution	Mixed Capital Build and Procured Operator with delivery partners
Service Delivery	Procured Operator – bringing relevant practice and skills development capabilities
Implementation	(see SOC Appraisal)
Funding	5, 7-year project (10yr benefits horizon)

Economic Appraisal

The following table presents a summary of the short-listed Options appraised against the Business as Usual baseline, and applying the parameters presented in later sections of this document. The PBC AMPF values have also been included to provide a level of comparison with the original projected performance for that activity.

UK

Option	10 Year BCR	10 Year NPSV
Do Minimum	1.3	£557k
Preferred Option	2.54	£32.5m
Alternative Option (1)	1.58	£8.2m
Alternative Approach (2)	2.2	£29.3m
PBC Benchmark⁴	2.2	£29.6m

Regional

Option	10 Year BCR	10 Year NPSV
Do Minimum	1.81	£1.27m
Preferred Option	3.1	£44.2m
Alternative Option (1)	1.92	£12.95m
Alternative Option (2)	2.2	£29.3m

As shown in the above summary it, can be seen that EAMPF option provides best option for Skills ambitions and also enhances the existing AMPF case with a stronger BCR of 2.54 and increased NSPV

⁴ Noting separate analysis in PBC (Annex) – with broadly consistent parameters, although that was undertaken over a longer time horizon and excluded OB which would have given a higher value in comparison.

with marginal increase in risk cost. As such, it demonstrates enhancement of the original (PBC) preferred option for AMPF while also leveraging that investment for delivery of the SILCG ambitions.

COMMERCIAL CASE

The Commercial Case sets out the proposed procurement arrangements for delivery of the preferred option, including:

- The proposed procurement strategy and route
- The proposed service requirements and required outputs
- The proposed approach to risk allocation
- The proposed charging mechanisms
- The proposed key contractual arrangements

As lead local authority for the programme, Neath Port Talbot CBC will lead each of these procurements. Neath Port Talbot CBC will therefore be responsible for ensuring compliance with public procurement rules and regulations.

As a public sector organisation Neath Port Talbot CBC has a duty to operate in an open, fair, and transparent way, allowing the market freedom of opportunity to trade with it. Its procedures for procurement are known as 'Contract Procedure Rules'. These are important as they help to:

- Give a legal and auditable framework to its procurement activities;
- Obtain value for money services for the public;
- Ensure the council complies with the law governing the spending of public money;
- Protect its staff and members from undue criticism or allegations of wrongdoing.

The Council also has a legal requirement to comply with EU Procurement Directives (and equivalents post Transition period). These are enforced in UK law through the Public Contracts Regulations 2015. This governs the way in which the public sector procurement process must be conducted for contracts over certain specified thresholds.

Proposed approach to project procurement

Project	Procurement route
EAMPF Enhanced Advanced Manufacturing Production Facility including National Net Zero Skills Centre of Excellence.	Construction via South West Wales Regional Contractors Framework (SWWRCF). 2 stage design and build contract. Specification at the early stages of development informed by industry.
Facility Operator	Operator to be procured via competitive tendering process. It is preferred that there will be one operator for the EAMPF, although this may change as the project develops. Tender specification being developed with support from Industry Wales and key stakeholders.

Community Benefits

The Council and its partners will work in partnership with appointed contractors and their supply chain to deliver 'targeted recruitment and training' outputs as a 'core' requirement of tenders to support the delivery of social, economic and environmental objectives. This involves encouraging:

- Training and the recruitment of the economically inactive by offering apprenticeship;
- Traineeships or work experience opportunities;
- Maximising opportunities for SMEs to tender or bid for sub-contract opportunities;
- Adopting measures to ensure prompt and fair payment terms;
- Encouraging environmental initiatives;
- Engaging with Third Sector organisations; and
- Supporting educational and community initiatives.

FINANCIAL CASE

The Financial Case sets out the funding requirements for the preferred option and demonstrates overall project affordability.

Table 4.1 National Net Zero Skills Centre of Excellence Investment Summary as of 30/09/2023

	Year 0 2017-18	Year 1 2018-19	Year 2 2019-20	Year 3 2020-21	Year 4 2021-22	Year 5 2022-23	Year 6 2023-24	Year 7 2024-25	Year 8 2025-26
	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)
Expenditure									
Capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Revenue	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Funding									
Swansea Bay City Deal Grant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Public Sector	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Sector	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00

	Year 9 2026-27	Year 10 2027-28	Year 11 2028-29	Year 12 2029-30	Year 13 2030-31	Year 14 2031-32	Year 15 2032-33	Total
	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)
Expenditure								
Capital	2.30	0.00	0.00	0.00	0.00	0.00	0.00	5.30
Revenue	0.00	5.00	7.50	8.00	11.00	11.50	12.50	55.50
Total	2.30	5.00	7.50	8.00	11.00	11.50	12.50	60.80
Funding								
Swansea Bay City Deal Grant	2.30	0.00	0.00	0.00	0.00	0.00	0.00	5.30
Public Sector	0.00	5.00	7.00	7.00	10.00	10.00	11.00	50.00
Private Sector	0.00	0.00	0.50	1.00	1.00	1.50	1.50	5.50
Total	2.30	5.00	7.50	8.00	11.00	11.50	12.50	60.80

The figures in Table 4.1 are the current financial investment forecast which the National Net Zero Skills Centre of Excellence is currently projecting over the timeline for the SBCD portfolio and are set within the original SBCD Heads of Terms. Funding elements are subject to change as the programme evolves.

The overall investment composition comprises of three following investment components:

- **City Deal investment**
- **Public sector**
- **Private sector**

Investment leverage

One of the benefits of City Deal is the ability to lever additional public and private sector investment and to work with existing and pipeline government funded initiatives and industry partnerships.

As a result of the City Deal investment in specialist facilities, equipment and industry led skills provision, it is estimated that the National Net Zero Skills Centre of Excellence will lever in an additional £55.5m of public and private research income over 5 years post construction of the facility.

Monitoring and Evaluation

The City Deal portfolio finances will be monitored through the SBCD Programme Board and SBCD Joint Committee, with the SBCD Economic Strategy Board also making recommendations on possible additional funding opportunities or alternative portfolio expenditure.

MANAGEMENT CASE

The purpose of the Management Case is to put in place the arrangements for the successful delivery of the project. It provides evidence that the capability and capacity is in place to govern and deliver the project, and arrangements are in place to manage project risks.

The project will be delivered using proven project management methodologies to ensure the outputs, benefits and outcomes are achieved in a controlled, well managed and visible set of activities. The project team will be supported by a technical advisory group.

The project has on-going engagement with a range of stakeholders including Welsh and UK Governments, industry including Industry Wales, and academia in relation to RD&I and skills.

Key Project Milestones

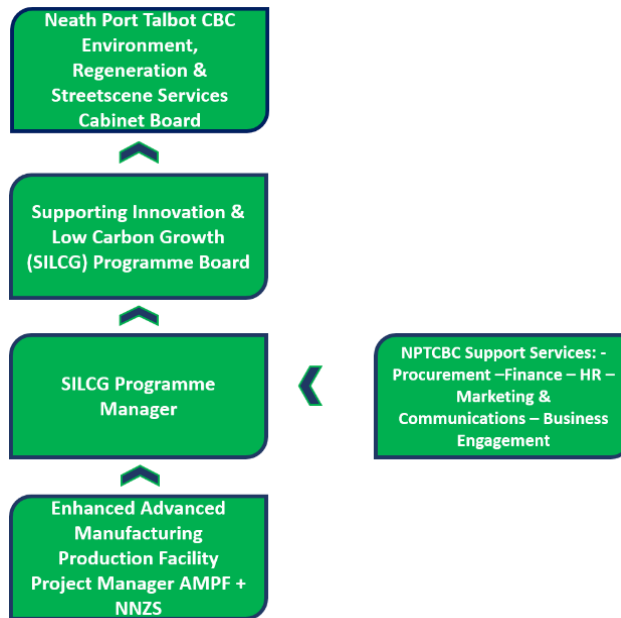
Activity	Milestone	Status
Outline Business case approval	Q4 2023	Under review.
Enhanced Advanced Manufacturing Production Facility building Stakeholder workshops / Design Brief	Q1 2024	Undertaken and further discussions ongoing.
Operator Procurement	Q2 2024	Planning stage.
2 stage Design & Build Procurement	Q1 2024	Initial scoping in progress.
Design Phase	Q3 2024 – Q3 2025	Future development
Construction Phase	Q3 2025 – Q4 2026	Future development
Facility Opens	Q4 2026	Future development

Key Project Outputs

Indicators	AMPF OBC (1)	NNZS (2)	Enhanced AMPF (1&2 combined)
Land Developed	0.81ha	-	0.81ha
Premises Created	4,000m2	1,000m2	5,000m2
Jobs Accommodated	111	29	140
Jobs Created/safeguarded	88 (+10 construction)	15	113
SMEs accommodated	15	-	15
SBCD Investment	£17.2M	£5.3M	£22.5M
Public Sector	-	£50M+	£50M+
Private Sector	£500K/yr. (to 2033)	£5.5M	£9M
No. of Courses per annum	-	50+	50+
No. of Individuals trained by 2033	-	3,500	3,500

Project & Programme Governance Framework

The EAMPF project will adhere to the existing SILCG programme governance arrangements detailed in the structure below. As above the EAMPF has its own project team and governance arrangements which align to and provide regular reports to the SILCG governance as detailed below:



1.0 THE STRATEGIC CASE

1.1 Introduction

The purpose of the Strategic Case is to make the case for change and demonstrate how the Enhanced Advanced Manufacturing Production Facility ('EAMPF') combining the original AMPF with the National Net Zero Skills Centre of Excellence as part of the Supporting Innovation and Low Carbon Growth programme ('SILCG') aligns with UK, Wales, regional and local strategies and policies as well as other ongoing programmes and projects.

1.2 The Strategic Context

This section provides an overview of the lead organisation as well as a review of relevant strategies, policies and other ongoing programmes and projects to demonstrate strategic fit.

1.2.1 Organisational overview

Neath Port Talbot County Borough Council is the lead local authority for the Supporting Innovation and Low Carbon Growth programme, and project lead for the Enhanced Advanced Manufacturing Production Facility.

Neath Port Talbot is located at the centre of the south Wales economy between the cities of Cardiff and Swansea. It benefits from direct access via the M4 corridor with access to a wider catchment area for employment – analysis demonstrates that there is a working age population of 1.4 million, and one million jobs within an hour's drive of the Port Talbot Waterfront Enterprise Zone.

Neath Port Talbot CBC (NPTCBC) was formed in April 1996 following local government reorganisation. It is the 8th most populous in Wales, with a population of approximately 140,000. 17 wards within the local authority area are in the top 10% most deprived in Wales.

NPTCBC has a proven track record of delivering large capital programme and projects, on budget and on time, from a number of different funding sources including:

- PDR Harbour Way: **£111m**
- 21st Century Schools Programme: **£122m**
- Neath Port Talbot Physical Regeneration: **£15m**
- Vibrant & Viable Places: **£35m**

The council also has extensive experience of lead body status for several collaborative regional projects including:

- South West Workways: **£23m**
- Workways+: **£7.5m**
- Engage: **£21m**

1.2.2 *Relevant Business Strategies*

The primary and overarching strategic driver for this project is the £1.2 billion Swansea Bay City Deal 'Internet Coast' ('SBCD') investment package which was signed by the Prime Minister, the First Minister of Wales, the Secretary of State for Wales, the Welsh Government Cabinet Secretary for Finance and Local Government and the leaders of Swansea, Neath Port Talbot, Carmarthenshire and Pembrokeshire Councils. The signing of the City Deal agreement confirms their joint commitment to ensure full implementation of the Swansea Bay City Deal with interventions focused on four themes:

- **The Internet of Economic Acceleration** – identification and demand of next generation digital infrastructure
- **The Internet of Life Science and Wellbeing** – expanding research and innovation infrastructure and piloting digitally integrated healthcare
- **The Internet of Energy** – energy innovation and sustainable housing
- **Smart Manufacturing** – supporting the manufacturing economy

The SBCD is a programme established to make a significant impact upon the regional economy and focusses activity on programmes and projects that are centred around key themes including economic acceleration, life science and well-being, energy, smart manufacturing and digital. One of the nine SBCD programmes is the SILCG programme.

The EAMPF forms part of the SILCG programme, which identifies the demand for such a production facility and the associated National Net Zero Skills Centre of Excellence ('NNZS'), recognising its economic potential and strategic benefit. The proposal not only addresses the Smart Manufacturing intervention (*of the SBCD*) but also seeks to address one of the four themes of the SILCG programme;

*'An Industrial Futures project to address the gap between demand and supply for businesses and available land in the Port Talbot Waterfront Enterprise Zone, **with a hybrid building providing production units as well as office space to support start-ups and indigenous businesses in the innovation and manufacturing sectors**'*

The Swansea Bay City Deal recognises the critical importance of the region as a driver for the Welsh and UK economies. It provides the partners with resources to unlock economic growth and a joint

commitment from Welsh and UK Governments to invest up to £241m on specific interventions across the region that including the health, energy and manufacturing sectors.⁵

The City Deal will tackle barriers to economic growth through:

- Developing higher value sectors and employment opportunities to match; increasing the number of businesses within these sectors to widen the economic base and improve the region’s GVA, benchmarked against the UK average.
- Committing local leaders and partners to implementing effective leadership across the City Region.
- Harnessing collaboration, enabling local authorities to plan and deliver services at an appropriate scale for more effective delivery, including strategic land-use planning, transport and economic development.
- Securing £1.3 billion in interventions to support economic growth, including £637 million of direct private sector investment, spread across the region to ensure all localities and citizens benefit.
- Adding £1.8 billion to regional GVA and creating over 9,000 jobs

The EAMPF project is also aligned to and will directly contribute to deliver the following UK, national (Wales), regional and local strategies and policies:

Table 1.1 *Relevant UK Strategies and policies*

Strategy/ Policy	Imperative	Project Relevance
Build Back Better: our plan for growth⁶	<ul style="list-style-type: none"> • Sets out the plan to ‘build back better’ • Tackling long-term problems to deliver growth that creates high-quality jobs across the UK. • 3 core pillars of growth: Infrastructure, Skills and Innovation – which in turn will support the transition to Net Zero. 	<ul style="list-style-type: none"> • EAMPF aligns with the BBB plan, with infrastructure, skills and innovation key themes of the project.

⁵ <http://www.swanseabaycitydeal.wales/about/>

⁶ <https://www.gov.uk/government/publications/build-back-better-our-plan-for-growth>

Strategy/ Policy	Imperative	Project Relevance
UK Industrial Strategy (2017)⁷ (archived)	<ul style="list-style-type: none"> Ideas – the world’s most innovative economy People – good jobs and greater earning power for all Infrastructure – a major upgrade to the UK’s infrastructure Business environment – the best place to start and grow a business Places – prosperous communities across the UK. 	<ul style="list-style-type: none"> EAMPF Project is aligned to the 5 foundations for a transformed economy: ideas, people, infrastructure, business environment, places. EAMPF will enhance competitiveness of regional economy by enhancing the knowledge ecosystem with suitable infrastructure to drive growth. EAMPF will encourage the creation of new businesses to capitalise on the research and development in the region. EAMPF will support Innovation in decarbonisation. EAMPF will strengthen the regional economic base through supporting critical industries, while contributing to the diversification and development supplementary industries to reduce reliance on existing manufacturing base. EAMPF will increase productivity and help to close the GVA gap between the region and the rest of Wales and between Wales and the rest of the UK.
Ten point plan for a Green Industrial Revolution⁸	<ul style="list-style-type: none"> Build back better UK global leader in green technologies 	<ul style="list-style-type: none"> EAMPF is aligned to the aim to ‘build back better: to invest in making the UK a global leader in green technologies. EAMPF will support green innovation. Port Talbot is identified in the plan as one of the places in the UK pioneering the decarbonisation of transport industry and power.
Green Jobs Taskforce⁹ (concluded 2021)	<ul style="list-style-type: none"> Set the direction for the job market as we transition to a high-skill, low carbon economy. 	<ul style="list-style-type: none"> The EAMPF will be focused on providing a skills pathway for existing and future green industries.
Clean Growth Strategy¹⁰	<ul style="list-style-type: none"> Decarbonisation all sectors of UK economy Low carbon opportunities Tackle climate change 	<ul style="list-style-type: none"> EAMPF is aligned to the aim of clean growth i.e. economic growth while reducing greenhouse gases. Decarbonising all sectors of the UK economy through the 2020s.

⁷ <https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future>

⁸ <https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution>

⁹ <https://www.gov.uk/government/news/uk-government-launches-taskforce-to-support-drive-for-2-million-green-jobs-by-2030>

¹⁰ <https://www.gov.uk/government/publications/clean-growth-strategy>

Strategy/ Policy	Imperative	Project Relevance
		<ul style="list-style-type: none"> • The EAMPF will support low carbon industries • The EAMPF will support the BEIS ambition to accelerate the commercialisation of clean energy technologies.
Climate Change Act 2008¹¹	<ul style="list-style-type: none"> • Reduce carbon emissions 	<ul style="list-style-type: none"> • The Climate Change Act is the basis for the UK’s approach to committing the Government to reduce emissions by at least 80% of 1990 levels by 2050, with 5 yearly interim targets. • The EAMPF is aligned to this Act by transitioning to a low carbon economy.
National Infrastructure Strategy 2021¹²	<ul style="list-style-type: none"> • Strategy to deliver an infrastructure revolution: • Supporting new green growth clusters in traditional industrial areas. • Bringing jobs and investment to some of the most deprived communities across the UK through the freeports programme; 	<ul style="list-style-type: none"> • EAMPF will support local and regional innovation clusters. • Will enhance existing skills provision. • EAMPF will be used as a catalyst to leverage increased levels of RD & I investment for the region. • The EMPF will satisfy the local need for flexible high quality commercial property with modern equipment and facilities. • The EAMPF will have the scope to support the skills requirements required for the freeports programme.
Levelling Up The United Kingdom 2022¹³	<ul style="list-style-type: none"> • Reduce geographic economic, social and health inequalities. 	<ul style="list-style-type: none"> • The EAMPF project contributes too many of the white paper’s missions, including improving productivity, spreading opportunity, and boosting skills.
UK Net Zero Strategy: Build Back Greener 2021	<ul style="list-style-type: none"> • The strategy sets out policies and proposals for decarbonising all sectors of the UK economy to meet net zero target by 2050. • Industry - to decarbonise industry in line with net zero goals 	<ul style="list-style-type: none"> • Development of the EAMPF will support and promote innovation and low carbon growth activity within the region. • The EAMPF through the NNZS will develop the skills within the regional labour market required for transition to a low carbon economy. • The EAMPF will act as a catalyst to increase and improve regional levels of UKRI funding, and for attracting aligned inward investors.

¹¹ <https://www.legislation.gov.uk/ukpga/2008/27>

¹² CP 329 – National Infrastructure Strategy – Fairer, faster, greener – November 2020 (publishing.service.gov.uk)

¹³ <https://www.gov.uk/government/publications/levelling-up-the-united-kingdom>

Strategy/ Policy	Imperative	Project Relevance
	whilst simultaneously transforming our industrial heartlands by attracting inward investment, future-proofing businesses, and securing high wage, high skill jobs.	

Table 1.2 Relevant national (Wales) strategies and policies

Strategy/ Policy	Imperative	Project Relevance
Taking Wales Forward 2016 – 2021 (WG)¹⁴	<ul style="list-style-type: none"> • Prosperous & secure • Deliver more and better jobs 	<ul style="list-style-type: none"> • Taking Wales Forward programme for government sets out how Welsh Government will deliver more and better jobs through a stronger, fairer economy, improve and reform our public services, and build a united, connected and sustainable Wales. • The EAMPF is aligned to the priority area of ‘prosperous and secure’ as it will provide the right environment for job creation.
Well Being of Future Generations Act 2015 (Welsh Government)¹⁵	<ul style="list-style-type: none"> • Prosperity • Resilience • Equality • Health • Community • Culture & Welsh Language • Globally responsible 	<ul style="list-style-type: none"> • The EAMPF is aligned to the 5 ways of working: long term; prevention; integration, collaboration and involvement • It is aligned to the 7 well-being goals: • A Prosperous Wales – provision of new employment opportunities, high quality jobs, training opportunities, diversification of the economy, re-use of brownfield land. Anticipated spin-out companies will stimulate further private and public investment in the region • A Resilient Wales - Safeguarding of existing, highly-skilled and well-paid jobs, provision of new business premises, with the necessary technological infrastructure to promote

¹⁴ <https://gov.wales/taking-wales-forward>

¹⁵ <https://www.legislation.gov.uk/anaw/2015/2/contents>

Strategy/ Policy	Imperative	Project Relevance
		<p>diversification and reduce overreliance on traditional industries and public sector employment</p> <ul style="list-style-type: none"> ● A More Equal Wales - the programme includes opportunities accessible to all to reduce societal inequalities ● A Healthier Wales - with long-standing evidence demonstrating the positive impact of employment on health and well-being, improving air quality ● A Wales of Cohesive Communities - through sustainable, viable employment ● A Wales of Vibrant Culture and thriving Welsh Language - with increased employment opportunities supporting the language in the medium and longer term ● A Globally Responsible Wales - design and delivery of buildings in line with sustainable development principles; using innovation to decarbonise industry, programme aligned to global needs.
<p>Prosperity for All: The National Strategy (Taking Wales Forward 2016 – 2021)¹⁶</p>	<ul style="list-style-type: none"> ● Deliver more and better jobs ● Create a stronger and fairer economy ● Build a sustainable Wales 	<p>The EAMPF is closely aligned to the priority areas in the following ways:</p> <ul style="list-style-type: none"> ● Creating high-value jobs leading to national prosperity ● Support green growth to create sustainable jobs for the future. ● Encourage a robust talent pipeline, benefitting the region through higher wages and lower levels of underemployment ● Provide a focus for inward investment and indigenous business growth through innovation ● Providing the right environment for businesses growth / diversification ● Leverage world-wide collaboration through research facilities ● Delivering wider benefits to the regional community

¹⁶ <https://gov.wales/sites/default/files/publications/2017-10/prosperity-for-all-the-national-strategy.pdf>

Strategy/ Policy	Imperative	Project Relevance
Prosperity for All: Economic Action Plan (2017) ¹⁷	<ul style="list-style-type: none"> Decarbonisation (public sector to be carbon neutral by 2030); Innovation, high quality employment and skills development 	<p>The EAMPF is aligned in the following ways:</p> <ul style="list-style-type: none"> Aligned to the national thematic sector of High Value Manufacturing Aligned to a number of areas in the Economic Contract: growth potential and progress in reducing carbon footprint Aligned to calls to action: decarbonisation; innovation, entrepreneurship and headquarters; high quality employment and skills development; R&D, automation and digitalisation. Focus on decarbonisation clearly aligns with key aims Investment in human capital, infrastructure and innovation to address productivity gap A focus of innovation and research in the Neath Port Talbot region will strengthen the existing local economy and create new sustainable opportunities Creating quality jobs and delivering industrially-relevant training in future-focused technologies and applications will support people-driven economic growth Enabling public investment with social purpose, delivering increased value Supporting public sector to become exemplar and drive green growth
Prosperity for All: a Low Carbon Wales (2019) ¹⁸	<ul style="list-style-type: none"> Key areas of environmental improvement including industry, transport and waste. Driving sustainable growth and modern infrastructure. 	<p>The EAMPF is aligned in the following ways:</p> <ul style="list-style-type: none"> Creating high value jobs and innovation in clean growth will support the vision of establishing Wales as one of the best places in the world to live, work and do business; Deliver research, infrastructure and solutions that are essential to delivering the rapid change needed to hit ambitious targets; Efficient use of resources and the reuse of brownfield site.
Innovation Wales Strategy (2014) ¹⁹	<p>5 key themes</p> <ul style="list-style-type: none"> Improving collaboration 	<p>Innovation Wales Strategy prioritises low carbon as a key strength on which to build.</p>

¹⁷ <https://gov.wales/prosperity-all-economic-action-plan>

¹⁸ https://gov.wales/sites/default/files/publications/2019-06/low-carbon-delivery-plan_1.pdf

¹⁹ <https://gov.wales/innovation-wales-strategy>

Strategy/ Policy	Imperative	Project Relevance
	<ul style="list-style-type: none"> Promoting a culture of innovation Providing flexible support & finance for innovation Innovation in Government Prioritising and creating critical mass 	<p>The EAMPF is aligned in the following ways:</p> <ul style="list-style-type: none"> Leading the way in fostering and improving collaboration between public sector, private sector and academia. Providing a facility where innovation is promoted and encouraged. The EAMPF will be used as a catalyst to attract increased levels of RD & I financing; Encouraging clustering and inward investment of organisations and businesses.
<p>A manufacturing future for Wales: a framework for action (2020)²⁰</p>	<ul style="list-style-type: none"> Ensuring sustainability of manufacturing post COVID-19 Green based – decarbonising industry as a priority, embrace the opportunities of a circular economy Place based – focused on strength of an area People based – role of education in securing future prosperity 	<p>The EAMPF is aligned to the 4 pillars and 10 themes of the framework:</p> <p>The EAMPF programme will:</p> <ul style="list-style-type: none"> Directly support the plans for clean, green growth – setting the foundations for a circular economy in a regional eco-system that synergizes benefits and growth; The cluster expertise in the area will create an ideal location to deliver green innovation through innovators, supply chain, infrastructure and manufacturers across a range of sectors; Academic and industrial partnership will offer opportunities to develop specialist learning and training to ensure a long-term talent pipeline aimed at attractive, high-quality career opportunities with longevity and resilience.
<p>Commercial Property: Market Analysis and Potential Interventions²¹</p>	<ul style="list-style-type: none"> Address gaps in supply of commercial property 	<p>The EAMPF is aligned to this policy in the following way:</p> <ul style="list-style-type: none"> Creation of this space will support indigenous business and encourage inward investment through delivering a modern, attractive and suitable infrastructure for innovative development

²⁰ <https://gov.wales/sites/default/files/consultations/2020-09/manufacturing-future-wales-consultation-document.pdf>

²¹ <https://gov.wales/sites/default/files/publications/2020-08/market-analysis-and-potential-interventions.pdf>

Strategy/ Policy	Imperative	Project Relevance
Regional Investment in Wales²²	<ul style="list-style-type: none"> • 4 investment priority areas: • Business productivity & competitiveness • Healthier, fairer and more sustainable communities • Zero carbon economy • Reducing economic inequalities 	<p>EAMPF is aligned in the following way:</p> <ul style="list-style-type: none"> • Creating the right environment for sustainable and inclusive jobs and growth. • Opportunities to grow and strengthen productivity and competitiveness of SMEs in green industrial revolution. • Opportunities for research and innovation in collaboration with government, industry and academia. • Economic growth and decarbonisation
Foundational Economy²³	<ul style="list-style-type: none"> • Promoting inclusive growth through a new focus on the foundational economy. 	<ul style="list-style-type: none"> • The project will support and grow the foundational economy by challenging the conventional way of providing business premises and nurturing an environment / cluster of innovative, new and indigenous businesses.
Wales Infrastructure Investment Plan (WIIP)	<ul style="list-style-type: none"> • Improve economic Infrastructure and by doing so boost growth and jobs, ensuring greater productivity and prosperity for our communities. 	<ul style="list-style-type: none"> • The EAMPF and NCEGS will align providing facilities that will positively impact upon productivity, job creation and upskilling the local labour market.
Net Zero Wales 2021	<ul style="list-style-type: none"> • A Greener, stronger, fairer Wales. • Supporting innovation in new renewable energy technology. • Developing green skills in businesses - Upskilling and training employees to take advantage of the potential economic opportunities for Wales. 	<ul style="list-style-type: none"> • The EAMPF will align closely to the priorities of Net Zero Wales. • The EAMPF will support innovation and local clusters. • The project will establish a centre of excellence for green skills – combining expertise from academia and industry to develop relevant workforce green skills for both existing and future requirements.
Net Zero Skills Action Plan²⁴	<ul style="list-style-type: none"> • Sets out this Government’s commitment to 	<ul style="list-style-type: none"> • The EAMPF will align with the 7 key priority areas, in particular;

²² <https://gov.wales/regional-investment-wales-framework>

²³ <https://gov.wales/foundational-economy>

²⁴ <https://www.gov.wales/sites/default/files/publications/2023-02/net-zero-skills-action-plan.pdf>

Strategy/ Policy	Imperative	Project Relevance
	<p>supporting skills development.</p> <ul style="list-style-type: none"> Establishes what is required for existing /future needs and journey to a low carbon economy. 	<p>Growing a skilled workforce to meet our net zero commitments, strengthening the skills system within Wales, and harnessing links with industry to support knowledge transfer.</p>
<p>Wales Innovates Strategy: creating a stronger, fairer, greener Wales</p>	<ul style="list-style-type: none"> The strategy aims to create and nurture a vibrant innovation culture and help fulfil the wellbeing objectives of the Welsh Government through the promotion and prioritisation of innovation via four objectives: <ul style="list-style-type: none"> Better Education Stronger Economy Health and Wellbeing Climate and Nature 	<ul style="list-style-type: none"> Better Education – the EAMPF, through the National Net Zero Centre of Excellence for Green Skills (working in conjunction with the SBCD Skills and Talent programme and other relevant stakeholders) will identify and provide the future skills requirements for the region in emerging and growth sectors of the economy. The project aims to develop a pathway to skills training to meet the needs of a low carbon economy, and improve the overall skills base of the region. Stronger Economy – the EAMPF is directly focused on the creation of a stronger economy for SW Wales. It will create the high-quality infrastructure that will provide the environment for the region’s businesses to establish, grow and thrive – creating jobs and securing private sector investment across the region. Health and Wellbeing –The EAMPF will achieve significant well-being benefits for residents, including creation of employment and training opportunities. Climate and Nature – The EAMPF will indirectly contribute to the long-term global responsibilities to sustainable growth and the environment through the development of businesses and activities in the low carbon and energy efficient sectors.

Table 1.3 *Relevant regional and local strategic and policy drivers*

Objectives/ Goals	Imperative	Project Alignment
South West Wales Regional Economic Delivery Plan (2017)²⁵	<ul style="list-style-type: none"> ● Business Growth, retention and specialisation ● Skilled and Ambitious for Long-term Success ● Maximising Job Creation for all ● Knowledge Economy and Innovation ● Distinctive places and competitive infrastructure 	<ul style="list-style-type: none"> ● Supporting indigenous companies and industries which are economically critical in terms of GVA and employment. ● Supporting economic diversification through value added jobs. ● Creating the physical and knowledge-based infrastructure to foster and encourage innovative start-ups, providing support to ensure retention and growth of new businesses, a ‘knowledge economy’ where innovation thrives ● In particular, support early-stage knowledge-intensive firms through incubation and innovation stages ● Creating highly skilled and well-paid jobs, developing skills to maximise employment in growth sectors. ● Removing barriers to employment. ● Providing infrastructure assets to support business as a regional gateway. ● Supporting business as a regional gateway, increasing entrepreneurial culture. ● Through specialised training solutions, deliver a talent pipeline for high-growth sectors. ● Contribute to the key themes: <ul style="list-style-type: none"> ○ Embeddedness - existing base of trained labour. ○ Relatedness - diversifying existing strengths in the area via the metals industry. ● Connectedness - already established network of steel and metals companies in the area.
South West Wales Regional Economic Framework ²⁶	<ul style="list-style-type: none"> ● Long term economic development of the region 	<ul style="list-style-type: none"> ● The EAMPF project is aligned in the following way: ● Addressing the areas of weaknesses / threats – will increase productivity, create employment opportunities, provision of high quality business infrastructure. ● Provide relevant skills pathways for existing and future requirements of business in the region.

²⁵ <https://www.swansea.gov.uk/swanseabaycityregioneconomicregenerationstrategy>

²⁶ <https://businesswales.gov.wales/mid-wales-and-south-west-wales-economic-frameworks>

Objectives/ Goals	Imperative	Project Alignment
		<ul style="list-style-type: none"> • Build on the strengths of sectoral strengths in energy, advanced manufacturing and innovation centres.
South West Wales Regional Economic Delivery Plan²⁷	<ul style="list-style-type: none"> • UK leader in renewable energy and the net zero economy • Building a strong resilient business base. 	<ul style="list-style-type: none"> • Recognising importance to the region of the manufacturing base, supporting its sustainability and clean growth through innovation and decarbonisation. • Creating infrastructure and ecosystem needed to deliver a diversified economy. • Providing attractive and functional employment site in the region, which is fundamental to securing investment • Creating (and supporting existing) necessary high value, skilled jobs.
Neath Port Talbot Economic Recovery Plan²⁸	<ul style="list-style-type: none"> • Build an entrepreneurial and resilient economy • Transformational investment and change. • Invest in future skills and opportunities 	<ul style="list-style-type: none"> • Help indigenous businesses grow and become more sustainable. • The EAMPF will be central to the county's focus to be an exemplar in supporting industrial decarbonisation. • The EAMPF will contribute to developing a skilled and resilient workforce, with relevant skills required for a low carbon future.
NPT Council Decarbonisation and Renewable Energy (DARE) Strategy (2020)²⁹	<ul style="list-style-type: none"> • Response to climate emergency • Reducing carbon emissions • Limiting future climate change 	<ul style="list-style-type: none"> • The Vision A cleaner, more prosperous and healthier county borough. • This project is part of the wider City Deal investment programme strategy which aims to transform the regional economy by improving skills, commercialising new technologies and ideas, and building expertise in digital technologies, life science and wellbeing, energy and advanced manufacturing. • Decarbonisation and renewable energy are key strategic themes within the programme which will promote the region as a test bed for the demonstration, integration and commercialisation of Future Energy Systems and create a test bed for renewable energy providers.

²⁷ <https://www.swansea.gov.uk/article/15033/South-West-Wales-Regional-Economic-Delivery-Plan>

²⁸ <https://www.npt.gov.uk/media/18436/economic-recovery-plan-final.pdf>

²⁹ <https://www.npt.gov.uk/media/13541/dare-strategy-may-20.pdf?v=20200522162830>

Objectives/ Goals	Imperative	Project Alignment
		<ul style="list-style-type: none"> Industrial decarbonisation is a major challenge if Wales is to reach Net Zero by 2030 and appropriate skills in the workforce is key to achieving this target. Wales is ideally placed to be a test bed for the rapid transition to low carbon technology and there are significant benefits to be gained from a co-ordinated, national approach to industrial decarbonisation and the creation of a green energy economy.
<p>NPTCBC Corporate Plan 2022-27³⁰</p>	<ul style="list-style-type: none"> Well Being Objective 4 - Jobs & Skills 	<ul style="list-style-type: none"> “Working with our partners we create the conditions for more secure, well paid and green work in the area and support local people into those jobs” The EAMPF will provide the opportunity to support the distinctive industrial base within the county, and enhance existing collaboration between public sector, private sector and academia. EAMPF will provide skills pathways for local residents to take advantage of employment opportunities that arise as society decarbonises. Support the aspiration regionally and locally to provide new ‘green jobs’. Creating opportunities for spin-out companies and further inward investment. Supporting sustainable economic growth. Contribute to creating a business environment that encourages indigenous and inward investment.
<p>RLSP – Employment and Skills plan 2022- 25.³¹</p>	<ul style="list-style-type: none"> Work with industry, education and public sector to identify future skills gap. Develop skills for current and future local employers requirements Encourage and promote pathways in the green energy sector. 	<ul style="list-style-type: none"> The EAMPF will provide an agile and flexible environment for the delivery of required and emerging green skills to satisfy existing and future employer requirements. An Industry led facility will be an exemplar for best practice, innovation and collaboration.

³⁰ <https://www.npt.gov.uk/media/17199/corporate-plan-2022-27-recover-reset-renew.pdf?v=20220422124059>

³¹ <http://www.rlp.org.uk/SharedFiles/Download.aspx?pageid=2&mid=13&fileid=50>

Objectives/ Goals	Imperative	Project Alignment
CJC Corporate Plan	<ul style="list-style-type: none"> • The CJC has set 3 well-being objectives to guide their work going forward: <ol style="list-style-type: none"> 1. To collaboratively deliver the Regional Economic Delivery Plan and Regional Energy Strategy thereby improving the (decarbonised) economic well-being of South West Wales for our future generations. 2. To produce a Regional Transport Plan for South West Wales. 3. To produce a sound, deliverable, co-ordinated and locally distinctive Strategic Development Plan for South West Wales which is founded on stakeholder engagement and collaboration and which clearly sets out the scale and location of future growth for our future generations 	<ul style="list-style-type: none"> • The EAMPF will complement the work of the SWW CJC, promoting regional collaborative working and contributing directly to the first well-being objective of the CJC through its delivery, in the context of the Regional Economic Delivery Plan (detailed above) and through its contribution to the Regional Energy Strategy (detailed below).
Regional Energy Strategy	<ul style="list-style-type: none"> • The overall objective of the strategy is to develop a strategic pathway identifying key interventions to deliver on the region’s ambitions for decarbonising its energy system. • The vision for SWW is the harnessing the region’s low carbon energy potential across its on and offshore locations, to deliver a prosperous and equitable net zero carbon economy which enhances the well-being of future generations and the region’s ecosystems, at a pace which delivers against regional and national emissions reduction targets by 2035 and 2050. 	<ul style="list-style-type: none"> • The EAMPF has decarbonisation at the centre of its strategy. It will encourage and foster the existing regional low carbon cluster, and develop a regional hub where economic decarbonisation is the driving force for all activity. • The NNZS will provide skills and training to the local labour market allowing regional residents to benefit and prosper from the transition to a low carbon economy.

1.2.3 Links with key initiatives and projects

The proposed industry led EAMPF has been identified by the SILCG programme as a key local and regional development opportunity, which will provide state of the art facilities to develop and enhance the local clustering of businesses involved in manufacturing, innovation, and research and development, resulting in significant benefits to the local and regional productivity and GVA. **It is proposed that the associated industry led NNZS will promote and increase relevant skills in the local and regional labour market that are/will be required to satisfy existing and future needs as our economy transitions to net zero.**

As can be seen from the tables at 1.1 – 1.3 the project aligns with the net zero and low carbon agenda as well as national, regional and local plans and strategies for economic development. When considering the EAMPF proposal it was established that there was a need to closely consider to the three strategies listed below.

‘A Manufacturing Future for Wales – Our Journey to Wales 4.0’³²

The WG ‘A Manufacturing Future for Wales’ – a framework for action was launched in February 2021, following extensive consultation with stakeholders and underpinned by the 7 objectives of the Well-Being of Future Generations Act (Wales) 2015. It has provided a framework which has fostered collaboration and helped coordinate Welsh Government support activity with a focus on manufacturing. It has framed work to decarbonise industry including establishing Net Zero Industry Wales, underpinned by the Net Zero Skills Action Plan

Wales is embracing technological change brought about by the fourth industrial revolution, with a manufacturing sector that now has around 150,000 people employed³³ and contributes over 16% of our national output³⁴, notably higher than the UK average.

In addition to the significant direct employment it creates, the sector contributes many thousands more in the extended supply chain. It still exports across the globe as well as contributing significant funding into Research, Development and Innovation (RD&I).

The original Manufacturing Action Plan (MAP) was developed in the context of how his vision could be transitioned for a well-being economy into reality. This approach has not changed and is underpinned by the pursuit of three outcomes;

A Prosperous economy - diverse yet inter-related economic base of outward-looking firms with positive innovation performance, good productivity levels and a workforce equipped with the skills for a changing world.

A Green Economy This economy is integral to a low carbon society, so we need to invest in low-carbon and climate resilient infrastructure, renewable energy projects,

³² [A Manufacturing Future for Wales. Our Journey to ‘Wales 4.0’ \(gov.wales\) - https://www.gov.wales/sites/default/files/publications/2021-02/manufacturing-future-for-wales-framework.pdf](https://www.gov.wales/sites/default/files/publications/2021-02/manufacturing-future-for-wales-framework.pdf)

³³ [workforce jobs by industry - Nomis - Official Census and Labour Market Statistics \(nomisweb.co.uk\)](https://www.nomisweb.co.uk/)

³⁴ [Gross Value Added by area and industry \(gov.wales\)](https://www.gov.wales/)

An Equal economy which means investing in the productive potential of all people in communities.

The proposed industry led EAMPF aligns closely to these three priority areas.

- The EAMPF will provide modern infrastructure to support existing and new forward thinking businesses that have significant innovation aspirations.
- It will foster further collaboration between the public and private sectors, including academia – further enhancing local clustering of businesses in undertaking target activities.
- The EAMPF will act as a catalyst for this clustering and provide business with the facilities to grow, playing a key role in attracting more inward and indigenous investment activity, and as a result leverage increased RD & I investment in the region.
- The industry led NNZS will be seen as an exemplar training facility for the low carbon sector and will enhanced existing FE and HE provision. Providing flexible training facilities with the ability to adapt quickly to the changing demands of industry as we move towards a low carbon society. It will focus the provision of a green skills pathway for local and regional residents to upskill and gain additional qualifications.
- As a training centre it will help to address the current green skills shortages, but also help to identify what skills will be needed in the future, preparing our regional labour market for the green skills our economy will require over the next decade.
- The EAMPF will support local and regional programmes such as Celtic Freeports and Floating Offshore Wind proposals and their associated supply chains.

Net Zero Skills Action Plan³⁵

The Plan sets out the Welsh Government’s commitment to net zero skills by investing in people, skills and talent as crucial drivers towards a stronger, fairer, greener economy. It is accepted that status quo is not sustainable, and the plan is the first step in helping to guide decisions on business investment and planning, with education providers and our public services. The plan will help learners of all ages understand how the support they will receive is supported by a skills system and economy that is fit for the future.

Whilst it is important to recognise the short and medium-term skills requirements of employers and equip our future generations accordingly, we also know identifying the right skills are vital in achieving a transition to Net Zero.

The EAMPF will match key priorities of the Net Zero Skills action plan, including growing a skilled workforce to meet our net zero commitments, and strengthening the [green] skills system – supporting the ambition to grow a highly skilled workforce in Wales.

³⁵ [Net zero skills action plan | GOV.WALES](#)

Innovation Strategy for Wales³⁶

The new Welsh Government Innovation Strategy sets out aspiration for Wales to be a leading, innovation-based nation.

The strategy focuses on ensuring innovative new technologies are developed to help solve the biggest societal challenges facing communities, ensuring those solutions reach every part of society. Through collaboration, the aim is to bring about better healthcare, tackling the climate and nature emergencies and creating better jobs and prosperity for businesses, universities, and local communities.

This new cross-government vision of innovation for a stronger, fairer, greener Wales points the way to a different approach to innovation in the future; one which adopts a “mission-based” attitude and collaboration into the following four missions; *Education, Economy, Health & Well Being and Climate & Nature*.

As can be determined from the information provided above, the EAMPF closely aligns to and can make a direct contribution to two of these missions.

- **Education:** ‘helps ensure Wales has an education system that supports the development of innovation skills and knowledge’
- **Economy:** ‘driving Wales forward to be a leading, innovation-based nation. This will see a Welsh economy that innovates for growth, collaborates across sectors for solutions to society’s challenges, and adopts new technologies for efficiency and productivity’.

The strategy makes a firm commitment to drive up investment from the UK Government and beyond in Welsh research, development and innovation (RD&I), significantly increasing RD&I investment outside London and south-east England. According to UKRI figures shown in figure 1.1 below Wales as a region lags behind other areas of the UK in terms RD & I funding leveraged.

³⁶ [New innovation strategy launched for a stronger, fairer and greener Wales | GOV.WALES](#)

Table 1.4 UKRI Spend

NUTS1 Name	UKRI Spend* FY 2018-19 £M	UKRI Spend as % of local GVA	UKRI Spend per capita £M
East Midlands	301	0.29%	62
East of England	530	0.34%	85
London	1079	0.26%	120
North East	215	0.40%	80
North West	457	0.27%	62
Northern Ireland	87	0.22%	46
Scotland	593	0.43%	109
South East	831	0.32%	91
South West	386	0.29%	69
Wales	131	0.21%	42
West Midlands	363	0.27%	61
Yorkshire and the Humber	406	0.34%	74

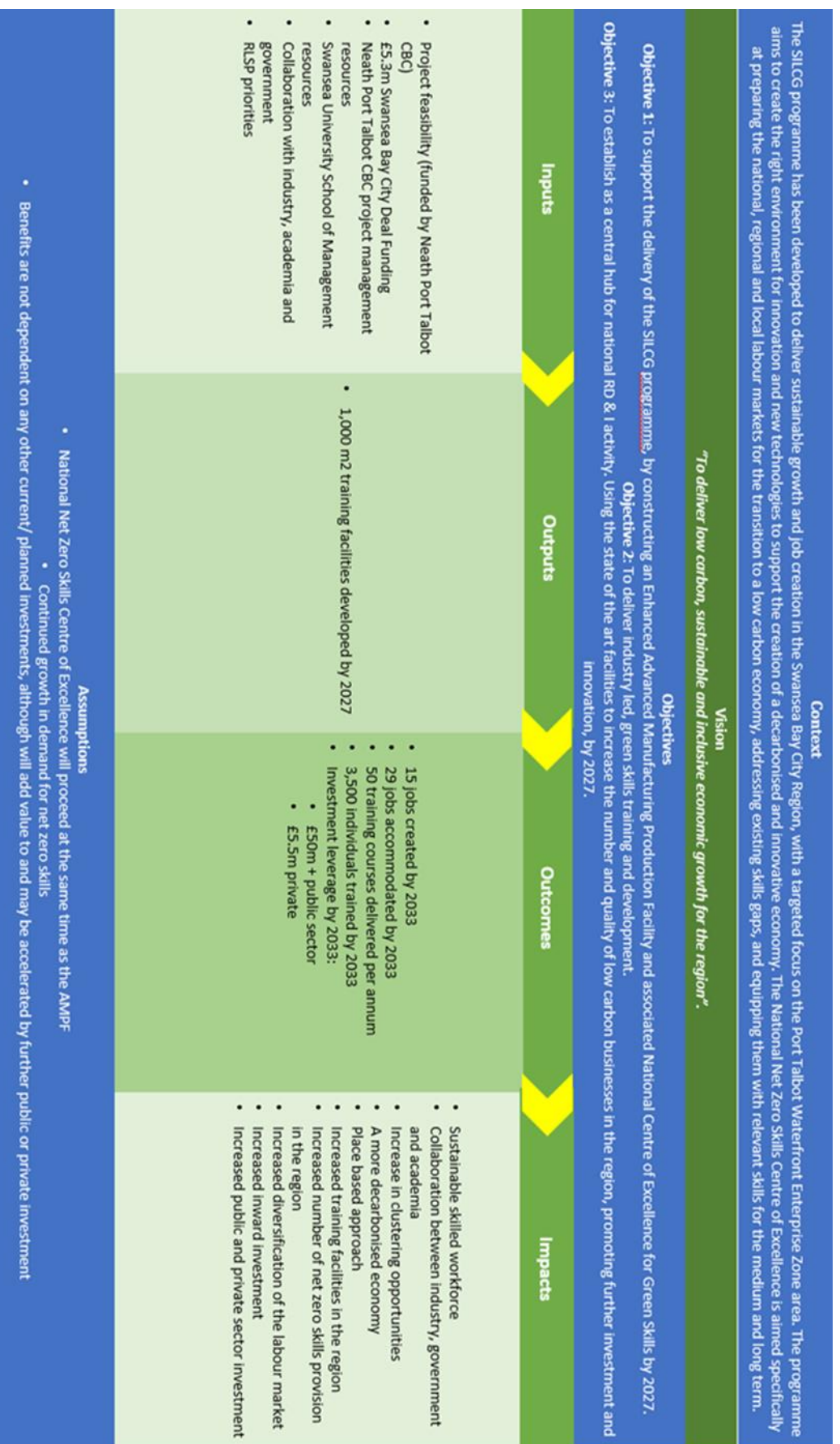
The EAMPF will seek to enhance and increase the levels of RD & I activity within the region by providing a facility to assist the growth of existing innovation clusters, and attracting inward investment from similar organisations/businesses.

1.2.4 Strategic drivers summary

The strategic drivers at UK, national, regional and local levels shown in the business case are clearly aligned and support the development of proposals focused on low carbon economic growth. In particular:

- **The UK and Welsh Government recognises the importance of decarbonisation to ensure economic growth is sustainable;**
- **There is a clear need to move towards renewable energy sources to increase efficiency and reduce costs, and for the public sector to exemplify this;**
- **Strategic imperatives to foster innovation and entrepreneurialism in high-value R&D-based opportunities;**
- **The creation of high-quality jobs is a clear link through all policy levels, as is a desire to provide training and development solutions to upskill existing workers in preparation for the transition to a low carbon economy.**
- **The overall cohesion of strategic drivers supports the rationale of developing the EAMPF/NNZS project. Moreover, the catalysing effect of this project is anticipated to deliver significant benefits, developing a base of expertise in a critical field that brings together research and industrial applications with the physical infrastructure that will generate inward investment and start-ups, support the sustainability of indigenous businesses, and create a supporting network of training and job opportunities in a talent pipeline.**
- **The vision is that the EAMPF along with the other SILCG projects, will establish Neath Port Talbot and the region as an ecosystem delivering a diversified and sustainable cluster for innovative low carbon growth.**

1.2.5 NNZS Logic Model



1.3 Case For Change

Developing the case for change must involve collaboration with key stakeholders to shape the Investment Objectives and inform the business needs. To ensure the robustness of the case for change, stakeholders were identified and engaged to assist with the development of this business case. (See Appendix 1).

This follows HM Treasury and Welsh Government's Better Business Case guidance, establishing a robust case for change with a clear understanding of:

- *What we are seeking to achieve – the **Investment Objectives**;*
- *What is currently happening – the **Existing Arrangements***
- *What is required to close the gap between what is happening now (Existing Arrangements) and what we are seeking to achieve (Investment Objectives) the **Business Needs**.*

*In this way the case for change is established on the basis of **need**, rather than simply a contention that a project is a 'good thing to do'.*

1.3.1 Investment Objectives

Stakeholder engagement has been undertaken through workshops to develop the Investment Objectives and the long-list to short-list options using the Options Framework (documented in part 1 of the Economic Case). A list of stakeholders consulted and workshops held can be found at Appendix 1. Also provided are letters of support from relevant interested parties (See Appendix 2).

Investment objectives form a key element of the 'case for change' within the Strategic Case. The Objectives describe what the delivery organisation and key stakeholders wish to achieve in terms of targeted outcomes. They should describe the expected outcomes of the project, should be SMART i.e. specific, measurable, achievable, realistic and time bound, and address the five key reasons for investment:

- **Improving economy** – *reducing the cost of existing services, or creating income*
- **Improving efficiency** – *improving the delivery of services in terms of outputs*
- **Improving effectiveness** – *improving the quality of services*
- **Statutory compliance** – *investing in services so they meet legal or best practice standards*
- **Re-procurement** – *investing to ensure that services subject to a contract that is expiring can continue, or be replaced.*

The Investment Objectives for the EAMPF are outlined below and support the delivery of the over-arching SILCG programme, align to UK, national and regional priorities, and describe what we wish to achieve in terms of targeted outcomes.

Stakeholder workshops were held between [August 2020 and October 2023] to discuss and agree the Investment Objectives and long-list to short-list options for the investment (See Appendix 1).

The following Investment Objectives were agreed with corresponding baseline suggested measures:

	Investment Objective	Measures	Total Measures
		NNZS	EAMPF
1	To support the delivery of the SILCG programme, by constructing an Enhanced Advanced Manufacturing Production Facility and associated National Net Zero Skills Centre of Excellence by 2027.	<ul style="list-style-type: none"> • 1,000 sq.m training facilities developed by 2027. • 15 Jobs Created by 2033. • 29 Jobs accommodated by 2033. 	<ul style="list-style-type: none"> • 5,000 sq.m of hybrid production & training facility developed by 2027. • 118 Jobs created by 2033. • 140 Jobs accommodated by 2033.
2.	To deliver industry led, net zero skills training and development. Upskilling the local/regional/national labour markets with appropriate skills to enable transition to a net zero economy, whilst supporting the development local and regional low carbon projects by 2033.	<ul style="list-style-type: none"> • 50 Training courses per annum delivered by 2033. • 3,500 individuals trained by 2033. 	<ul style="list-style-type: none"> • 50 training courses per annum delivered by 2033 • 3,500 individuals trained by 2033.
3.	To establish as a central hub for national RD & I activity. Using the state of the art facilities to increase the number and quality of low carbon businesses in the region, promoting further investment and innovation, by 2033.	<ul style="list-style-type: none"> • Investment attracted £50m + £5.5m private by 2033. 	<ul style="list-style-type: none"> • Investment attracted £50m + public /£9m Private by 2033. • 15 SMEs Accommodated

Located on a brownfield site on Baglan Energy Park the facility will enhance the growing RD&I cluster in the area to transform the area into a knowledge focused business hub, creating hundreds of skilled jobs.

The land negotiations between NPTCBC and Welsh Government are advanced, and there are no issues currently identified. Further site surveys will be undertaken as part of the development process to understand what site remediation may be required.

The land is owned by Welsh Government and the overall capital costs of delivering the entire enhanced project are estimated to be circa £22.5m – **this OBC is seeking the approval of an additional £5.3m to create a 1,000 square metre National Net Zero Skills Centre of Excellence ('NNZS') within the facility.** The Council plans to procure a partner to operate the facility and its sustainability will be realised through existing links with industry, academia and government.

With a focus on decarbonising the manufacturing process, the EAMPF project derives from the Swansea Bay City Deal *Supporting Innovation and Low Carbon Growth* programme, which has been developed to inject momentum into the delivery of sustainable growth and job creation in the Swansea Bay City Region. The project forms part of the programme's *Industrial Futures* tranche, which has a primary objective to address the gap between demand and supply for business and industrial sites and premises, as well as creating the right environment for innovation, new technologies and a decarbonised local and regional economy.

This business case is seeking an additional investment of £5.3 million from the City Deal, in addition to the £17.2m already secured for the construction of the Advanced Manufacturing facility ('AMPF'). As stated above this additional funding will enable the project to deliver an Enhanced AMPF, incorporating the NNZS, and as a result will address the existing skills gap as we transition to a Net Zero economy.

1.3.2 Existing arrangements

The potential impact of the EAMPF (AMPF and NNZS) to address the strategic drivers and deliver the outcomes articulated by the Investment Objectives is wide ranging.

This section therefore describes the '*status quo*' from a broad perspective, covering:

- Regional Productivity
- Manufacturing
- Academia & Research, Development & Innovation
- Sector Clustering
- Net Zero Skills

1.3.2.1 Regional Productivity

The Swansea Bay City Region (SBCR) is a critical driver for the Welsh economy, with a population of 688,000, supporting 302,000 jobs and 22,000 businesses. Figure 1.4 below shows regional productivity per hour is underperforming compared to the UK average and the Cardiff Capital region over the past two decades³⁷. In 2015, GVA per employee was 74% of the UK average³⁸, down from 77% in 2010 and 90% in 1981/39. Only 71% of the working age population is classed as economically active compared to 76% for the UK as a whole⁴⁰. Skill levels in the region compare poorly to other regions of Wales and the UK, with fewer people with high levels qualifications and many with none at all⁴¹ and reliance on the larger foundational industries in the region to support the regional economy and provide high value jobs.

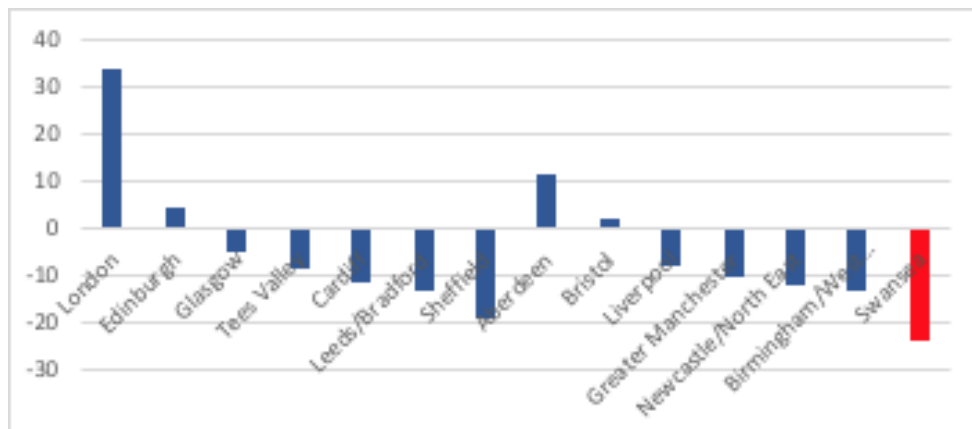


Figure 1.2 – SBCR productivity per hour relative to UK average (2016)

The Landscape of Wales - Sector Employment Demographics

Data from Enginuity (sector organisation representing engineering and manufacturing in Wales) reflects that the combined Advanced Manufacturing and Engineering (AME) sub-sectors in Wales employ 96,900 people across 5,805 establishments. Of those working in AME, an estimated 66,000 people are employed in technical roles such as professional engineers, scientists and technologists.

³⁷ <https://www.walesonline.co.uk/business/business-news/shocking-economic-figures-wales-regions-14260311>

³⁸ [Swansea Bay City Region City Deal Heads of Terms](#)

³⁹ [Swansea Bay City Region Economic Regeneration Strategy, 2013-2030](#)

⁴⁰ [Data from 2010. Source: Swansea Bay City Region Economic Regeneration Strategy 2013-2030](#)

⁴¹ [Swansea Bay City Region: A City Deal 2016-2035, The Internet Coast](#)

Key AME sub-sectors in Wales include metals (27% of AME employment), consultancy, testing and analysis (16%), electronics (15%), aerospace (14%) and automotive (10%).

Micro-sized establishments (less than 10 employees) account for 82% of total AME establishments, Small and Medium-sized Enterprises (SMEs (10 to 249 employees)) represent 17% of establishments and less than 1% of AME establishments in Wales are large (250 employees plus) – just 495 of approx. 120,480.

Demographics of the technical workforce in the AME sectors in Wales

Working status - 95% of the AME technical workforce is a company employee and 95% of the technical workforce is employed on a full-time basis with only 9% of the technical workforce being female. 6% of the technical workforce is aged 16-24 years old, with 9% aged 60 years and over. Only 8% of the technical workforce has some sort of disability with only 5% of the technical workforce coming from an ethnic minority.

Occupations - In terms of technical occupations, approximately 12,500 people are employed as technicians, 19,670 people are employed in craft level occupations and 17,345 in operator level occupations. These three technical occupations account for 75% of total employment in technical occupations within the AME sectors in Wales.

Employment trends -The AME sectors in Wales have experienced a period of major restructuring. Between 2010 to 2014, there was a net gain of nearly 17,000 jobs (+21%), compared with an increase in employment of 3% across all sectors in Wales. In 2015, there were 433 postings for technical engineering jobs in Wales.

Employment projections - Considering retirements, for operator, craft and technician technical roles, there is expected to be a net requirement across the AME sectors in Wales for 4,000 new recruits (800 per annum) in these occupations between 2016-2022.

Vacancies - Employers in the AME sectors in Wales show a substantial demand for new recruits. In 2015, it was estimated that 18% of AME establishments in Wales had vacancies compared to 14% of establishments across all sectors. In total, there were 1,400 vacancies across the AME sectors in Wales. In terms of specific occupations, it is estimated that there were vacancies for 210 operators, 550 crafts person's and 130 technicians.

Over three-quarters of all AME vacancies in Wales were from SMEs (50-249 employees).

It is estimated that 10% of AME employers in Wales had hard-to-fill vacancies with a total of 660 hard-to-fill vacancies reported. Two-thirds of all hard-to-fill vacancies were in craft, technician and operator occupations. Skill shortages in applicants were the main reason for these hard-to-fill vacancies. Employers

in Wales have increased their provision of off-the-job training from 47% in 2013 to 49% in 2015, reflecting an increased awareness of the need to tackle the problem themselves.

1.3.2.2 Manufacturing

MAKE UK, which represents the UK manufacturing community, reported on the current state of the manufacturing sector in June 2020. It stated that manufacturing has continually reinvented itself in order to adapt to the many factors and forces which drive change (source: A manufacturing future for Wales: a framework for action)⁴².

One of the main manufacturing opportunities in South Wales is in the established steel and metals industries. This section therefore examines the extent of this industry in the region, the impact on the regional and UK economy and describes smart manufacturing approaches being pursued in relation to these industries.

There is a diverse range of steel and metal producers, suppliers and customers within the SBCR, critical to the UK, national, regional and local economies.

The UK steel industry directly contributes £1.6 billion to the economy, employs 31,900 people in production facilities, downstream processing and rolling and distribution businesses and supports 52,300 jobs through its supply chains and local communities⁴³ contributing £3.9 billion. The steel and metals industry in South Wales is the foundation of this economy, comprising:

- Tata Steel – the largest steel producer in the UK – with four facilities in Wales, employing over 5,000 people in the SBCR at the Port Talbot integrated steel works and steel packaging operation within Llanelli. Every job at Tata Steel supports another 1.22 within the region⁴⁴
- Celsa Steel and Liberty Steel with large operations in Cardiff and Newport
- Internationally recognised metal producers and SMEs: Timet, a titanium manufacturer supplying one-fifth of the world’s titanium; Sandvik Osprey, a global leader in the production of gas atomised metal powders; Wall Colmonoy & Weartech, producers of cobalt-based alloys; Vale, one of the largest refineries in Europe producing high purity nickel and subproducts; and Darlow Lloyd, specialising in waste management and asset recycling

⁴² <https://gov.wales/sites/default/files/consultations/2020-09/manufacturing-future-wales-consultation-document.pdf>

⁴³ <https://www.makeuk.org/insights/publications/new-deal-for-steel>

⁴⁴ <https://wer.cardiffuniversitypress.org/articles/abstract/10.18573/j.2012.10440/>

Figure 1.3 below shows the associated average salary in the steel industry is 28% higher than the national average and 46% higher in Wales and Yorkshire and Humberside – areas of high socio-economic deprivation.

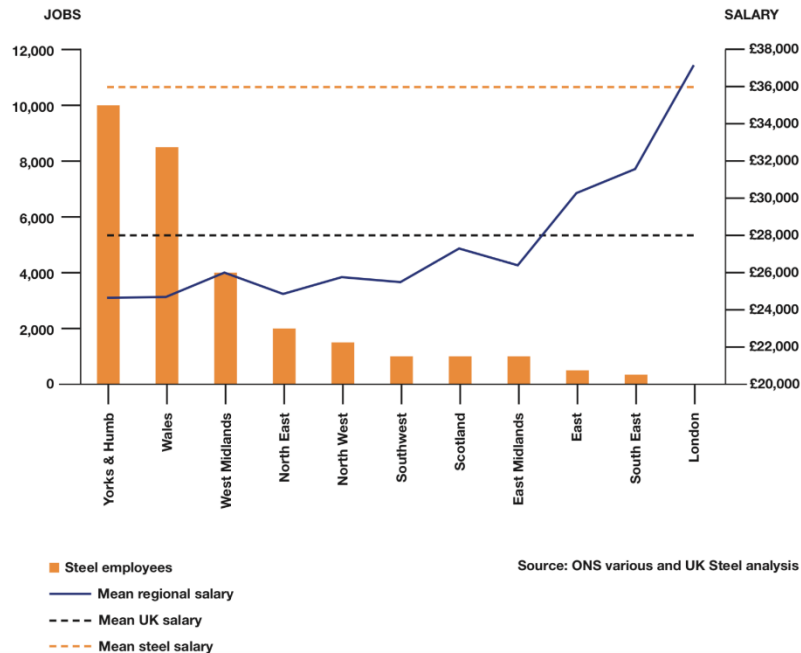


Figure 1.3: UK steel employment by region, average regional and steel salary⁴³

There are six steel producing companies in the UK with associated downstream processing, rolling and distribution businesses, producing 7.3 million tonnes of crude steel which was further processed into a finished product, such as strip, plate and wire rod.

Steel is endlessly recyclable, versatile, cost effective, ubiquitous and critical to a diverse industrial economy, with supply chain linkages into major downstream manufacturing sectors such as automotive, aerospace, rail, construction, energy, packaging and machinery.

Market sectors are transforming to improve performance and reduce carbon emissions. UK steel producers are striving to develop and supply higher-value steel – for example, the construction sector is developing low-impact energy efficient housing and the automotive sector is reducing vehicle weight and moving towards electrification.

UK finished steel demand forecast was 11 million tonnes in 2030⁴⁵, split by market sector, with construction and automotive being dominant areas (see Figure 1.4).

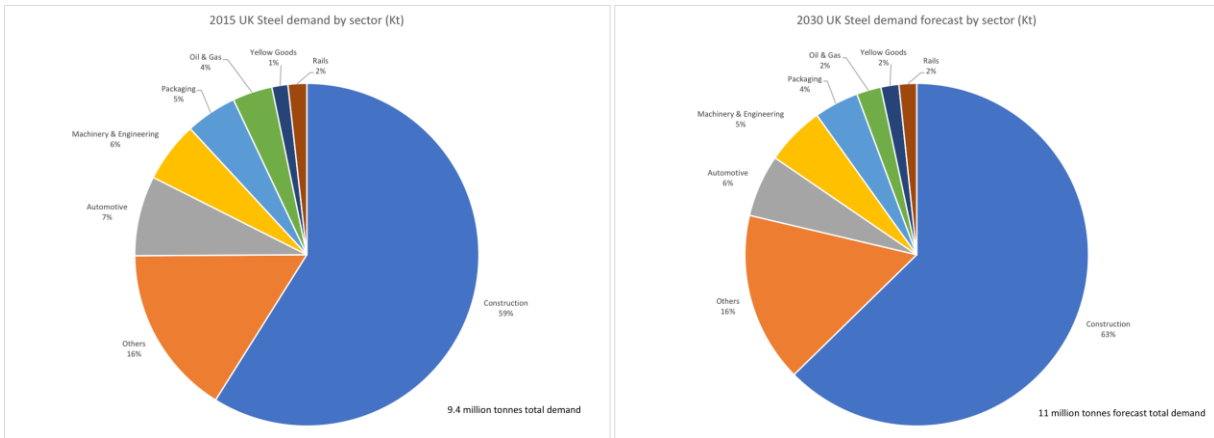
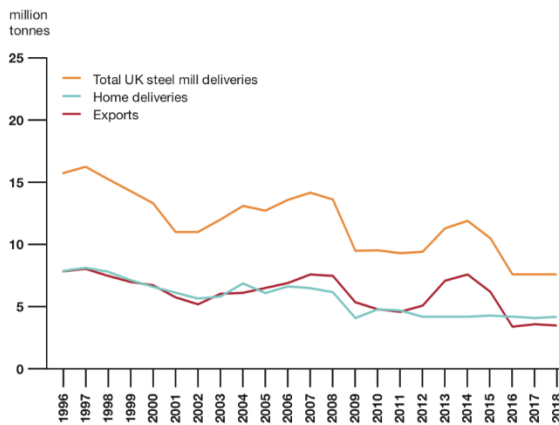


Figure 1.4: Forecast finished UK steel demand by sector

Note: 'Others' includes appliances, light and commercial vehicles, ships, rolling stock, process equipment and internal combustion engines

While UK demand for steel continues to increase, there has been a steady decline in home and export deliveries (see Figure 1.5 below).

UK steel mill home and export deliveries 1996 - 2018



UK steel requirement 2010 - 2018

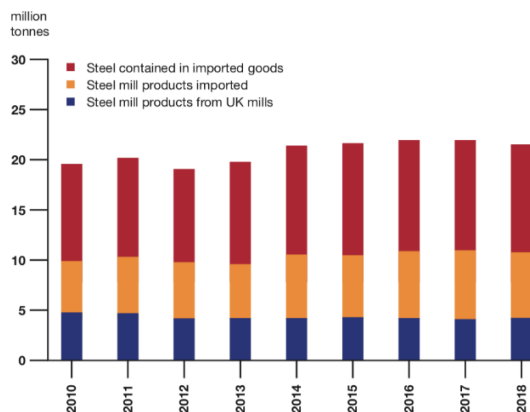


Figure 1.5: UK steel mill product supply into the UK market and level of exports⁴⁶

⁴⁵ <https://www.gov.uk/government/publications/uk-steel-industry-future-market-opportunities>

⁴⁶ <https://www.makeuk.org/insights/publications/uk-steel-key-statistics-guide-2019>

In terms of trends impacting on future demand, a number of broader ‘macro’ trends are likely to impact future employment and manufacturing across Wales, including Port Talbot. These are mostly related to technology change and its associated cultural impacts e.g. increased flexible working / homeworking and an increase in self-employment. There are also changing opportunities in manufacturing e.g. 3D printing for small-scale prototyping and production, which may lead to changing demand for industrial and ‘hybrid’ units.

Therefore it is very important that the EAMPF/NNZS is flexible and able to adapt to changing cultures, technologies and manufacturing needs.

Neath Port Talbot has a large manufacturing and engineering skills base, anchored through the presence of large regionally significant employers such as Tata, which employs approximately 4,000 people. With approximately 18% of employees working within manufacturing, these skills are an asset to new businesses investing in the region, and to the existing business base, as traditional skills are transferable into new industries or to new operational processes.

Upskilling and leveraging the existing manufacturing skills base will be a key activity of the EAMPF/NNZS and doing so support the economic transition to a low carbon economy.

With Neath Port Talbot’s strengths and capabilities, there is a clear economic opportunity to use the EAMPF as a catalyst to drive investment towards net zero activity, whilst at the same time considering other sectors so as to enable not only a low carbon but diversified future economy.

1.3.2.3 Academia & Research, Development and Innovation

Academic institutions in Neath Port Talbot are hubs for innovation and high quality skills development. Swansea University is the third largest university in Wales, is research-led and its Bay Campus is located in Neath Port Talbot.

The Swansea University Bay Campus is home to a multitude of innovation assets, and teaches a range of courses, with specialties in subjects including science and engineering.

The Neath Port Talbot Group of Colleges is a leading further education and vocational qualifications provider, voted the number one training provider in Wales in 2020.

Accessibility to a highly skilled workforce and provision of skills training at quality academic institutions should be a key attractor for businesses looking to expand or locate in Neath Port Talbot. There are also

opportunities for academic institutions to play a role in assisting with the deployment of green skills at the EAMPF and retraining the existing labour market as industries move towards more sustainable activities and a greener economy.

Research and development is fundamental in enabling businesses and economies to respond to new challenges. R&D activities in Neath Port Talbot are playing a key role in creating the conditions for business growth and ensure the long-term resilience of the economy.

RD&I clusters exist around Baglan Energy Park, Harbourside, Swansea University Science and Innovation Bay Campus and University of Wales Trinity St David Waterfront Innovation Quarter Campus in SA1, Swansea. The region has a growing number of RD&I initiatives and Centres of Excellence led by the local universities – Swansea, Cardiff, South Wales, and Trinity St David including:

SPECIFIC UK Innovation and Knowledge Centre (Buildings as Power Stations): Focused on research, proof of concept and commercialisation of building-integrated technologies that captures and stores solar energy.

Welsh Centre for Printing and Coating: One of the World’s leading centres in printing and coating.

Energy Safety Research Institute (ESRI): Delivers research in energy and energy-safety.

Materials Research Centre: One of the UK’s leading centres in materials teaching and research.

Centre for Solar Energy Research (CSER): This facility collaborates on renewable-energy R&D across Wales and has proven expertise and a world class reputation in researching novel photovoltaic materials and devices.

Future Manufacturing Research Institute: The FMRI, Swansea’s newest Research Centre, aims to transform the field of manufacturing through a unique combination of expertise and facilities focused on digital and advanced materials / manufacturing.

Swansea Additive Manufacturing Research: This group aims to understand and develop additive manufacturing processes, specifically powder bed laser fusion.

Materials Advanced Characterisation Centre: Also referred to as MACH1, the centre offers a wide range material and measurement capabilities to deliver multi-sample, high-throughput testing of advanced materials to industry.

ASTUTE 2020+ (Advanced Sustainable Manufacturing Technologies): The partnership provides expertise and R&D support in 3 key areas: Advanced Materials Technology, Computational Engineering Modelling, and Manufacturing Systems Engineering.

1.3.2.4 Other key research facilities in Neath Port Talbot

Global Rail Centre of Excellence

The Global Centre for Rail Excellence, will be a unique and purpose built facility and dynamic testing environment for rolling stock testing and rail infrastructure, in addition to providing storage and maintenance for rail transport. The centre will include test ovals, alongside R&D and training facilities and a proposed hotel. The project also seeks to bolster the region's position as a **low-carbon** hub, through investigating the provision of green hydrogen production fed from adjacent wind and PV farm developments, to be used on site.

Steel and Metals Institute (SaMI) Transitioning to SWITCH Harbourside

The Steel and Metals Institute SaMI is an open access facility that works predominantly with the steel and metals industry to deliver practical innovative solutions. SaMI supports the steel and metals industry in the challenge to decarbonise through lower carbon products and processes, reduced carbon emissions, and creation of a circular economy.

Advanced Engineering and Materials Research Institute (AEMRI)

The AEMRI will be an engineering inspection facility at TWI Wales. The centre will support aerospace, automotive, electronics, nuclear and renewable energy research.

TWI Technology Centre (Wales)

The centre specialises in the development and application of non-destructive testing (NDT) which is important in sectors such as transport, petrochemicals and energy.

South Wales Industrial Transition from Carbon Hub (SWITCH)

SWITCH conducts research, focusing on 'future-proofing' the steel industry and its supply chain through innovation. Funding via the City Deal will be used to fund a purpose built facility and equipment for this research.

Wales' first commercial energy positive **Bay Technology Centre**: Comprising 24 offices and 8 labs, the centre provides high-quality flexible office space for existing businesses in the energy and renewables sector, including those starting and scaling up.

1.3.2.5 Sector Clustering

Some of these clusters are located on-site at the universities but many are located elsewhere, including a strong innovation clustering around the Port Talbot Waterfront Enterprise Zone (PTWEZ) which incorporates Baglan Energy Park (BEP) and Harbourside, including:

- BEP is home to the Baglan Bay Innovation Centre, a 39,000 sq. ft. facility built over four floors, that provides 32 incubator units and communal meeting rooms for innovative, high-tech and sustainable technology led businesses to grow.⁴⁷
- BEP has also attracted world class investment from a range of high-profile companies including GE Energy, Hi Lex Cable Systems and Montagne Jeunesse.⁴⁸
- Also located on BEP is Wales' first Renewable Hydrogen Research and Demonstration Centre, run by the University of South Wales, and SPECIFIC, the Sustainable Product Engineering Centre for Functional Innovative Coatings, run by Swansea University, with strategic partners Akzo Nobel, NSG Pilkington, Tata Steel and Cardiff University.
- Harbourside is also developing into a new business hub. The new Harbourside R&D Village is already home to leading global innovators such as Tata Steel and TWI UK Ltd and is developing a reputation for successful innovation in production. Land has also been identified here for a proposed new education campus planned by Neath Port Talbot Group of Colleges.

The clustering of businesses alongside other businesses and academia is recognised as a key enabler of innovation. Neath Port Talbot is characterised by clustering of R&D and innovation assets, specifically at **Swansea University, Baglan Energy Park** and **Harbourside Business Park** highlighting great potential for knowledge sharing between academia, industry and business.

The **SWIC Cluster and Deployment Plan**⁴⁹ is a cluster of key industrial companies across South Wales who are together driving innovation with the aim of reducing carbon emissions and supporting ambitions for a green industrial revolution ambitions.

The project will create opportunities to showcase the wider region and Wales as a leader in decarbonisation and clean growth, for example through CCUS, hydrogen and circular economy initiatives.

The EAMPF project recognises and will be central to any future opportunities for further business and innovation clustering across Neath Port Talbot, including the potential for a Silicon Valley-style 'Innovation Accelerator', which could drive innovation and delivers quality jobs that raise prosperity and boost economic growth.

⁴⁷ Viability Study for Plot 4 Baglan Energy Park, Rowland Jones, 2015

⁴⁸ Swansea Bay Technology Centre Pre-Design Assessment V2.0. Solcer Ltd, 2018

⁴⁹ <https://www.swic.cymru/deployment>

Floating Offshore Wind (FLOW)

FLOW is a key and emerging opportunity for Port Talbot, which this opportunity could bring forward further private sector investment in the region and generate new green jobs.

This opportunity is reinforced within ABP's vision for the future of the Port in Port Talbot. FLOW could support existing industries and create new. The potential for greater offshore wind development throughout Swansea Bay and the Celtic Sea, could contribute to meeting the energy needs at the Port of Port Talbot but also create new jobs through both construction and maintenance. There are manufacturing opportunities throughout the wind turbine supply chain such as in cable manufacturing. Steel is identified as one of the key components required for FLOW, which gives Port Talbot a competitive advantage through its proximity to the steelworks. There is also export potential for some of the supply chain areas such substructure fabrication and turbine assembly. FLOW opportunities at Port Talbot would be synergistic with the capabilities of nearby areas, for example, offshore maintenance at Milford Haven.

Celtic Freeport Bid

NPTCBC working with Pembrokeshire Council, Milford Haven Port Authority and Associated British Ports have been successful in their Freeport Status bid to Welsh Government with the aim of establishing a globally significant world class renewable energy cluster for FLOW, hydrogen, CCUS and related manufacturing (incl. alternative fuels).

Freeport status will enable us to:

- Embrace technological change and drive innovation.
- Strengthen our links further academia and innovation assets and projects such as South Wales Industrial Corridor (SWIC); South Wales Industrial Transition from Carbon Hub (SWITCH), Mobile Energy Storage as Heat (MESH) (collaboration between Tata and Swansea University to capture, store and release heat from the steelworks to heat buildings), Hydrogen Research Centre, Flexis, SPECIFIC, etc.
- Attract large scale private investment in the energy technologies of the future.

1.3.2.6 Net Zero Skills

The Welsh Government's Net Zero Skills Action Plan sets out the strategy for developing the green skills our economy will require, now and in the future, as it transitions to low carbon/net zero.

Current provision of green skills in the region is both sporadic and patchy, mainly focussed around traditional 'sustainability' skills, and being delivered primarily by existing academic institutions. There is little coordination of industry led skills training, and an absence of flexibility in delivery methods and

facilities to be able to respond to and address skills training for new or emerging products, methods or technologies.

Recent activity undertaken by the SBCD Skills & Talent project has developed a skills barometer spreadsheet which identifies all of the skills providers in SW Wales along with courses on offer. This has also allowed the skills team to identify the gaps in skills provision across SW Wales and identify key areas when skills are needed.

There is currently very limited skills training which is directed towards future local development programmes such as FLOW and Celtic Freeport, and there is a need to look further to the horizon at what the skills requirement will be within the next 3 – 5 years.

1.4 Business Needs

The Business Needs represent the gap between the desired outcomes (Investment Objectives) and the Existing Arrangements expressed as problems with the status quo and opportunities for change.

To reflect the problems and opportunities associated with the Existing Arrangements, this section is structured against the headings from the Existing Arrangements section:

- Regional Productivity
- Manufacturing
- Academia & Research, Development & Innovation
- Sector Clustering
- Net Zero Skills

1.4.1 Regional Productivity

The Welsh Government Economic Action Plan identifies increasing productivity and diversification as key to economic growth. The steel industry is well established in the SBCR and a major contributor to GVA, jobs and the local economy, but overall, the productivity of the region is underperforming, with GVA at 74% of the UK average and decreasing over time.

The region needs targeted investment to arrest the decline in economic performance. The development of the region's research, development and innovation sectors to develop clustering opportunities is critical to future proofing the economy and harnessing the opportunities of the Green Industrial Revolution. A

key opportunity is to build on the existing industry and steel production in the region, but in doing so, diversify the industrial and manufacturing base and support the associated supply chain. Doing more of the same will not work. – there is a need to drive change, meet modern demands and standards, including increasingly stringent environmental standards, to cement the region’s future for steel expertise, RD&I, energy and renewables sectors and to create and safeguard jobs.

Productivity gains and boosting the region’s economic competitiveness can be achieved through existing companies, start-up companies and inward investment. Key growth sectors are energy, renewables, advanced manufacturing, high value engineering, ICT, financial and business services, and tourism.

Bridging the Regional Skills Gap

With craftsperson’s, operators and technicians being the occupations most likely to be affected by the need to acquire new skills or knowledge there is clearly an identified need to have a training provision to support these potential learners employed or likely to be employed in our key sectors.

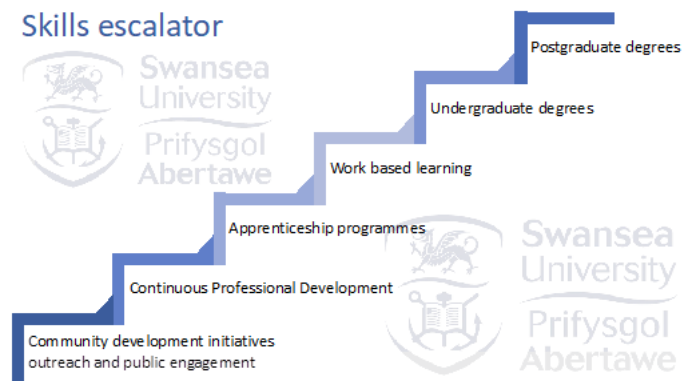
The advertised reason for these specific skills gaps in the AME sectors is a lack of experience because of recent recruitment or possible deficiencies in existing training provision within the local Work Based Learning provision with the main skills cited as technical, practical or job specific skills (approximately three quarters of regional establishments reporting skills gaps).

The proposal is to design and build the EAMPF providing programmes of study at the required levels and content to support companies and their staff to reskill or upskill in the new emerging technologies used in industry 4.0, or to enable people to develop new careers in advanced manufacturing in addition to their apprenticeships or vocationally specific qualifications.

The EAMPF would provide training using “Leading Edge” equipment and processes which will underpin the transition of Local Wales companies up to industry 4.0 level of operations.

The initial Level of outcomes for learners would be targeted at Level 3+, upskilling craftsperson’s to a new content or higher level not currently available through their Work Based Learning or Academic programmes of study. This would complement the “NOW SWITCH” proposal (Net Zero Wales Sustainable Welsh Industrial to Transition from Carbon hub) initiated by Swansea University.

One of its 4 elements being the “Switch on Skills and their Skills escalator” which is also aimed at level 3+ learners.



Overall, there is an over reliance on the foundational industries to support the economy and provide high value jobs. Economic diversity is increasingly important as are skills – there are too few people with relevant high-level qualifications and many with none at all – all of which contributes to a lack of innovators and entrepreneurs in the region.

The recently published skills barometer provides evidence that South West Wales is lacking in skills providers who can support the net zero skills agenda with courses appropriate to this area. In addition, Industry Wales has identified the need for industry led skills provision to meet the needs of industry over the next 5 to 15 years.

During the project development period the South West Wales Regional Learning and Skills Partnership were consulted within the context of their role with the SBCD Skills and Talent programme and more generally with the promotion of learning and skills across the region. An extract below is provided from the letter of support written by Jane Lewis (Regional Partnership Manager) (See Appendix 2.1) on behalf of the RLSP.

“The development of a Centre of Excellence of Net Zero skills will meet the ambitions of the City Deal Skills and Talent Programme not only by bringing a Centre where people and businesses can learn and manufacture together but, it will be a venue where academics in our universities and colleges can work together. This will be a unique opportunity where Higher and Further Education; School Education can learn from each other and have greater links to learn from the manufacturers themselves, sharing best practice and building the skills platform of the future, creating economic growth for the region.”

Economic business needs are to:

- **Diversify the economy (industrial and manufacturing base), increase productivity and stimulate recovery by supporting the steel and metals industry and the decarbonisation of industry, alongside encouraging existing innovation clusters to further develop.**
- **Support the supply chain associated with the industrial and manufacturing base.**
- **Develop skills in the region to support existing and developing industry.**

1.4.2 Manufacturing

There is a need to develop clean growth ‘mini clusters’ and net zero industry clusters. The South Wales Industrial Cluster (SWIC) has recently been awarded funding from UKRI to develop a net zero industrial cluster in South Wales, which includes Port Talbot⁵⁰. The SILCG programme will support the delivery of the net zero industrial cluster with its interlinked programme of projects, and in particular the EAMPF will be a central pillar of this support.

In their letter of support for the EAMPF project (See Appendix 2.2) Dr Chris Williams, Head of Industrial Decarbonisation at Industry Wales (on behalf of the South Wales Industrial Cluster) commented ***“we would like to endorse and support the plans for the addition of the National Net Zero Skills Centre of Excellence with the ambition to upskill the existing workforce and provide relevant training for new people who wish to work in the green economy and maximise the opportunity of the number of new developments taking place in the region.”***

The UK steel industry is a major contributor to the UK economy and South Wales and the SBCR are core to that economy. Over the past 20 years, despite increasing demand for steel and steel products in the UK, UK suppliers have not been able to fully satisfy this demand (and export demand), losing market share to foreign suppliers.

Safeguarding the steel industry in the UK and SBCR therefore requires improved competitiveness – meeting customers’ evolving needs for innovative steel products. In the wider global steel market, there is strong competition for steel and metal products and the UK’s opportunity to be competitive is through innovation – creating higher quality steel and metal products; reducing costs and increasing their range of applications and reducing carbon emissions from their processing (given steel and metal production is

⁵⁰ <https://www.ukri.org/news/ukri-announces-winners-of-industrial-cluster-competition/>

a major source of GHG emissions, innovation in steel production and processing could provide very significant improvements to GHG emissions in the SBCR). The SBCR is well placed to drive this innovation, building on the heritage of steel production and skills in the region alongside the support available from the region's universities and research institutions.

Existing Manufacturing skills deficit

26% of advanced manufacturing and engineering establishments ('AME') in Wales reported existing skills gaps. The incidence of skills gaps increases by size of establishment, ranging from 20% of micro-sized establishments to 46% of large establishments.

It is estimated that 7% of the AME workforce in Wales have skills gaps. The main reason for skills gaps in the AME sectors is a lack of experience/being recently recruited. The main skills cited as lacking in employees were technical, practical or job specific skills (approximately three quarters of establishments reporting skills gaps). Employers were most likely to have technical skills gaps with craft, operator, and technician occupations.

The other main skills gaps highlighted include problem solving, team working, oral communications and management skills.

Jane Lewis Regional Partnership Manager at the RLSP reports, ***"There are approximately 9,000 currently employed in manufacturing in Neath and Port Talbot, with 17% due to retire in the next 10 years. The anticipated growth for the region is 16,000 jobs across primary and secondary services and these will be across all levels, bringing in high paid, high skilled opportunities into the region."***

It is therefore essential to equip the next generation of AME workers with the skills for the future. With significant developments such as FLOW and Free Ports it is key to the economic future of the county/region that we have an appropriately skilled workforce to deliver these opportunities.

The resultant impact of these skills gaps were increased workload for other staff, increased operating costs, difficulties meeting quality standards and difficulties introducing new working practices. AME employers were clear that the main action necessary to overcome this skills deficit would be to increase training activity/spend or increase/expand trainee programmes.

Developments in manufacturing will support and develop indigenous businesses – and as described above – will be delivered through research and innovation and collaboration between government, industry and academia, as well as developing the skills of the local and regional labour force.

Business needs in relation to manufacturing are to:

- **Maintain and improve the competitiveness of the SBCR steel and metals industry.**
- **Support industry, academia and government collaboration through applied research.**
- **Establish a robust, flexible and accessible training programme/system to upskill existing and potential employees within the sector.**

1.4.3 Academia, Research, Development & Innovation

There is a need to further develop the region's RD&I sectors to support economic growth and diversification, in particular in the Clean Growth sectors including energy and renewables.

The range of regional assets as detailed in the existing arrangements section demonstrates the potential of the regions applied research output in relation to ICT, advanced manufacturing and life sciences. The key to turning this applied research into economic growth is through commercialisation of research and spin-outs. **There is a need to facilitate the spin out and product development which will be supported by increasing the stock of a range of modern commercial/industrial premises, and in relation to this proposal, the development of the EAMPF.**

Professor David Worsley OBE, Swansea University in his letter of Support for the NNZS project commented, **"This centre is clearly allied closely to SWITCH Harbourside and sits in a local net zero ecosystem including our SPECIFIC project sites, the Cardiff University Combustion Centre and the USW Hydrogen hub. It is indeed very exciting to be part of this journey and the news that you are planning to support net zero skills escalation meshes uniquely with our work with the SWITCH on Skills programme."** (Appendix 2.3).

Dr David Warren at Swansea University, M2A Operations Manager at Swansea University (See Appendix 2.4) **comments "I see many opportunities for collaboration at the Advanced Manufacturing Production Facility including research and skills to develop the technology and workforce to reach our Net Zero goals and contribute to a prosperous region."**

An established, cohesive and multidisciplinary research base is in place for steels and metals in the SBCR, with collaborations between government, industry and academia through Swansea University's research centres including SPECIFIC, MACH and SaMI. Their research supports the local and national steel industry to remain competitive through innovation in products and processes and seeking decarbonisation opportunities. However, these collaborations require support to thrive – they are constrained by lack of space, researchers, equipment and unsuitable infrastructure:

- Although high quality research and innovation is present within the region, the research community from which impact can be delivered is relatively small⁵¹.
- Current applied research capability is constrained by low grade infrastructure and lack of available space for expansion.
- People, including co-located industrial staff already exceeding available capacity with design layout and space impacting on the ability to collaborate effectively.
- Current equipment capability insufficient to meet research needs.

Addressing these problems would improve the quality and scope of metals research and the associated output with opportunities to investigate such areas as:

- Alternative low carbon fuel sources for steelmaking.
- Improve scrap segregation and utilisation while meeting quality requirements.
- Use of societal waste as a fuel source in the steelmaking process.
- Improve product capability through alloy development and late-stage product development, integrating approaches that will accelerate development stage.

Business needs in relation to RD&I are to:

- **Support maintenance and growth of market share in the steel and metals industry by ensuring the UK and SBCR remain leaders in steel innovation, advancing RD&I and decarbonisation**
- **Address the practical needs of RD&I that support commercialisation through spinouts, high growth start-ups and indigenous business growth – providing appropriate infrastructure and collaborative space for industry and academia, including flexible office/laboratory, industrial premises, and classroom facilities for learning/training.**

⁵¹ https://www.hefcw.ac.uk/documents/policy_areas/research/reid-review-en.pdf

1.4.4 Sector Clustering

The range of regional research and innovation assets demonstrates the potential of SBCR's applied research output. Turning this into productive economic activity requires research to be commercialised and spun out into new companies, which relies on strong links between academia, research, and industry through **physical co-location and collaboration**.

Incubation, early-laboratory and real-world living-laboratory facilities and proving factories are key components of successful innovation ecosystems around the world. Demand is increasing for these capabilities, with 30 enquires from companies within the last 12 months, requiring 12,350 m² of business space and outstrips limited supply. As of 2016, Swansea had four incubators according to official research conducted by the Department for Business, Energy and Industrial Strategy. However, with the exception of TechHub, each is either creative-industry or health-focussed and not in a position to support spin-outs and potential high-growth start-ups in the targeted areas such as energy, renewables, and smart manufacturing. In addition, co-located commercial office space and laboratory facilities are only available at the fully let R&D Village at Harbourside.

There is therefore a need to meet these demands for 'co-located space' and to continue to provide and increase numbers of appropriately skilled individuals to use them.

Innovation in the region taking place through the Hydrogen Centre, ESRI, FLEXIS, Baglan Energy Park and Harbourside R&D Village, to support low-carbon energy and can investigate opportunities including:

- Development of renewable hydrogen production, energy storage and usage in vehicles.
- Next generation energy distribution.
- Carbon capture utilisation and storage.

Business needs in relation to sector clustering are to:

- **Build on strong existing innovation clusters fostering further collaboration between government, industry and academia.**
- **Encourage private sector investment in appropriate facilities.**
- **Work with the Skills and Talent programme, RLSP and other skills and training providers to map skills gaps to be delivered by NNZS, and secure funding for decarbonisation-focused development of research specialists and work-based learning to ensure there are appropriate skills to support low carbon economy and the Green Industrial Revolution.**

1.4.5 Net Zero Skills

The Regional Learning and Skills Partnership ('RLSP') in their South West Wales employment and skills plan 2022-25 identify that there is a need for **'a huge nationwide education / training programme is required for Net Zero.'**

It identifies that green (net zero) skills need significant attention if we are to have a suitably skilled labour market to drive our economy as we move towards a low carbon society. It suggests that there is an existing shortage of **'specific green skills in all sectors'** and that **this existing skills gap will only increase if it is not addressed.**

In addition to green skills the plan identifies skill gaps in specialist knowledge in the energy sector in areas such as; Turbines, Solar, Hydro, Nuclear, Marine, Tidal, Renewable technologies, Carbon Capture / Decarbonisation.

In the manufacturing sector in South West Wales the RLSP highlights; Smart Manufacturing, Disruptive Technologies / Digital, Materials (sustainability, circular material products) as skill pathways that need to be developed.

In order to continue to transition towards a low carbon economy there is significant importance to develop regional strategy, infrastructure and green skills pathways to support the development of our workforce in order that the skills that will be required in the future are readily available.

The Regional Learning and Skills Partnership (RLSP) brings together industry partners from all sectors along with training/ education providers to develop a strategic partnership to enhance and promote skills and training in the region, specifically to meet the demand of employers both now and in the future. The plan contains key actions on training needs, including the emerging technologies to meet the net zero agenda.

The post COVID-19 landscape for skills has changed the way in which individuals now receive training; there has been a clear shift in the training requirements specifically around digital technology and there has been an increased demand for apprenticeships and work experience opportunities as we emerge from a world of hybrid working.

The RLSP skills plan identifies that recruitment remains a major challenge for many sectors with many facing economic difficulty as jobs remain unfilled. This is compounded by the current cost of living crisis and the challenge of delivering on the climate change agenda, all which impact on the productivity of businesses. However, skills remain a priority for business, and the plan details the priority areas that need to be addressed to ensure that we develop the workforce for the future.

The Net Zero Carbon Budget policy, establishes that all sectors will need to have embedded “green skills” within their workforces and a huge knowledge and upskill process will have to take place. Recruiting educators for these roles is a challenge, both digital and net zero are large ever evolving skills, and attracting talent to fill these roles is difficult. To Achieve Net Zero by 2030 the ‘green skills deficit’ will undoubtedly need to be addressed, with survey responders (*from the RLSP plan*) stating that renewable skills will be the most required job skill in the coming years, yet many employers in the sector are still unsure of what specific skills in this subject area would be needed.

Business needs in relation to Net Zero Skills are to:

- **Ensure industry has a clear path and understanding of their support network. Promote availability of upskill and reskill pathways.**
- **Develop skills for current and future regional employer’s requirements, engaging learners with industry and showcasing the exciting opportunities.**
- **Sector perception improvement.**
- **A central hub delivering industry led green skills development.**
- **A flexible green skills delivery strategy, that enables skills pathways to be designed to consider new and emerging methods and technologies as they become apparent.**
- **Skills pathways led by industry in order to ensure ‘industry competency’ as well as having the proficient basic skills required.**
- **Additional funding for specialism and skills developments – particularly in relation to decarbonisation, which needs to be addressed in collaboration with the Skills and Talent Project within the SBCD portfolio.**

1.5 Potential Project Scope

1.5.1 Potential business scope and key service requirements

This section of the Strategic Case starts the process of considering the potential scope of the project based on the changes required to satisfy the identified business needs and deliver the Investment Objectives (outcomes).

Scoping activities will continue throughout the development phase of the project to inform the business case, and a related needs analysis for the advanced manufacturing industry in the region with the focus being inclusive of:

- **New Technologies** – Differentiating between the educational offer available and working well, the educational offer available which needs improvement and finally the educational offer which is yet to be developed all based around employer need.
- **Stakeholder Perception** -The way forward and how they can be involved.
- **Staged implementation strategy** – Trying to meet the overall need of employers.
- **Legacy** – How will the strategic plan include funding not just for capital investment but for day-to-day activity in management of such an innovation centre.
- **Knowledge Flows** – Availability of Existing Local Provision, Progression, Levels, Skills Transfer, Qualifications, Outcomes and Curriculum content.
- **Talent and Skills Development** – Demographic Challenges and if companies have responded to the challenges with relevant recovery actions already, discussing the implications of such actions.

Continued stakeholder scoping workshops are expected to highlight specific needs development requirements as indicated by similar requests from other regions in Wales.

The EAMPF will provide access to cutting edge equipment, systems and software in a state-of-the-art facility, tailored to the needs of learners and industry ensuring a prolific learning experience. It will provide employment led and oriented training needed to develop company's quotas for economic improvement and sustainability.

The NNZS will seek provide the highest quality training by expert trainers in a simulating environment endorsed by leading industrial vendors, where the specialist training programmes would be designed to reduce the skills gaps in supporting industry to accelerate innovation through technology.

Co-Location

The project is to develop an industry led, hybrid facility offering specialist facilities to commercialise RD&I (proving factory concept) supported by industry led skills provision to complement FE/HE provision in the region. It is proposed that these two activities are synergistic, and to gain maximum benefit should be co-located at the same development site.

“I can see that integrating the skills centre of excellence with an advanced manufacturing centre provides a number of additional, synergistic benefits. For example, the ability to allow first hand industrial training on state of the art manufacturing equipment to give the learners real world experience that cannot be gained from just classroom environments. We therefore feel that the two projects are highly complementary and will bring many positive benefits to the locality and SBCD region.” David Gwynne, Interim CEO, Celtic Freeports (See Appendix 2.5).

“The uniqueness of the centre being co-located with the AMPF will give those undertaking courses the opportunity to practice their new skill sets on state of the art equipment housed in the facility.” Ben Burggraaf, CEO, Net Zero Industry Wales (See Appendix 2.6).

“Combining the skills centre with the advanced manufacturing production facility, an already approved SILCG project, will provide a unique and unrivalled provision in the local area and city deal region for the benefit of all. To address the shortfall in jobs within the green economy that are needed by 2050 this can be addressed with the step change envisaged by supporting a centre of this size and scale in conjunction with the AMPF supporting supply chains and the diverse local manufacturing industry.” Nicola Pearce, SILCG Programme SRO, Director of Regeneration & Environment NPTCBC (See Appendix 2.7).

In addition to a number of letters of support from relevant stakeholders (See appendix 2.8 onwards), the concept of co-location has also been proven to be successful in similar facilities across the UK.

CASE STUDY 1 - CATCH (HUMBERSIDE)

Established in 1999 the **CATCH** facility in Humberside⁵² is an example of a hybrid, industry led hybrid facility supporting the process, energy, engineering and renewable industries, with a combination of production and classroom facilities (for skills training). **CATCH** has also recently announced plans for an additional £60M state-of-the-art training facility, to reach a training goal of 1000 apprentices a year by 2029. This significant investment is being made in anticipation of a series of Net Zero projects set to commence from as early as 2024 and beyond, and a corresponding demand for skilled labour will be required. These Net Zero projects are projected to generate a potential 20,000 new industrial jobs, necessitating an unprecedented, rapid upscaling of the existing skills pipelines.

The new Net Zero facility is planned at the same location as the existing facility, and house a national net zero conference and learning centre, bespoke classrooms and workshops for electrical, instrumentation, mechanical technical skills, a welding and fabrication hub with an impressive 160 welding bays, and a UK first of its kind outdoor Process Unit Training Module to enable a real process site experience in a safe environment for all trade skills.

⁵² <https://catchuk.org/about-hcf-catch/>

The **CATCH** Vision is threefold:

1. Being at the leading edge of change, with outstanding employer-led networks sharing best practice and promoting innovation.
2. The provision of a unique, authentic and industry focused training and competence assessment facility with a world class reputation and track record in delivering employer needs.
3. Ensuring future generations of employees are prepared to enter the workplace with the right skills and behaviours needed by industry.

The similarities with the proposed EAMPF project are clear.

The EAMPF will create a hybrid, industry led production and training centre supporting the diversification of the regional economy, creating value added jobs and a working environment where manufacturing and innovative businesses can flourish and where products can be commercialised, thus increasing the GVA of the region. It will be recognised as a national centre for the delivery of the key 'green skills' required to equip the labour market in Wales for transition to a low carbon economy.

CASE STUDY 2 – NATIONAL MANUFACTURING INSTITUTE SCOTLAND (GLASGOW).

The **National Manufacturing Institute Scotland**⁵³ or '**NMIS**' is a cutting-edge manufacturing centre led by the Scottish Government operated by the University of Strathclyde, from its base in Glasgow.

Similar to the proposed EAMPF, at **NMIS** industry, academia, and the public sector work together on ground-breaking manufacturing research to transform productivity levels, make companies more competitive and boost the skills of the current and future workforce.

NMIS ambitions are;

- Increase productivity by reducing barriers to innovation.
- Grow the economy by galvanising investment and increasing manufacturing competitiveness within Scotland and internationally.
- Catalyse job creation and strengthen supply chain links across the country.
- Provide leadership, build collaborations and enhance capability to influence adaptation and exploit manufacturing opportunities to boost Scotland's transition to a net-zero emissions economy by 2045.
- Inspire and attract talent and equip current and future workforces with the skills they and the manufacturing and engineering community need.

⁵³ <https://www.nmis.scot/>

The **NMIS** website states *“We do this by working with manufacturing businesses of all sizes from across Scotland, the wider UK, and beyond making it easier for them to access innovative technologies and connecting them with our widespread national and international network of world-leading industry and academic experts and collaborators.”*

In June 2023 **NMIS** opened its new world-class, flagship facility at the heart of the Advanced Manufacturing Innovation District Scotland (AMIDS) in Renfrewshire, aiming to be a major stimulus for the country’s economy, skills development, and prosperous, sustainable, communities.

This advanced manufacturing facility will support manufacturing, engineering and associated technology businesses of all sizes. Innovative R&D will help them to become more productive, tap into emerging markets, embrace new technologies and achieve net-zero targets.

The new facility will also be home to the NMIS Manufacturing Skills Academy, fully connected Digital Factory, and publicly accessible collaboration hub. The Manufacturing Skills academy offers advanced manufacturing training and development opportunities for individuals at all levels of their career.

Both CATCH and NMIS (as well as other examples across the UK and Ireland) will be considered in greater detail as the project plan evolves and consultation for the EAMPF advances.

The concept of co-locating the advanced manufacturing facility and the National Centre of Excellence for Green Skills has been developed from discussions with industry and academia, and learned lessons from similar facilities around the UK – as outlined in the case studies above. The benefits of cross-working, sharing knowledge and expertise, and allowing both industry and academia to support and develop each other in a specialist and purpose built facility will have long term benefits for the region.

Expected Training Areas for Engineering and Manufacturing Disciplines

- Low/Reduced Carbon Initiatives
- Electrical and Electronic Maintenance
- The Smart Factory and Industry 4.0 Initiatives - Autonomous Control
- Digital Implementation Techniques – Coding, Cyber Security and PLCs
- Automation and Control using Robotic Systems of Operation
- Advanced Manufacturing - Additive manufacturing, Machining, CNC, CAD/CAM

The initial Level of outcomes for learners would be targeted at Level 3+, upskilling craftsperson’s to a new content or higher level not currently available through their Work Based Learning or Academic programmes of study. This would be an industry led facility and the training provided would respond to the needs of industry, with approximately three quarters of local companies reporting skills gaps.

The specialist training programmes would be designed to reduce the skills gaps in supporting industry to accelerate innovation through technology.

Table 1.4 Potential scope and Services

Investment Objective	Potential business scope & key service requirements
<p>IO1 - To support the delivery of the SILCG programme, by constructing an Enhanced Advanced Manufacturing Production Facility and associated National Centre of Excellence for Green Skills by 2027.</p>	<ul style="list-style-type: none"> • Investment in the development of high quality, flexible, specialist commercial and industrial premises to support research, commercialisation and collaboration. • Provide infrastructure and support at each stage of the life cycle of a business to enable diversification in research, spin-outs, start-ups, growth companies and inward investment. • Develop clustering opportunities. • Establish an open access facility to work with a range of industrial partners.
<p>IO2 - To deliver industry led, green skills training and development. Upskilling the local/regional/national labour markets with appropriate green skills to enable transition to a net zero economy, whilst supporting the development local and regional low carbon projects by 2033.</p>	<ul style="list-style-type: none"> • Ensuring skills and training match the opportunities emerging from the green economy. • Ensure appropriate infrastructure to support R&D, prototype, commercialisation, business growth. • Industry led, specialist green skills pathways to be developed matching the existing and future requirements of the region. • Align skills pathways with national, regional and local green skills strategies and priorities.
<p>IO3 – To establish as a central hub for national RD & I activity. Using the state of the art facilities to increase the number and quality of low</p>	<ul style="list-style-type: none"> • Providing proof of concept in decarbonisation interventions for industry, transport, buildings and economic growth.

Investment Objective	Potential business scope & key service requirements
Carbon businesses in the region, promoting further investment and innovation, by 2033.	<ul style="list-style-type: none"> Strengthen collaboration between government, industry and academia to secure private and private investment and research funding. Increasing RD&I in steel and metals to support competitiveness and decarbonisation targets. Use the EAMPF as a lever to support growth of existing RD & I activity, providing a springboard to increase the region's UK share of RD & I funding. Attract and retain increased inward investment.

1.5.2 Benefits

Table 1.5 Summary of main benefits

Investment objectives	Main benefits criteria by stakeholder group	Benefit classification	Stakeholder
IO1 IO3	<ul style="list-style-type: none"> Productivity gains including from commercialisation of R&D, using uplift in salaries of additional jobs to UK Commercialisation of new and improved products Productivity gain, based on uplift in salaries of additional jobs to UK Safeguard and create employment opportunities More resilient supply chain Build on existing strengths 	<p>CRB</p> <p>CRB</p> <p>CRB</p> <p>CRB</p> <p>NCRB</p> <p>NCRB</p>	<p>SBCR</p> <p>WG</p> <p>UKG</p> <p>Industry</p> <p>Academia</p> <p>Community</p> <p>Wider society</p>
IO2 IO3	<ul style="list-style-type: none"> Income related to industry collaboration and training 	<p>CRB</p>	<p>SBCR</p> <p>WG</p> <p>UKG</p>

Investment objectives	Main benefits criteria by stakeholder group	Benefit classification	Stakeholder
	<ul style="list-style-type: none"> Value of research, based on funding attracted from public funding sources Increase academia and industry collaboration and innovation Clustering impact Establish the region as a leader in green skills development. Prepare labour market with skills required by industry during transition to Net Zero economy. 	<p>NCRB</p> <p>NCRB</p> <p>NCRB</p> <p>NCRB</p> <p>NCRB</p>	<p>Industry</p> <p>Academia</p> <p>Community</p> <p>Wider society</p>

See Benefits Register at Appendix 3.

1.5.3 Risks

Table 1.6 Summary of main risks

Risk Description	Mitigation
Developmental	
<p>Resource capacity Resource capacity of project teams, particularly during the development phase</p>	Effective project governance / re-deployment if necessary / team working.
<p>Procurement Failure to generate interest via tender process, potentially leading to increased costs / extended timescales.</p>	Detailed project and resource allocation. Regular progress meetings and project monitoring.
Implementation	

Risk Description	Mitigation
<p>Project slippage Slippage as a result of late business case approval, procurement delays or match funding requirements, which could lead to project delay and / or increasing costs</p>	<p>Detailed project and resource allocation. Regular progress meetings and project monitoring.</p>
<p>Planning delays Potential slippage, obstruction or increasing costs due to planning delays or unexpected planning conditions/ changes to planning legislation</p>	<p>Effective project management and early communication with the planning authorities. Pre-application consultation initiated.</p>
<p>Land ownership issues Inability to negotiate land agreements in a timely fashion could lead to programme slippage and / or increased costs</p>	<p>Detailed programme and resource allocation. Early engagement with land owners. Regular progress meetings and project monitoring.</p>
<p>Technological advances Potential cost increases in the long term if equipment needs to be upgraded</p>	<p>Proper engagement with stakeholders to be carried out during development phase. On-going project management / monitoring.</p>
<p>Operational</p>	
<p>Loss of key members of staff Resource capacity of project / project teams, could lead to time delays, increased costs</p>	<p>Effective project governance / re-deployment if necessary / team working</p>
<p>Failure to achieve outputs / outcomes Could lead to clawback of funding and reduced impact of projects.</p>	<p>A Monitoring and Evaluation Plan will be produced. Effective project management processes / meetings to be employed.</p>

Risk Description	Mitigation
Financial	
Increasing capital costs Further funding could be required i.e., unforeseen costs, changing requirements.	Effective project management / budget monitoring.
Dependence on multiple funding sources Further funding may be required if not all sources are secured.	Effective programme management / budget monitoring.
Short term WG and other funding sources Further funding may be required if not all sources are secured.	Effective programme management / budget monitoring.
Failure to secure tenants/Operator On-going revenue responsibilities affecting long term sustainability	Effective programme management processes / early advertising and engagement with potential tenants/operator.

See Risk Register Appendix 4

1.5.4 Constraints and Dependencies

1.5.4.1 Constraints

The constraints that have been placed on the programme are detailed below:

- Project budget based on the fixed funding agreement between NPTCBC and the SBCD.
- 15-year funding profile with a front-loaded delivery within 5 years.
- Availability of development sites.
- Planning and development parameters.
- Requirement to find a suitable operator.

The EAMPF/NNZS project will have an agreed capital budget and delivery timeframe. Proven project management methodologies will be implemented to ensure delivery within budget and management of change process. In addition, NPTCBC will be responsible for ensuring that the specified procurement route is implemented.

Analysis of suitable development sites has been completed with a suitable plot identified for the EAMPF project at Baglan Energy Park. Any further constraints highlighted during design phase will be managed through the project governance process.

1.5.4.2 Dependencies

To add value to the regional skills ecosystem, the project will ensure synergy and manage inter-dependencies between other projects in the SILCG programme, the SBCD portfolio and FE, HE and private sector provision. The project will not rely on these interventions to fund the skills provisions but the facility could be used to deliver regional skills provision.

The key inter-dependencies are identified below:

- Ensuring added value with FE and HE skills courses, Skills and Talent Programme.
- Ensuring alignment to industry led skills requirements.
- Ensuring alignment and responsiveness to opportunities and threats.
- Operator to establish revenue generating delivery model

There are also a number of external dependencies outside the programme environment:

- **Renewable energy projects within the region:** A stakeholder engagement plan has been developed to ensure alignment between the EAMPF and other initiatives, programmes and projects in the region.
- **SBCD Skills and talent project:** Align the proposed skills activity within the EAMPF with the SBCD skills and talent project to identify skills and talent development requirements, enhancing existing provision within the region.
- **Strategies and policy drivers:** Governance process to ensure a continual review of any new policies and changes that could have a potential impact on project delivery.
- **Private sector engagement:** Stakeholder management at SILCG programme level and specifically related to EAMPF project.

2.0 The Economic Case

2.1 Introduction

This Economic Case section provides an updated perspective of the EAMPF project incorporating scope for associated skills development activities (i.e. from AMPF in PBC to EAMPF). It is set in the context of the Supporting Innovation and Low Carbon Growth PBC, and in response to the Case for Change and broader Strategic Case.

The Economic Case considers the EAMPF in its entirety, rather than appraising the NNZS as a stand-alone operation. The rationale for combining this assessment is that the AMPF and the NNZS are intrinsically linked, both in terms of activity and their co-location, and thus the combined EAMPF project will generate economic output 'more than the sum of its individual parts'. In other words, the two activities (AMPF and NNZS) will complement each other, leading to increased economic impact of both activities by the fact they are working together/co-located.

The ambitions to deliver against the SILCG programme have been built into the overarching PBC and project-level SOC, appraising (including revisiting) options against the following Investment Objectives (developed as SMART in section 1.3.1);

- To support the delivery of the SILCG programme, by constructing an Enhanced Advanced Manufacturing Production Facility and associated National Net Zero Skills Centre of Excellence by 2027.
- To deliver industry led, green skills training and development. Upskilling the local/regional/national labour markets with appropriate green skills to enable transition to a net zero economy, whilst supporting the development local and regional low carbon projects by 2033.
- To establish as a central hub for national RD & I activity. Using the state-of-the-art facilities to increase the number and quality of low carbon businesses in the region, promoting further investment and innovation, by 2033.

Long-list options were developed initially in October 2020 (SOC) and subject to comprehensive review within the PBC development in May 2021 (See Appendix 5). Potential for alignment with the wider programme to maximise value for money, including risk management was a core part of this exercise. These options are summarised and reviewed from SOC potential for:

- A - Do Minimum: **Rely on existing activity/sites, with minimal investment such as into expansion of existing programmes.**
- B - Dispersed Growth: **Investment fund for disparate activities to address training and practice needs.**
- C - Intermediate I: **Incremental development of activities at existing key sites (variants of this option are presented in Option B and the prior AMPF SOC).**
- D - Individual NZ Skills Centre: **Dedicated facility for delivery of relevant skills programmes.**
- E - Intermediate II: Mixed – **Integrated Advanced Practice and skills development facility (Preferred Approach).**
- F - Intermediate III: Mixed – **Multiple Site Incremental Development and fund for disparate activities.**
- G - Do Maximum: **Expand existing sites and establish new Integrated Facility (+D).**

Short-list Options were developed through a series of engagements with key stakeholders of Local Government, Industry (through Industry Wales, Net Zero Industry Wales and local industry), RLSP and academia (FE/HE) through to June 2023 (See Appendix 1). Subsequent analysis focused upon Investment Objectives and Critical Success Factors. This identified a Preferred Option along with Alternatives, appraised as summarised below, baselined against both Do Minimum and the earlier form AMPF (prior to SILCG programme) presented in the PBC.

- Do Minimum: **Reconfiguration of existing facilities and provider activities for alignment with EAMPF objectives.**
- Preferred Approach: **Creation of Integrated Advanced Manufacturing Centre (i.e. AMPF + Skills Centre) co-locating Practice and Skills development.**
- Alternative (1): **Development of single site with investment fund for distributed skills and practice activity (potentially managed through NPT/SBCR/partners).**
- Alternative (2): **Distributed development through investment fund for practice and skills development (potentially managed through NPT/SBCR/partners).**

Details of each Option are included in subsequent sections. This appraisal has been updated following review, including to factor the update to Strategic Context (see Strategic Case), incorporating UK

Industrial Strategy; Build Back Better; National Infrastructure Strategy; and associated WG Policies/Strategies including Net Zero Wales.

The following table presents a summary of the Short-list appraisal, with further detail later in this case. Short-list options have been developed with Cost-Benefit Analysis presenting the following summary UK perspective (regional perspective in later sections). The AMPF proposal as presented in the PBC has been included as a further benchmark to show the shift with inclusion of the SILCG programme;

Options Summary	Do Minimum	Option 1 (Preferred) (EAMPF)	Option 2 (Alternate)	PBC Benchmark (AMPF)
NPSV	£0.56m	£32.5m	£29.3m	£29.6m
Public Sector Cost	£2m	£22m		£17m
BCR	1.3	2.54	2.2	2.2
Significant non-monetisable benefits	-	Widening access for careers in NZ sectors, ~3,500 individuals + PBC	-	Improved built environment
Significant unquantifiable benefits	-	Wider uplift of built environment Economy diversification (resilience)	Wider uplift of built environment Economy diversification (resilience)	Specific activities and products/ services ⁵⁴
Risk costs by type and residual OB	Delivery Risk £179k 20% OB	Delivery Risk £2.02m 20% OB	Delivery Risk £1.35m 20% OB	Delivery Risk £1.1m 20% OB
Switching values		23% reduction in benefits. (Delay/costs affect similarly)		
Time horizon and rationale	10yr horizon, based on standard GB guidance, and fitting with infrastructure and operation timescales to realise benefit.			

As shown in the above summary it, can be seen that EAMPF option provides best option for Skills ambitions and also enhances the existing AMPF case with a stronger BCR of 2.54 and increased NSPV with marginal increase in risk cost. As such, it demonstrates enhancement of the original (PBC) preferred option for AMPF while also leveraging that investment for delivery of the SILCG ambitions.

⁵⁴ As noted in PBC Appraisal

The summary of the Preferred Option refers to the following implementation;

Scope	In line with demand projections, create an additional 1,000 sq.m centre for skills development, along with the already proposed ~4,000sq.m facility for advanced manufacturing practice (Total integrated facility of 5,000 sq.m). Innovation scope across targeted TRLs and skills from foundation to HE, with focus on applied.
Service Solution	Mixed Capital Build and Procured Operator with delivery partners
Service Delivery	Procured Operator – bringing relevant practice and skills development capabilities
Implementation	(see SOC Appraisal)
Funding	5, 7-year project (10yr benefits horizon)

Sensitivity analysis has shown the preferred implementation as being most resilient in face of key risks occurring, from both UK and regional perspectives. Risks occurring that result in delayed and/or reduced benefits have the most significant impact on most implementations, although the Preferred Option presents a high level of resilience.

2.2 Investment Objectives & Critical Success Factors

The Internet Coast programme, along with HM Treasury Green Book guidance provides the overarching framework for defining Critical Success Factors and Investment Objectives (S6). These objectives sit alongside those of the associated AMPF as presented in the SOC and prior PBC. A work stream focused on developing these provided a feasibility report examining the potential for the region, baselined against similar initiatives delivered in comparable context⁵⁵. This section presents the IOs and CSFs with relevant notes on their development/rationale;

IO1 - To support the delivery of the SILCG programme, by constructing an Enhanced Advanced Manufacturing Production Facility and associated National Net Zero Skills Centre of Excellence by 2027.

The PBC has presented the need for advanced practice and skills development to be developed in support of the Programme level ambitions.

NPT Council and partner activity to date has developed a mix of indigenous and inward-investing enterprise within the cluster. The baseline and growth trend identified through ongoing research and project development has defined existing to longer-term requirements. Working closely with major

⁵⁵ A summary of this feasibility study was presented to WG, with latest update in June 2023

industry players including UK-wide strategic businesses such as Tata Steel has allowed many opportunities to flourish, though pent-up demand remains for facilities proximate to relevant facilities, for both start-up and large-firm partners. This is evidenced through activities such as the forthcoming Celtic Freeport initiative.

IO2 - *To deliver industry led, net zero skills training and development. Upskilling the local/regional/national labour markets with appropriate skills to enable transition to a net zero economy, whilst supporting the development local and regional low carbon projects by 2033.*

Supporting the upskilling of 3,500 individuals within the period at Level 3+.

Aligned to the SBCR Internet Coast ambition, EAMPF supports emphasis on high-value (GVA contribution) employment creation. The NPT track-record demonstrates the potential for significant job creation with high levels of additionality, targeting Advanced Manufacturing including Low Carbon Technologies. As presented in the Strategic Case, the global growth of this sector, including SIA-identified⁵⁶ smart specialisations shows this to be a strong area of potential for SBCR/UK. It also requires focus upon the role of the wider ecosystem of skills providers to provide the breadth needed for the evolving sector. Consultation has taken place with the RLSP and the SBCD skills and talent programme to identify areas of focus.

IO3: *To establish as a central hub for national RD & I activity. Using the state of the art facilities to increase the number and quality of low carbon businesses in the region, promoting further investment and innovation, by 2033.*

To realise 5,000 sq.m of market-driven facilities to support advanced practice and skills development for innovation and low carbon growth.

Connected to IO2, the facilities will have a focus on high TRL/MRL activity. Recent major inward-investments in preparation for Internet Coast demonstrate the potential for developing this innovation approach within SBCR, to benefit the UK as a whole. The Bay Technology Centre has shown how major partner initiatives attract and catalyse further innovation.

Critical Success Factors (CSFs)

The CSFs to support achievement of the above objectives included *Strategic Fit, Business Needs, Potential Value for Money, Potential Achievability, Supply-side Capacity and Potential Affordability*, along with the following project-specific factors:

⁵⁶ South Wales Crucible Science and Innovation Audit 2015 undertaken for UK Government

PBC Integration: The Supporting Innovation and Low Carbon Growth Programme is critical framing for the project proposal. Projects being realised through this broader PBC are not just important context but provide significant opportunity to maximise potential for the specific skills ambitions via their infrastructure and sector engagement. The ability of EAMPF to deliver effectively into this agenda requires alignment of capabilities, activities and timescales to maximise impact, manage risk and optimise value for money.

Internet Coast Integration: Drawing upon the new wave of General-Purpose Technology in AI and IoT is an important part of the case for change, and critical to achieving the longer-term spending objectives. Using the regional assets, existing and forthcoming, including the broader Internet Coast project portfolio is an important factor in delivering the targeted innovation activity.

2.2.1 Long List Options

A long-list of options was developed through a work stream from PBC to project-specific SOC, supported by desk-based research and review of initiatives targeting similar benefits. The long-list has been reviewed and updated at each stage of development. This process drew upon a depth of research of the regional cluster and its development potential, with specific focus upon the role of infrastructure and skills developments (see also Strategic Case).

Noting the alignment with the broader SBCR portfolio and the Supporting Innovation and Low Carbon Growth programme, development of the options framework has been through significant development and continued review. This has assisted in developing a broad and robust Options Framework, co-developed with stakeholders from across the region.

The summary of the long-list options including summary review is presented below, together with the Options Framework itself and identified Preferred Approach.

Approach	A - Do Minimum: Rely on existing activity/sites
Description	<p>This option describes no expansion of the existing ecosystem but aiming to focus activities to maximise efficiency of existing facilities. Current facilities and training activities are financed through various mechanisms already in place through a variety of internal and external funding models.</p> <p>Optimising configuration/capacity of existing activity/sites to accommodate growth and application of new technologies (e.g. IoT/AI). This would require some level of investment for reconfiguration to support new use cases, though with potential to capture some benefit through broader projects (including SBCR). As such, this approach would capitalise on sunk investments though with minimal new expenditure.</p>

Review	The approach provides greatest affordability, though weakest additionality. As shown in the case for change, existing facilities are operating at capacity with diminishing returns to improve their efficiency. Alongside potential capacity limits, the Approach would also miss the ambition to realise the Hub/Centre as a focus for the sector. In this respect the achievability is high, though with minimal impact upon business needs, strategic fit or integration. The approach would not achieve the investment objectives.
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Approach	B – Dispersed Growth: Investment fund for disparate activities
Description	<p>Creating a fund to invest in individual opportunities across the region on a competitive basis as they emerge in a portfolio of disparate activities/facilities. This would create pockets of infrastructure across the region with potential for co-investment from host organisations.</p> <p>The approach could draw upon previous business infrastructure investment models as used by Welsh Government, NPT itself, and development agencies. This could potentially be delivered through an open or rolling call, aligned with the Supporting Innovation and Low Carbon Growth targeted activities.</p>
Review	The approach would have the benefit of being market-led, attuned to individual opportunities. However, there is risk of overlap with other Projects within the Programme, as well as greater challenge in achieving alignment between potentially disparate activities.

Approach	C- Intermediate I: Incremental development of activity at existing sites
Description	<p>This option synthesizes a range of options considered at SOC stage, involving variants of smaller premises, existing business development and operator structure. A relatively limited investment across key sites (notably Harbourside) sites considered to begin an incremental increase in capacity and capabilities.</p> <p>This could involve redevelopment of facilities working with skills providers, made available through the reconfiguration of sites within the broader developments, or creation of new facilities contiguous with existing Low Carbon innovation activity.</p>

Review	Existing arrangements and familiarity with sites/operations gives potential confidence to deliverability while modest investment requirements give strong affordability. A range of facilities and operating models may fragment activity losing coordination and impact. It could also lack the initial scale required to attract further investment. As such, the scale of activity provides limited delivery against business needs and impact against investment objectives.
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Approach	D – Individual NZ Skills Centre - Dedicated facility for delivery of relevant skills programmes
Description	This option would involve creation of a new facility, with purpose of delivering new skills programmes for the NZ sector. Access to specialist facilities/equipment in-house and/or through partners would require consideration. Established outside of existing providers/provision it offers potential for multiple providers.
Review	The option aligns well with much of the ambition, delivering a clear focus for targeted skills development. A level of independence could also support multiple delivery partners maximizing reach/scope. However, weaker potential integration with the wider PBC and duplication of scope are limitations which undermine. It does however remain a further alternative following the Preferred and identified Alternative.

Approach	E - Intermediate II: Mixed – Integrated Advanced Practice and skills development facility (<i>Preferred Approach</i>)
Description	<p>This option describes a larger (in comparison to C) investment into an integrated advanced practice and skills facility. This option reflects a number of variants explored in the SOC, and delivers potential benefits of option D including a number of operator approaches.</p> <p>The option offers scope for longer-term co-investment through partnering model, as being developed through other City Deal projects. This could utilise existing activity and infrastructure at the site to demonstrate commercial viability.</p>
Review	<p>The option performs more strongly against critical success factors, including greater integration with the Supporting Innovation and Low Carbon Growth programme. Achievability of the approach is high, along with supply-side capacity based on experience of previous phases.</p> <p>The requirement for partnered delivery reduces capability challenges, albeit with reduced affordability, though increased potential value for money</p>

Option	F - Intermediate III: Multiple Site Incremental Development and fund for disparate activities
Description	This option describes the creation of a fund as described in Option B to invest in small opportunities across the region in addition to the expansion of a focal skills development facility as described in Option D .
Review	The approach combines the benefits of both approaches, however it also brings forwards the same challenges. Furthermore, the dispersed nature of the activity and potentially unaligned delivery of capacity could provide greater challenge in aligning supply-side capacity/co-investment

Option	G - Do Maximum: Expand existing sites and establish new Integrated Facility (+D)
Description	This option is a re-scoped Do Maximum following initial SOC appraisal. It describes all potential components of the wider appraisal, including a central facility, investment fund and distributed development. This is the most ambitious option, creating significant capacity across the region. In essence, it presents the total transformation plan within a single project.
Review	Being the most ambitious option, it aligns with critical success factors and spending objectives. However, affordability and supply-side capacity would be challenged, along with availability of sites and alignment with interdependencies within the broader programme delivery.

EAMPF: Options Framework

	A - Do Minimum: Rely on existing activity/sites	B – Dispersed Growth: Investment fund for disparate activities	C- Intermediate I: Incremental development of activity at existing sites	D - Individual NZ Skills Centre - Dedicated facility for delivery of relevant skills programmes	E - Intermediate II: Mixed – Integrated Advanced Practice and skills development facility	F - Intermediate III: Multiple Site Incremental Development and fund for disparate activities	G - Do Maximum: Expand existing sites and establish new Integrated Facility (D+)
Description	This option describes no expansion of the existing ecosystem but aiming to focus activities to maximise efficiency of existing facilities. Current facilities and training activities are financed through various mechanisms already in place through a variety of internal and external funding models.	Creating a fund to invest in individual opportunities across the region on a competitive basis as they emerge in a portfolio of disparate activities/facilities. This would create pockets of infrastructure across the region with potential for co-investment from host organisations.	This option synthesizes a range of options considered at SOC stage, involving variants of smaller premises, existing business development and operator structure. A relatively limited investment across key sites (notably Harbourside) sites considered to begin an incremental increase in capacity and capabilities.	This option would involve creation of a new facility, with purpose of delivering new skills programmes for the NZ sector. Access to specialist facilities/ equipment in-house and/or through partners would require consideration. Established outside of existing providers/ provision it offers potential for multiple providers.	This option describes a larger (in comparison to C) investment into an integrated advanced practice and skills facility. This option reflects a number of variants explored in the SOC, and delivers potential benefits of option D, including a number of operator approaches. The option offers scope for longer-term co-investment through partnering model, as being developed through other City Deal projects.	This option describes the creation of a fund as described in Option B to invest in small opportunities across the region in addition to the expansion of a focal skills development facility as described in Option D .	This option is a rescopeed Do Maximum following initial SOC appraisal. It describes all potential components of the wider appraisal, including a central facility, investment fund and distributed development. This is the most ambitious option, creating significant capacity across the region. In essence, it presents the total transformation plan within a single project.
Scope	Utilise existing facilities and ecosystem activities to support growth of existing, and capture of new, opportunities. Capital investment limited to enhancing efficiency of existing facilities. Potential for ~500s.m. of mixed distributed facilities ^a	Develop specialist capabilities / capacities in locations across SBCR with public and private sector in response to emerging opportunities. This would be market-led opportunities developing a portfolio of projects giving Open Access capabilities	Work towards ~5,000sq.m. (demand projection) of distributed capability across the cluster. Potential development of skills programmes with partners focused on each site	Development of 1,000sq.m. standalone facilities for skills programmes. Potential partnership delivery of FE/HE and industry-led delivery. In-house/partnered equipment for programmes. Potential to build upon Option A or fully-independent operation.	In line with demand projections, create a ~5,000sq.m. integrated facility for advanced practice and skills development. Innovation scope across targeted TRIs and skills from foundation to HE, with focus on industry-led practice.	Providing a combination of approaches B&D with I.e. 5,000sq.m. facility and other developments based on demand ^a	Develop both central and distributed capabilities offering ~5,000 + 5,000sq.m. total in order to progress ahead of demand. Skills offerings as per Option D with scope for further partner-based activity in distributed locations.
Service Solution	NPT innovation/skills support to existing activities	Development of facilities across the region through open competition amongst existing ecosystem	Mixed Capital Build and Procured Operator with delivery partners	Mixed Capital Build and Procured Operator with delivery partners	Mixed Capital Build and Procured Operator with delivery partners	Combination of Implementation Approaches B&D	Mixed Capital New Build, with multiple Operators
Service Delivery	Existing facilities delivery	Diverse (Procured) Ecosystem – portfolio procured/ partnered on individual opportunity basis	Existing organisation arrangements	Standalone skills operator, bringing aligned access	Procured Operator – bringing relevant practice and skills development capabilities (see SOC Appraisal)	Procured Operator – bringing relevant practice and skills development capabilities (see SOC Appraisal)	Mixed: Procured Operator/Other (see SOC Appraisal)
Implementation	Immediate start as 3/5-year project	3-year project – Competition / procurement of portfolio of investments	5-year project	3 year facility project, 10 year delivery	3 year facility project, 10 year delivery	5 year facility project, 10 year delivery	Immediate start ~7yr project
Funding	Nil City Deal funding	~£5.3m City Deal Funding.	~£5.3m City Deal Funding.	~£5.3m City Deal Funding.	~£5.3m City Deal Funding.	~£5.3m City Deal Funding plus other funding sources.	~£5.3m City Deal Funding plus other funding sources.

^a Balance of facility provision reflects Need/Demand section: See Market Assessment Annex and original SOC Assessment

Investment Objectives and Critical Success Factors

	A - Do Minimum: Rely on existing activity/sites	B – Dispersed Growth: Investment fund for disparate activities	C- Intermediate I: Incremental development of activity at existing sites	D - Individual NZ Skills Centre - Dedicated facility for delivery of relevant skills programmes	E - Intermediate II: Mixed – Integrated Advanced Practice and skills development facility	F - Intermediate III: Multiple Site Incremental Development and fund for disparate activities	G - Do Maximum: Expand existing sites and establish new Integrated Facility (D+)
Description	This option describes no expansion of the existing ecosystem but aiming to focus activities to maximise efficiency of existing facilities. Current facilities and training activities are financed through various mechanisms already in place through a variety of internal and external funding models.	Creating a fund to invest in individual opportunities across the region on a competitive basis as they emerge in a portfolio of disparate activities/facilities. This would create pockets of infrastructure across the region with potential for co-investment from host organisations.	This option synthesizes a range of options considered at SOC stage, involving variants of smaller premises, existing business development and operator structure. A relatively limited investment across key sites (notably Harbourside) sites considered to begin an incremental increase in capacity and capabilities.	This option would involve creation of a new facility, with purpose of delivering new skills programmes for the NZ sector. Access to specialist facilities/ equipment in-house and/or through partners would require review. Established outside of existing provision it offers potential for multiple providers.	This option describes a larger (in comparison to C) investment into an integrated advanced practice and skills facility. This option reflects a number of variants explored in the SOC, and delivers potential benefits of option D, including a number of operator approaches. The option offers scope for longer-term co-investment through partnering model.	This option describes the creation of a fund as described in Option B to invest in small opportunities across the region in addition to the expansion of a focal skills development facility as described in Option D .	This option is a rescoped Do Maximum following initial SOC appraisal. It describes all potential components of the wider appraisal, including a central facility, investment fund and distributed development. This is the most ambitious option, creating significant capacity across the region. In essence, it presents the total transformation plan within a single project.
Investment Objectives:							
Support SILCG Programme	Limited potential without dedicated resources	Limited potential coordination with fully market-led approach	May not provide the scale/pace of transformation.	May lack some integration (see PBC)	Provides scope that covers demand assessment	Provides scope that covers demand assessment	Provides scope that covers demand assessment
Delivers Skills development	Limited potential without dedicated resources	Limited potential coordination with fully market-led approach	Challenge to cohere skills delivery across sites/partners	Provides scope that covers demand assessment	Provides scope that covers demand assessment	Provides scope that covers demand assessment	Provides scope that covers demand assessment
Provide appropriate facilities	Limited potential without dedicated resources	Limited potential coordination with fully market-led approach	Incremental developments may not maximise capacity growth	Standalone nature challenges futureproof	Specification challenge (flexible) (note: operator dependency)	Combined strengths/challenges of Options B + D	Fullest potential to deliver range of facilities
Increase low carbon RD&/enterprise	Limited activity to support additional outputs/outcomes	Market-led approach focused on specific business needs	Market-led approach focused on business needs less than Option B	Market-led approach focused on specific business needs	Commercial focus (note: operator dependency)	Potential of both Options B + D	Greatest scope for supporting innovation/enterprise
Evaluate impact	Based on existing activity	Dispersed/overlapping activities challenge to evaluate	Identifiable sites/activities support evaluation	Identifiable sites/activities support evaluation	Identifiable sites/activities support evaluation	Dispersed/overlapping activities challenge to evaluate	Dispersed/overlapping activities challenge to evaluate
Critical Success Factors							
Strategic Fit	Offers very limited delivery	Supports market-led ambitions, though limited alignment	Uncertainty over relevance of existing sites/activities	Aligns with context (see also PBC)	Aligns with context (see also PBC)	Potential of both Options B + D	Delivers comprehensively against ambitions
Business Needs	Offers very limited delivery	Supports market-led ambitions, though limited alignment	Alignment with Market-demand to be tested	Aligns with Market-demand	Aligns with Market-demand	Aligns with Market-demand (see research summary)	Capacity may run ahead of requirements
PBC Integration	Status quo within PBC baseline	Overlaps with scope from existing project	Limited/uncertain alignment with PBC ambitions	Risks duplication and/or gaps	Aligns with PBC ambitions	Overlaps with scope from existing project	Overlaps with scope from existing project
Internet Coast Integration	Status quo within SBGR portfolio baseline	Challenge to coordinate, for both PBC and SBGR levels	Aligns with SBGR ambitions	Aligns with SBGR ambitions	Aligns with SBGR ambitions	Aligns with SBGR ambitions	Aligns with SBGR ambitions
Potential Value for Money	Limits scope to exploit other investments	Overlap with other PBC projects undermines VfM	Distributed sites potential loss of economy of scale	Potential duplication of facilities with AMPF	Offers economy of scale – subject to effective specification	Could be flexed according to demand	Capacity may run ahead of requirements

Potential Achievability	Limited requirements	Mature systems, though overlap presents likely difficulty	Mature systems, strong NPT track record	Mature systems, strong NPT track record	Mature systems, strong NPT track record	Could be flexed according to demand	Scale and resource requirement challenges
Supply-side Capacity	Limited requirements	Diverse activities may end up competing for limited supply	Unknown – uncertain availability prior to testing (risk)	Unknown – uncertain availability prior to testing (risk)	Mature systems, strong NPT track record (e.g. Bay Tech/Inn Centre)	Diverse activities may end up competing for limited supply	Diverse activities may end up competing for limited supply
Potential Affordability	Status quo	Distribution increased cost Potential co-investment?	Scope could be flexed to budget	Potential additional equipment required	Requires alignment with PBC	Beyond PBC Scope	Significantly beyond PBC scope

Preferred Approach

	A - Do Minimum: Rely on existing activity/sites	B – Dispersed Growth: Investment fund for disparate activities	C- Intermediate I: Incremental development of activity at existing sites	D - Individual NZ Skills Centre - Dedicated facility for delivery of relevant skills programmes	E - Intermediate II: Mixed – Integrated Advanced Practice and skills development facility	F - Intermediate III: Multiple Site Incremental Development and fund for disparate activities	G - Do Maximum: Expand existing sites and establish new Integrated Facility (D+)
Description	This option describes no expansion of the existing ecosystem but aiming to focus activities to maximise efficiency of existing facilities. Current facilities and training activities are financed through various mechanisms already in place through a variety of internal and external funding models.	Creating a fund to invest in individual opportunities across the region on a competitive basis as they emerge in a portfolio of disparate activities/facilities. This would create pockets of infrastructure across the region with potential for co-investment from host organisations.	This option synthesizes a range of options considered at SOC stage, involving variants of smaller premises, existing business development and operator structure. A relatively limited investment across key sites (notably Harbourside) sites considered to begin an incremental increase in capacity and capabilities.	This option would involve creation of a new facility, with purpose of delivering new skills programmes for the NZ sector. Access to specialist facilities/equipment in-house and/or through partners would require consideration. Established outside of existing providers/provision it offers potential for multiple providers.	This option describes a larger (in comparison to C) investment into an integrated advanced practice and skills facility. This option reflects a number of variants explored in the SOC, and delivers potential benefits of option D, including a number of operator approaches. The option offers scope for longer-term co-investment through partnering model, as being developed through other City Deal projects.	This option describes the creation of a fund as described in Option B to invest in small opportunities across the region in addition to the expansion of a focal skills development facility as described in Option D .	This option is a rescope Do Maximum following initial SOC appraisal. It describes all potential components of the wider appraisal, including a central facility, investment fund and distributed development. This is the most ambitious option, creating significant capacity across the region. In essence, it presents the total transformation plan within a single project.
Scope	Utilise existing facilities and ecosystem activities to support growth of existing, and capture of new, opportunities. Capital investment limited to enhancing efficiency of existing facilities. Potential for ~500 sq.m. of mixed distributed facilities ^a	Develop specialist capabilities / capacities in locations across SBCR with public and private sector in response to emerging opportunities. This would be market-led opportunities developing a portfolio of projects giving Open Access capabilities	Work towards ~5,000sq.m. (demand projection) of distributed capability across the cluster. Potential development of skills programmes with partners focused on each site	Development of 1,000sq.m. standalone facilities for skills programmes. Potential partnership delivery of FE/HE and industry-led delivery. In-house/partnered equipment for programmes. Potential to build upon Option A or fully-independent operation.	In line with demand projections, create a ~5,000sq.m. integrated facility for advanced practice and skills development. Innovation scope across targeted TRIs and skills from foundation to HE, with focus on industry-led practice.	Providing a combination of approaches B&D with I.e. 5,000sq.m. facility and other developments based on demand ^a	Develop both central and distributed capabilities offering ~5,000 + 5,000sq.m. total in order to progress ahead of demand. Skills offerings as per Option D with scope for further partner-based activity in distributed locations.
Service Solution	NPT innovation/skills support to existing activities	Development of facilities across the region through open competition amongst existing ecosystem	Mixed Capital Build and Procured Operator with delivery partners	Mixed Capital Build and Procured Operator with delivery partners	Mixed Capital Build and Procured Operator with delivery partners	Combination of Implementation Approaches B&D	Mixed Capital New Build, with multiple Operators
Service Delivery	Existing facilities delivery	Diverse (Procured) Ecosystem – portfolio procured/partnered on individual opportunity basis	Existing organisation arrangements	Standalone skills operator, bringing aligned access	Procured Operator – bringing relevant practice and skills development capabilities (see SOC Appraisal)	Procured Operator – bringing relevant practice and skills development capabilities (see SOC Appraisal)	Mixed: Procured Operator/Other (see SOC Appraisal)
Implementation	Immediate start as 3/5-year project	3-year project – Competition / procurement of portfolio of investments	5-year project	3 year facility project, 10 year delivery	3 year facility project, 10 year delivery	5 year facility project, 10 year delivery	Immediate start ~7yr project
Funding	Nil City Deal funding	~£5.3m City Deal Funding.	~£5.3m City Deal Funding.	~£5.3m City Deal Funding.	~£5.3m City Deal Funding.	~£5.3m City Deal Funding plus other funding sources.	~£5.3m City Deal Funding plus other funding sources.

2.3 Short Listed Options

Long-list options were reviewed against the Critical Success Factors (see Section 2.2) and to determine potential performance against the Investment Objectives. The risk assessment (included as Appendix 4) was used to support this exercise together with experience of the stakeholder group. The Preferred and Alternative Approach options both involved integration with the existing AMPF plans, to optimise value for money and programme integration.

The following table presents the short-list options, including the Do-Minimum. Options relating to development of elements of the PBC (i.e. based on Preferred Approach) draw significantly upon prior work undertaken by the Supporting Innovation and Low Carbon Growth team. This includes comprehensive need and demand studies, along with development of the Strategic Case. All Options, including those from the SOC have been reviewed against the refreshed Strategic Case, noting the macro-context of challenges and opportunities of a post-Brexit UK, and the SBCR/NPT vision for development of strategic sites. The short-listed options, together with review criteria are as follows;

Do Minimum: This option describes no expansion of the existing ecosystem but the reconfiguration of existing space and activity to maximise efficiency of existing facilities, with focus on NZ skills development. Current endeavours are financed through various mechanisms already in place through a variety of funding models. A number of prior projects (e.g. Bay Technology and Innovation Centre) provide context for such reconfigurations, while potential benefits are considered from baseline performance. Providers, local and further afield could contribute to the skills delivery, though there would be dependence upon alignment with their capacities/missions and potential competing priorities. This has recently been reviewed in the context of the need and demand analysis to establish the counterfactual based on existing capabilities/capacity.

Support SILCG Programme	Limited additionality
Delivers Skills development	Limited additionality
Provide appropriate facilities	Limited beyond existing ecosystem engagement
Increase low carbon RD&I/enterprise	Limited additionality, though with robust/extensive existing ecosystem
Evaluate impact	Continued need/demand monitoring

Strategic Fit	Limited contribution to ambitions
Business Needs	Minimal impact upon needs
PBC Integration	PBC Baseline
Internet Coast Integration	Existing integration, though delivers limited additionality
Potential Value for Money	Diminishing returns on existing at capacity infrastructure
Potential Achievability	Viable
Supply-side Capacity	Viable
Potential Affordability	Viable – status quo

Preferred Option: This option describes an integrated service/facility being delivered within the NPT ecosystem/site to establish leading practice and skills development, in support of broader industry-led activity across the region. The facility would be integrated with AMPF to maximise impact of both investments, reducing duplication of resources and offering combined practice/skills support to the sector. In line with demand projections, creation of a procured partner operated ~5,000 sq.m. integrated facility for advanced practice and skills development. Innovation scope across targeted TRLs and skills from foundation to HE, with focus on industry-led practice.

Support SILCG Programme	Provides scope that covers demand assessment
Delivers Skills development	Provides scope that covers demand assessment
Provide appropriate facilities	Specification challenge (flexible) (note: operator dependency)
Increase low carbon RD&I/enterprise	Commercial focus (note: operator dependency)
Evaluate impact	Identifiable sites/activities support evaluation

Strategic Fit	Aligns with (see also PBC)
Business Needs	Aligns with Market-demand (see research summary)
PBC Integration	Aligns with PBC ambitions
Internet Coast Integration	Aligns with SBCR ambitions
Potential Value for Money	Offers economy of scale – subject to effective specification
Potential Achievability	Mature systems, strong NPT track record
Supply-side Capacity	Mature systems, strong NPT track record (e.g. Bay Tech/Inn Centre)
Potential Affordability	£17.2m SBCD funding secured. Additional £5.3m required (Subject to the approval of this OBC).

The Preferred Option utilises the Preferred Approach together with the PBC planning to provide a developed implementation. This uses comprehensive review for PBC and project-specific need/demand and scoping. This presents an implementation as follows which optimises the preferred option against the Critical Success Factors and maximises potential delivery against Investment Objectives;

Scope	In line with demand projections, create a ~5,000 sq.m. integrated advanced manufacturing production facility (4,000 sq.m) and net zero skills centre of excellence (1,000 sq.m). Innovation scope across targeted TRLs and MRLs, skills from foundation to HE, with focus on applied.
Service Solution	Mixed Capital Build and Procured Operator with delivery partners
Service Delivery	Procured Operator – bringing relevant practice and skills development capabilities (see SOC Appraisal).

Implementation	5, 7-year project
Funding	~£5.3m City Deal Funding. (£17.2m City Deal Funding already secured.)

Alternative 1: This option describes the creation of an investment fund to invest in individual skills development opportunities across the region on a market-led competitive basis as they emerge in a portfolio of disparate activities/facilities, alongside the development of core activity (based on Option E). Consideration of critical success factors and performance against spending objectives reads across the Preferred Option, and Alternative 2, though with a slower ramp-up of activity.

Support SILCG Programme	Provides scope that covers demand assessment
Delivers Skills development	Provides scope that covers demand assessment
Provide appropriate facilities	Combined strengths/challenges of Options B + D
Increase low carbon RD&I/enterprise	Potential of both Options B + D
Evaluate impact	Dispersed/overlapping activities challenge to evaluate

Strategic Fit	Potential of both Options B + D
Business Needs	Aligns with Market-demand (see research summary)
PBC Integration	Overlaps with scope from existing project
Internet Coast Integration	Aligns with SBCR ambitions
Potential Value for Money	Could be flexed according to demand
Potential Achievability	Could be flexed according to demand
Supply-side Capacity	Diverse activities may end up competing for limited supply
Potential Affordability	Beyond PBC Scope

Alternative 2: This option describes the creation of an investment fund to invest in individual opportunities across the region on a competitive basis as they emerge in a portfolio of disparate activities/facilities – aligns with Option B – used to test Preferred Option and Variants.

The short-listed options were subject to Cost-Benefit Analysis, against the baseline as presented in the following section.

2.4 Cost Benefit Analysis

The following section presents an updated Economic Case to the EAMPF SOC. It has been developed in line with updated Green Book guidance (Treasury, 2020), with appraisal focused on targeted productivity effects (wage premium). The analysis sits alongside that already undertaken and presented in the earlier 2017 *Internet Coast Proposal Impact Appraisal*, based on job creation both within the development itself and as a wider result of the initiative. It also allows for alignment in considering the SILCG ambitions incorporated into the AMPF as defined in the PBC (used as a subsequent benchmark for appraisal). Both AMPF and Skills aspects aim to increase productivity through supported sectors. Therefore, to avoid risk of double-counting across benefits relating to job creation/safeguarding⁵⁷ and productivity from enhanced skills, these are analysed from focus on the latter. This factors those engaged within/through AMPF as part of the upskilled to protect consideration of additionality.

EAMPF aims to contribute to the region and wider UK economy by supporting growth of high GVA activity in Advanced Manufacturing, with focus upon net-zero technologies, including those with existing and emerging strengths in the NPT cluster. This is reflected in the broader cluster context noted in analysis of the region by SQW (2016), and specifically as driven by the strategic Steel and Renewable Energy capabilities across the region. These strengths, and the interplay of high productivity sectors within the cluster also underpins the current *South Wales Crucible* Science and Innovation Audit (SIA), and as echoed by the recently-announced Celtic Freeport initiative.

2.5 Appraisal Summary

The following table presents a summary of the short-listed Options appraised against the Business as Usual baseline, and applying the parameters presented in later sections of this document. The PBC AMPF values have also been included to provide a level of comparison with the original projected performance for that activity.

UK

Option	10 Year BCR	10 Year NPSV
Do Minimum	1.3	£557k
Preferred Option	2.54	£32.5m
Alternative Option (1)	1.58	£8.2m
Alternative Approach (2)	2.2	£29.3m
PBC Benchmark ⁵⁸	2.2	£29.6m

⁵⁷ Benefits presented in AMPF SOC and PBC

⁵⁸ Noting separate analysis in PBC (Annex) – with broadly consistent parameters, although that was undertaken over a longer time horizon and excluded OB which would have given a higher value in comparison.

Regional

Option	10 Year BCR	10 Year NPSV
Do Minimum	1.81	£1.27m
Preferred Option	3.1	£44.2m
Alternative Option (1)	1.92	£12.95m
Alternative Option (2)	2.2	£29.3m

2.6 Options and Counterfactual

This appraisal is undertaken against the baseline ‘Do-Nothing’ case, alongside ‘Do Minimum’, and ‘Alternative’ Options as presented in the Appendix. The Do-Nothing baseline is developed from analysis of the SBCR economy presented in the SQW analysis, along with sector-specific insight from RLSP and other publications, and further data drawn from ONS. Projected performance of each option is based upon regional and sector insight for need and demand⁵⁹ drawn from industry, government (including extensive NPTC research), and academic sources, as noted throughout this document and as referenced throughout the wider Business Case. The PBC benchmark, included to identify the additionality of the SILCG activity is drawn from the summary provided in the 2021 PBC.

Do-Nothing involves the relative plateauing of related ‘Priority’ sectors within the region, as projected by SQW (2016, 2022), notably in Manufacturing in the region on the basis that it is limited in embracing emerging practice and opportunities. This implies continued regional reliance on the challenged parts of industrial sectors, identified by SQW and therefore potential continued divergence from UK and Wales levels of productivity. It is recognised that this sector perspective, derived from SIC coding of activities, is limited in respect to the broader cluster⁶⁰ (SIA 2015, SQW 2022). However, it does provide a baseline for regional knowledge-based economic activity to support consideration of Options. The recently-announced Freeport initiative and other already-approved SILCG projects present that Do-Nothing is unrealistic, for a level of skills development will be required within the region. Therefore, Do Minimum is a more significant baseline for this options appraisal.

Continuing divergence from Wales and UK average GVA per capita performance suggests the Do-Nothing baseline would be a negative trend. However, for the purpose of this appraisal the current regional average is utilised and therefore the current GVA per capita of targeted sectors is also used for future years (i.e. without inflation/growth, though with STPR⁶¹ discounting).

⁵⁹ Including that noted in the earlier SOC

⁶⁰ As seen from the Smart Specialisation perspective capture in the South Wales Crucible Science and Innovation Audit undertaken for UK Government.

⁶¹ For the Time Horizon applied, this utilises the 3.5% Green Book STPR figure

2.6.1 Productivity Uplift (Wage Premium/GVA per worker)

SBCR is part of the West Wales & Valleys region which has suffered a long-standing productivity gap with the rest of Wales, UK and EU which has resulted in its qualification for three rounds of EU Structural Funds support. This hides a sectoral disparity though, which underpins a renewed strategy to pursue more productive activities in 'Priority' sectors, including those involved in the Internet Coast programme.

GVA per hour worked within Advanced Manufacturing in Wales during the period 2006-2014 showed strong upward trajectory, outperforming against UK trends at ~110%⁶². This was set within the wider economy which performed at ~75% of UK average. This must be viewed within the regional sector context, where SQW (2016) presented a £11,900 deficit between mean regional and UK GVA per capita (£34,300 compared to £46,200), i.e. a difference of 34.7%. Other available data⁶³ aligns with these values. The Salary Uplift for Advanced Manufacturing sector in the region sits above this average by £10,800 per employee⁶⁴, while providing reskilling opportunities for those in more challenged sectors thereby also avoiding reductions.

Advanced Manufacturing practice and skills also relates to other high-GVA sectors, which would reinforce this potential. The regional relationship between Priority sectors including Advanced Manufacturing alongside ICT and associated segments of MedTech is of particular note, with these sectors performing in line with broader UK (Davies et al., 2018). However, it should be noted that there are wider benefits provided through reduced carbon impact, as well as health and wellbeing improvements. While these relate indirectly to the Investment Objectives they are hereby noted.

It is recognised that the options appraised may result in a range of skills and economic activity, though all with a focus on Priority Sectors. Therefore, each option involves comparison between contribution to such sectors compared to the regional average.

The current, and anticipated impact of post Covid-19 and more recent economic turmoil due to the further Russian invasion of Ukraine, both in the near and longer-term serve to reinforce the importance and growth of sectors supported by the Spending Objectives. This is noted in the updated Risk Assessment.

2.6.2 Additionality and National / Regional Contexts

As development and application of skills in Advanced Manufacturing would be at the expense of potential for another sector this appraisal focuses on the potential improved GVA provided

⁶² Priority sector statistics 2016 – New GVA Data, Statistics & Research, Welsh Government, <http://gov.wales/statistics-and-research/priority-sector-statistics/?tab=previous&lang=en>

⁶³ Regional GVA NUTS2, Office for National Statistics, <https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/regionalgvanuts2>

⁶⁴ ONS data used in development of SOC

compared to alternative use. This relates solely to the above noted differential between targeted sectors and the wider regional economy.

Some benefit linked to the initiative could naturally be achieved, while the proposed activity will also to an extent substitute or displace other activity(ies). Indeed, some skills would have been otherwise developed (i.e. elsewhere) or applied in other sectors. The intervention tackles growing and unsatisfied demand for STEM skills, which will be further pressured by ongoing economic uncertainty. This in itself supports additionality of the initiative, together with evidence of such demand at the regional level (RLSP 2022). To address consideration of additionality, the appraisal draws upon guidance including that of UK Government (BIS, 2009, Treasury, 2018) and other sources (Partnerships, 2008, EU, 2013) to consider additionality with regard to both spatial and activity contexts. From a south west Wales regional perspective, evaluations of prior ERDF activities give some context to potential levels of additionality. (Oldbell3, 2012).

The main analysis presents the case for UK-level benefit of the EAMPF initiative, however there is strong regeneration theme and ambition to restructure the SBCR economy within the Internet Coast City Deal giving emphasis to benefit to the region. As presented in Annex 3 of the Green Book, distributional analysis allows for appraisal at both levels and is here treated as follows with key parameters;

	UK	SBCR
Additionality	30%	15%
Multiplier	Excluded ⁶⁵	1.4

Mean/Median additionality of benefits derived from development educational infrastructure has been shown to be of the order of 46% and 53% respectively (BIS, 2009)⁶⁶. Noting the potential for leakage, as some skills will leak beyond the UK this is factored as 30%⁶⁷ remaining additionality at the UK level.

From DELHE data, it can be projected that leakage beyond the region will be ~50% of this group, and therefore SBCR additionality is factored as 15%. However, as multiplier effects can be factored at the regional level these are included as ~1.4, which is relatively conservative for knowledge-based activity. For example, recruitment data for Swansea University presents ~50% local input and targets the majority Home/EU. On the output side, data drawn from Destinations of Leavers from Higher Education show strong existing retention within the region and UK.

The nature of the proposed activity also overlaps into the broader health economy with skills supply and innovation activity relating to reindustrialisation around Green growth. The original AMPF scope to create/safeguard jobs, together with the NZ Skills ambitions relate directly to this agenda. Major regional (and national) challenges in recruitment and retention of engineering and technical

⁶⁵ As required by Green Book guidance, though retained for SBCR where below full employment and wider regeneration opportunity support inclusion of multiplier effects

⁶⁶ Though as this is based on a relatively low number of observations a conservative approach has been adopted.

⁶⁷ For the 'Base' Case, with a range of parameters used in Optimistic and Pessimistic Cases

staff suggest that additional supply would be highly additional. This is supported by data presenting that engineering graduates from professionals trained at local HEIs and FE Colleges present strong employability outcomes⁶⁸.

2.6.3 Time Horizon

The Swansea Bay City Region has developed Internet Coast within its 15-year economic strategy through to 2031. The long-term capital investment infrastructure nature of the proposed initiative lends itself to appraisal over a longer-period, of 20-30 years, in line with guidance of organisations such as that proposed specifically for science parks (EU, 2002, EU, 2014). Indeed, EAMPF is presented as part of a longer-term ambition to transform the Advanced Manufacturing Sector and support the transition to Net Zero. For example, certain options relate to activities strongly aligned with initiatives such as the Celtic Freeport, which would involve activity towards the end of the 15-year period, with significant impact sometime thereafter. Benefits arising from these later phase activities are factored separately with associated risks (including for benefits realisation and timescales) considered within the sensitivity analysis.

The SILCG PBC, including for AMPF which relates to the Preferred/Alternative Options noted operation planned through to 2053. Appropriate to the nature of that original scope, the Skills/Productivity project phase can be considered with more confidence in the nearer-term. While this may reduce initial BCR, the more significantly-discounted longer-term impact is less relevant to this appraisal, though represents an important aspect of the proposal.

Therefore, to align with the Internet Coast programme and general Green Book time horizon, a 10-year horizon is used in the appraisal. It should be noted though, that the project plans that describe intention for both the activity and a significant portion of its benefits are, as intended, to be realised beyond this period.

2.6.4 Capital Costs and Residual Values

Costs associated with facilities have been drawn from scoping documents, and as reflected in the PBC and SOC. Potential risk associated with these has been reflected in the scenarios used for the Sensitivity Analysis (see also Risk and Optimism Bias⁶⁹). Noting the Operator/Distributed Funds nature of the Options, this has been split into initial Project Phase and Ongoing Operation, with the latter considering maintenance and refresh.

The EAMPF infrastructure will clearly be of value beyond the 10 and 15-yr time horizons. Therefore, to incorporate residual value and opportunity cost an anticipated market value of the facilities at these points has been incorporated. While depreciation along with facility maintenance is incorporated separately⁷⁰ in the Financial Case, it has in the absence of market projections been

⁶⁸ Recent perspective post-Covid-19 offered by <https://luminare.prospects.ac.uk/>

⁶⁹ Noting PBC Benchmark does not include OB, as well as longer time-horizon

⁷⁰ As noted in 6.13 of the Green Book

used with a standard linear 30-year depreciation cycle⁷¹ to present a relatively conservative market value.

2.6.5 Ongoing Costs and Cash Releasing Benefits

Each of the Options considered involves ongoing activities and associated income/costs being responsibility of the Operator/outside parties (as applicable). For example, the Rent and Service Charge are directly linked to the Operating costs, and as such transferred to the Operator rather than expressed as Cost or Benefit. The PBC, SOC and supporting analysis provide a breakdown of need and demand that underpins this. The Preferred and Alternative options involve a standalone operation (although integrated with AMPF) and as such does not offer CRB.

2.6.6 Wider Benefits

The targeted benefits (as presented in prior sections of the business case) relate predominantly to employment and productivity, though also to broader regeneration. This includes enhancement of the built environment, which along with enhance employment prospects would result in improved land values. This is of particular note for some options which target longer-term impact potential by opening up major development sites. As this may overlap with the productivity uplift seen through the core benefits, it is simply noted here rather than quantified/monetised.

In parallel, improved health outcomes from sustainable redevelopment would result in cash-releasing and other benefits to Health service and other organisations as well as benefits to individuals. Due to the difficulty in distinguishing these benefits, along with the potential positive carbon reduction impact from the contribution of related initiatives (including within the PBC), these are excluded from this analysis.

2.7 Optimism Bias

This section of the appraisal also notes the relatively conventional nature of the construction and operation, though with a potentially diverse range of occupants, and therefore the higher end of the range⁷², 20%, is used to factor for Optimism bias. The proposed activity, across Preferred Approach and Alternative 1 also draw upon organisations with experience in delivery of similar infrastructure projects to time and budget, which suggests this value is relatively conservative (noting in particular the Baglan Technology Centre). For the more complex Options, a higher level of Optimism Bias (25%) is factored, reflecting the different nature of delivery. However, there remains a margin compared to the Preferred Option (see also Switching Values). Do Minimum has

⁷¹ Of note, this aligns with the Project Sponsor accounting practice, RICS Red Book and EU CBA Guidance for developments of this nature EU 2002. Guide to cost-benefit analysis of investment projects. *In: EVALUATION UNIT, D. R. P., EUROPEAN COMMISSION (ed.). Web, EU 2014. Guide to Cost-Benefit Analysis of Investment Projects, Economic appraisal tool for Cohesion Policy 2014-2020. In: POLICY, D.-G. F. R. A. U. (ed.). Web.*

⁷² As noted in Annexe 5 of the Green Book, 2018

zero for Optimism Bias in light of the minimal activity and ambition involved (providing baseline). OB was not included in the AMPF PBC appraisal, which provides confidence in the gap between that and this appraisal.

Potential impact upon benefits realisation has been comprehensively considered through the risk analysis, presented in the risk assessment table (see Appendix 4). This assessment has been undertaken through review of relevant literature and prior projects, and comprehensive review activity with Project Managers/Directors engaged in recent similar initiatives, both within the region/sector and further afield. These risks have been synthesized into parameters used in the sensitivity analysis presented in Section 2.8.

2.8 Sensitivity Analysis

The risk assessment presented in the previous section presents key residual risks, which could potentially result in delayed or reduced benefits realisation, cost increase or combination thereof. Sensitivity analysis, for both Regional and UK level appraisal has therefore reviewed short-listed options with parameters ranging up to 1-year delay, 40% reduction in benefits and 20% cost increase (in addition to factored Optimism Bias).

As the Preferred and Alternative Options are Sensitivity analysis shows switching values of 66% reduction in benefits or 305% increase in cost for Preferred Option before Do Minimum becomes next Option. Alternative 3, involving a distributed fund could also potentially switch if Benefits of the Preferred Option were delayed, though this would be beyond the initial project phase and subject to other risks. The following tables present a further perspective of the Options appraised at UK and Regional Level.

2.8.1 UK Perspective

SBCR Cost-Benefit Analysis: Sept 2023 UK Perspective

Project Name EAMPF

Version 1.1

Date 18/09/2023

Scenario (Base)	10Yr NPSV
A - Preferred Implementation	32,522,362
B - Alternative 1	8,203,760
C - Alternative 2	29,324,922
D - Do Minimum	557,580

Sensitivity Analysis

10Yr NPSV

20% reduction in Wider Benefit	10Yr NPSV
A - Preferred Implementation	-
B - Alternative 1	-
C - Alternative 2	-
D - Do Minimum	-

1Yr Delay in Benefits	10Yr NPSV
A - Preferred Implementation	26,121,413
B - Alternative 1	5,191,060
C - Alternative 2	22,928,237
D - Do Minimum	- 166,461

20% increase in costs	10Yr NPSV
A - Preferred Implementation	28,310,362
B - Alternative 1	5,395,760
C - Alternative 2	24,449,922
D - Do Minimum	183,180

10Yr NPSV

40% reduction in Benefits	10Yr NPSV
A - Preferred Implementation	11,089,417
B - Alternative 1	- 693,744
C - Alternative 2	7,844,953
D - Do Minimum	- 414,252

Slow Mobilisation (6month delay)	10Yr NPSV
A - Preferred Implementation	29,321,888
B - Alternative 1	6,697,410
C - Alternative 2	26,126,580
D - Do Minimum	195,559

1Yr Delay and -20% Wider Benefit	10Yr NPSV
A - Preferred Implementation	-
B - Alternative 1	-
C - Alternative 2	-
D - Do Minimum	-

2.8.2 Regional Perspective

**SBCR Cost-Benefit Analysis: Sept 2023
Regional Perspective**

**Project Name EAMPF
Version 1.1
Date 18/09/2023**

Scenario (Base)	10Yr NPSV
A - Preferred Implementation	44,232,651
B - Alternative 1	12,950,835
C - Alternative 2	29,324,922
D - Do Minimum	2,049,564

Sensitivity Analysis	10Yr NPSV
20% reduction in Wider Benefit	
A - Preferred Implementation	44,135,458
B - Alternative 1	12,439,908
C - Alternative 2	28,181,449
D - Do Minimum	1,952,372

1Yr Delay in Benefits	10Yr NPSV
A - Preferred Implementation	36,007,637
B - Alternative 1	9,168,417
C - Alternative 2	22,928,237
D - Do Minimum	1,223,738

20% increase in costs	10Yr NPSV
A - Preferred Implementation	40,020,651
B - Alternative 1	10,142,835
C - Alternative 2	24,449,922
D - Do Minimum	1,893,564

	10Yr NPSV
40% reduction in Benefits	
A - Preferred Implementation	18,115,591
B - Alternative 1	2,154,501
C - Alternative 2	7,844,953
D - Do Minimum	917,739

Slow Mobilisation (6month delay)	10Yr NPSV
A - Preferred Implementation	40,120,144
B - Alternative 1	11,059,626
C - Alternative 2	26,126,580
D - Do Minimum	1,636,651

1Yr Delay and -20% Wider Benefit	10Yr NPSV
A - Preferred Implementation	35,963,642
B - Alternative 1	8,808,734
C - Alternative 2	22,122,153
D - Do Minimum	1,155,630

The sensitivity analysis has shown the preferred implementation as being most resilient in face of key risks occurring, from both UK and regional perspectives. Risks occurring that result in delayed and/or reduced benefits have the most significant impact on most implementations, while cost overruns would have greatest negative affect on Alternative 2 (already most expensive option). Switching value analysis suggests that a 15% increase in costs or ~12% reduction in benefit would be required for Alternative 2 to compete with the Preferred Option. However, as both options would be susceptible to similar risks/challenges, the comparison with Alternative 1 is potentially more relevant where 23% reduction in benefits would potentially result in comparable NPSV.

Regional NPV is generally higher than the UK perspective for all options/scenarios reflecting the localised wider benefits to the regional economy through multiplier effects, offsetting the reduced additionality due to leakage. This also presents that the integrated Skills/AMPF (i.e. EAMPF) initiative is enhanced, with increased NPSV and improved BCR. As such it offers greater potential value for the original AMPF ambition while also leveraging that investment for delivery of the objectives set out for this case.

2.9 Going Forward

The Economic Case for the EAMPF is a living document and as the projects mature, further information may be developed that can be used in the Economic Case, in particular in identifying, quantifying and monetising benefits.

As the project develops it may be possible to further expand on the place-based analysis and the potential benefits that arise through the EAMPF to the low-carbon / green economy economic cluster in SBCR.

3.0 The Commercial Case

3.1 Introduction

The Commercial Case sets out the proposed procurement arrangements for delivery of the preferred option, including:

- The proposed procurement strategy and route
- The proposed service requirements and required outputs
- The proposed approach to risk allocation
- The proposed charging mechanisms
- The proposed key contractual arrangements

3.2 Procurement Strategy and Route

The preferred option as identified at the end of the Economic Case will involve procurement activity to be undertaken by Neath Port Talbot CBC. A 50:50 price/quality ration will be applied to tender scoring.

Given the current volatile nature of the construction sector, appropriate contract management measures which are used by the council on all construction projects will be adopted to minimise risk. These would include (*but not limited to*) inception meetings, regular update meetings and monitoring, following the standard protocols set out by the Neath & Port Talbot CBC legal and procurement department.

The procurement route for the EAMPF is set out in the table below:

Table 3.1 Proposed approach to project procurement

Project	Procurement route
EAMPF Enhanced Advanced Manufacturing Production Facility including National Net Zero Skills Centre of Excellence.	Construction via South West Wales Regional Contractors Framework (SWWRFC). 2 stage design and build contract. Specification at the early stages of development informed by industry.
Facility Operator	Operator to be procured via competitive tendering process. It is preferred that there will be one operator for the EAMPF, although this may change as the project develops. Tender specification being developed with support from Industry Wales and key stakeholders.

As lead local authority for the project, Neath Port Talbot CBC will lead the procurement. Neath Port Talbot CBC will therefore be responsible for ensuring compliance with public procurement rules and regulations. The procurement strategy will be aligned to Circular and Foundational Economy principles. Social value targets will be established as part of the procurement exercise.

As a public sector organisation Neath Port Talbot CBC has a duty to operate in an open, fair, and transparent way, allowing the market freedom of opportunity to trade with it. Its procedures for procurement are known as 'Contract Procedure Rules'. These are important as they help to:

- Give a legal and auditable framework to its procurement activities;
- Obtain value for money services for the public;
- Ensure the council complies with the law governing the spending of public money;
- Protect its staff and members from undue criticism or allegations of wrongdoing.

3.2.1 *Community Benefits*

Neath Port Talbot Council is committed to promoting Sustainable Development through our policies, strategies and services, thus achieving best value for money in the widest sense. The aim is to build stronger communities, reduce social exclusion and poverty and encourage the development of the economy. In delivering this project, the Council is pursuing Community Benefits to contribute to the social, economic and environmental well-being of the wider community.

Community Benefits further supports our duty to comply with the Well-being of Future Generations (Wales) Act 2015, which requires us to seek to improve the economic, social, environmental and cultural well-being of the County in all that we do. Therefore, our commitment to pursuing Community Benefits through our procurement activity will support this aim and by incorporating Community Benefits into this tender, in addition to delivering the primary service we are seeking to promote the additional, wider opportunities.

The Council and its partners will work in partnership with appointed contractors and their supply chain to deliver 'targeted recruitment and training' outputs as a 'core' requirement of tenders to support the delivery of social, economic and environmental objectives. This involves encouraging:

- Training and the recruitment of the economically inactive by offering apprenticeship;
- Traineeships or work experience opportunities;
- Maximising opportunities for SMEs to tender or bid for sub-contract opportunities;
- Adopting measures to ensure prompt and fair payment terms;
- Encouraging environmental initiatives;
- Engaging with Third Sector organisations; and
- Supporting educational and community initiatives.

In addition, there are collaborative arrangements to coordinate the delivery of community benefits. This leads to adult employability initiatives such as Workways+ and Communities for Work working closely together with organisations such as the local authorities, Department of Work and Pensions, the Further Education sector to identify opportunities to support disadvantaged individuals and help them tackle barriers to employment.

Community benefits performance will be considered during the procurement and tender scoring process.

The SILCG programme has a Community Benefit register and the EAMPF community benefits will be monitored and reported to governance groups through this.

The Contractor will be required to monitor the Community Benefits achieved throughout the lifetime of this project and report outcomes at monthly project meetings. The Contractor will be required to maintain auditable records covering all aspects of the Community Benefits and measurement tool requirements to be available for inspection by the Council as and when required in support of the monthly, quarterly and annual reports submitted.

3.2.2 Swansea Bay City Deal procurement principles

The EAMPF as part of the SILCG programme, will align to the Swansea Bay City Deal procurement principles.

The SILCG procurement strategy will address the SBCD 5 Procurement Principles:

1. Be Innovative
2. Have an open, fair and legally compliant procurement process
3. Maximise Community Benefits from each contract
4. Use Ethical Employment Practices
5. Promote the City Deal

3.3 Procurement plan

Indicative procurement dates shown in the table below.

Table 3.2 Proposed procurement plan (Calendar Year).

Project component	Procurement design date	Procurement date
Facility Operator Procurement	Q1 2024	Q2 2024
Enhanced Advanced Manufacturing Production Facility – design and build.	Q2 2024	Q2 2024
Enhanced Advanced Manufacturing Production Facility – Equipment*	Q1 2026	Q3 2026

*Planned at this stage – dependant on operator / operating model

For procurement plan Gantt chart see Appendix 6.

3.4 Service Requirements and Outputs

Table 3.3 Service streams and required outputs

Project component	Expected Outputs
Advanced Manufacturing Production Facility	Specialist hybrid facility providing a range of industrial / production units with pilot line and office space. (4000 sq.m) Provision of open access specialist equipment advised by industry with academia input
National Net Zero Skills Centre of Excellence.	Dedicated skills and training facility providing classroom and training facilities with access to relevant 'leading edge equipment'. (1000 sq.m).
Facility Operator	Provision of an open access facility incorporating industry led skills provision and collaboration between industry, academia and government. Revenue delivery model securing public and private sector leverage.

3.5 Risk Allocation

Service risks for this programme vary by procurement. The procurement of the infrastructure and specialist equipment all entail standard contract risks.

Memorandum of Understanding (MoU) will be agreed between Neath Port Talbot CBC and the proposed operator in relation to the facility agreeing outputs, outcomes and impacts to be delivered.

Table 3.4 Risk Allocation Table

Risk Category	Potential Allocation	
	Public	Private
1. Design Risk	✓	
2. Services, Construction & Development Risk	✓	✓
3. Transition & Implementation Risk	✓	
4. Availability and Performance Risk	✓	✓
5. Operating risk	✓	✓
6. Variability of Revenue Risks	✓	✓
7. Termination Risks	✓	
8. Technology & Obsolescence Risks		✓
9. Control Risks	✓	✓
10. Residual Value Risks	✓	
11. Financing Risks	✓	
12. Legislative Risks	✓	
13. Other Project Risks	✓	✓

3.6 Charging Mechanism

Appropriate payment mechanisms will be devised as part of each procurement design period, and will be specified in the relevant a part of NEC3 contract.

The project will utilise a separate project bank account.

3.7 Key Contractual Arrangements

Contract terms will be devised as part of each procurement design period.

The construction of the facility would be subject to an NEC3 Engineering and Construction contract.

3.7.1 *Personnel implications*

It is anticipated that TUPE⁷³ regulation will not apply to this investment. This is because the project is not expected to have any impact on the employment of existing staff. The proposed operating model for the programme is outlined in the Management Case and does not include the transfer of any staff.

⁷³ Transfer of Undertakings (Protection of Employment) Regulations 1981

4.0 The Financial Case

4.1 Introduction

The Financial Case sets out the funding requirements for the preferred option and demonstrates overall project affordability.

4.2 Investment Summary

The financial information shown includes the procured construction costs, associated project costs and fees in the development and delivery of the project. The current investment summary presented in Table 4.1 below is based on forecasted investment as of 30 September 2023:

Table 4.1 National Net Zero Skills Centre of Excellence Investment Summary as of 30/09/2023

	Year 0 2017-18	Year 1 2018-19	Year 2 2019-20	Year 3 2020-21	Year 4 2021-22	Year 5 2022-23	Year 6 2023-24	Year 7 2024-25	Year 8 2025-26
	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)
Expenditure									
Capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Revenue	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Funding									
Swansea Bay City Deal Grant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Public Sector	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Sector	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00

	Year 9 2026-27	Year 10 2027-28	Year 11 2028-29	Year 12 2029-30	Year 13 2030-31	Year 14 2031-32	Year 15 2032-33	Total
	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)
Expenditure								
Capital	2.30	0.00	0.00	0.00	0.00	0.00	0.00	5.30
Revenue	0.00	5.00	7.50	8.00	11.00	11.50	12.50	55.50
Total	2.30	5.00	7.50	8.00	11.00	11.50	12.50	60.80
Funding								
Swansea Bay City Deal Grant	2.30	0.00	0.00	0.00	0.00	0.00	0.00	5.30
Public Sector	0.00	5.00	7.00	7.00	10.00	10.00	11.00	50.00
Private Sector	0.00	0.00	0.50	1.00	1.00	1.50	1.50	5.50
Total	2.30	5.00	7.50	8.00	11.00	11.50	12.50	60.80

The figures in Table 4.1 are the current financial investment forecast which the National Net Zero Skills Centre of Excellence is currently projecting over the timeline for the SBCD portfolio and are set within the original SBCD Heads of Terms. Funding elements are subject to change as the programme evolves.

It is the aim of the SBCD that all projects will be delivered in a seven-year period in order to maximise the full benefits realisation of the operational schemes during the lifetime of SBCD funding, which is to be released from both the UK and Welsh Governments.

The overall investment composition comprises of three following investment components:

- The **City Deal investment** component consists of the government grants awarded by UK and Welsh government totalling £5.3m. City Deal Grant is awarded to projects of the fifteen-year term up to a maximum of the allocated value.

- **Public sector** investment consists of investment from local authorities and other public funded and public service organisations. Public sector investment will also consist of specific Welsh Government and UK government grant funding. Local Authorities may agree that borrowing for a Regional Project should be made by all the Authorities equally or in proportions agreed or that borrowing should be carried out by one Authority on behalf of others if they so agree. The decisions as to whether borrowing on behalf of the programme shall be carried out by one Authority on behalf of the others and the proportions shall be determined by the Authorities as a matter reserved to the Authorities.
- **Private sector** investment includes regional investment from local and national private sector partners. The National Net Zero Skills Centre of Excellence aims to secure private sector investment via the procurement process and delivery model to secure an operator and explore delivery models, which will be confirmed at FBC stage.

4.3 Annual Income and Expenditure summary

Table 4.2 Project Level Income and Expenditure Forecast

	Year 0 2017-18	Year 1 2018-19	Year 2 2019-20	Year 3 2020-21	Year 4 2021-22	Year 5 2022-23	Year 6 2023-24	Year 7 2024-25	Year 8 2025-26
	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)
Expenditure									
Capital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Revenue	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Funding									
Swansea Bay City Deal Grant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00
Public Sector	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Sector	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00

	Year 9 2026-27	Year 10 2027-28	Year 11 2028-29	Year 12 2029-30	Year 13 2030-31	Year 14 2031-32	Year 15 2032-33	Total
	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)	(£m)
Expenditure								
Capital	2.30	0.00	0.00	0.00	0.00	0.00	0.00	5.30
Revenue	0.00	5.00	7.50	8.00	11.00	11.50	12.50	55.50
Total	2.30	5.00	7.50	8.00	11.00	11.50	12.50	60.80
Funding								
Swansea Bay City Deal Grant	2.30	0.00	0.00	0.00	0.00	0.00	0.00	5.30
Public Sector	0.00	5.00	7.00	7.00	10.00	10.00	11.00	50.00
Private Sector	0.00	0.00	0.50	1.00	1.00	1.50	1.50	5.50
Total	2.30	5.00	7.50	8.00	11.00	11.50	12.50	60.80

4.4 Investment leverage

One of the benefits of City Deal is the ability to lever additional public and private sector investment and to work with existing and pipeline government funded initiatives and industry partnerships.

As a result of the City Deal investment in specialist facilities, equipment and industry led skills provision which will improve collaboration between industry, government and academia, it is estimated that the National Net Zero Skills Centre of Excellence will lever in an additional £5.5m of private research income and over £50m of public sector research income over 5 years post construction of the facility, with increased opportunities for clustering, job creation and retention leading to economic growth.

4.5 Flow of Funding

The release of funds from the Accountable Body to Neath Port Talbot Council will follow funding route illustrated in Figure 4.1 below:

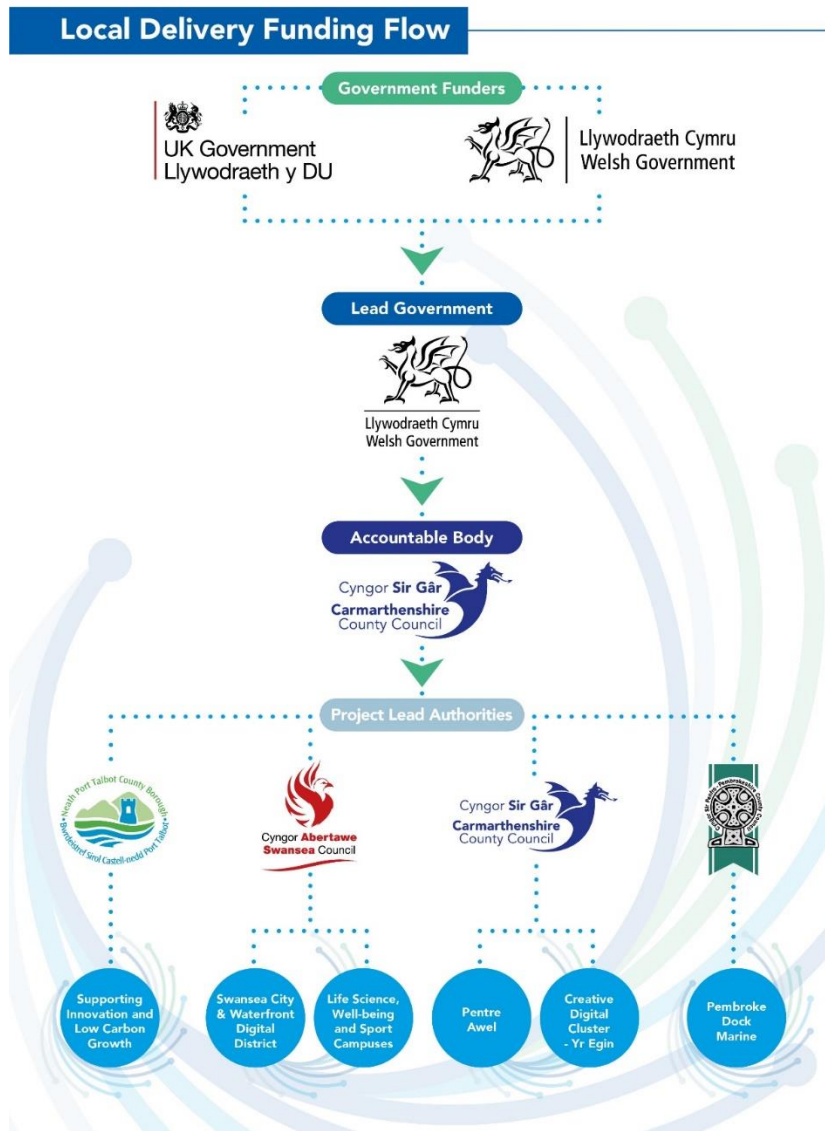


Figure 4.1 City Deal Funding Flow

4.6 Borrowing

The capital borrowing (in respect of the Government funded element) for the City Deal Projects will be re-paid by identified Government funds (UK & Welsh Government) over the 15-year period with the UK Government element now being paid over a 10-year timeframe.

The exact level of borrowing and the structure and terms of the borrowing is yet to be confirmed at this point in time, however it will be calculated based on the amount required per relevant local authority and will be in line with the individual local authority's internal requirements. This is being

determined by the four Section 151 Officers of the four regional local authorities. All borrowing will be agreed based on the principles of the Prudential Code and Treasury Management Policy and Strategy for each local authority. When further details of the investments required for each Project are known, a full business case appraisal for each individual Project will be completed and submitted to the relevant local authority for approval before submission to the Joint Committee. These full business cases will include the detailed funding proposals and requirements of the local authority.

Government Grant 'Top Slice' - Annually, up to 1.5% of the Portfolio Investment Fund, specifically the government grants awarded, will be earmarked to support the Joint Committee and central administration functions required to support the delivery of the Portfolio. This is referred to as 'Top Slice' of Government Grants.

Interest on Investments - It is recognised that throughout the lifecycle of the City Deal portfolio, cash balances will arise through cash flow movements as and when Projects become live and actual expenditure is incurred. Cash balances held by the Joint Committee will be invested through Carmarthenshire County Council as the Accountable Body. Income generated from cash investments will be ring-fenced and redistributed direct to Projects based on the allocation outlined within the original Heads of Terms.

4.7 Retention of National Non-Domestic Rates

Welsh Government have agreed in principle (as per below) 50% of the additional net yield generated through City Deal developments can be retained by the region to support revenue costs associated with the programme. This has been acknowledged by the Lead Authorities within the Joint Committee Agreement (JCA - 29th April 2018).

Welsh Government (Cabinet Secretary for Finance, 11th April 2018):

'I intend to initiate arrangements to allow the region to retain 50% of the additional net yield in Non-Domestic rates generated by the 9 programmes / projects which are to be delivered by the Deal'

4.8 Monitoring and Evaluation

The City Deal portfolio finances will be monitored through the SBCD Programme Board and SBCD Joint Committee, with the SBCD Economic Strategy Board also making recommendations on possible additional funding opportunities or alternative portfolio expenditure. Regular reports will also be presented by the Accountable Body to the regional Local Authority Directors of Finance and Regional Section 151 Officer working group. This working group will, in collaboration with the Welsh Government and the SBCD Portfolio Management Office, agree the financial monitoring process which will be:

- In line with overall reporting processes for the City Deal
- Based on best practice principles and guidance on project monitoring contained within the Green Book

Regular financial monitoring reports will be reported through the SBCD governance process. The NNZS Centre of Excellence, as part of the SILCG will report at SILCG programme level governance arrangements via the SILCG Programme Board.

The monitoring process will allow for the control of project cost variations and visibility of variations at a portfolio level.

The monitoring requirements of the Portfolio will require the Project Authority Lead to submit a claim for project funding to the Accountable Body at a frequency to be determined by the Accountable Body. The claim shall include a progress report on the project. The progress report shall include an assessment of risks associated with the project and details of progress against the agreed outputs. After the parties have agreed in accordance with clause 6.7 of the funding agreement that the project has achieved practical completion, the project authority lead shall not be required to submit claims for project funding. Thereafter, the project authority lead shall complete annual monitoring returns in a form to be specified by the Accountable Body prior to the Accountable Body releasing any project funding to which the project authority lead is entitled. The annual monitoring forms will include an obligation to report on the progress in achieving the agreed outputs. The Accountable Body reserves the right to impose additional monitoring requirements at a frequency and for such period as it considers reasonable in all the circumstances.

In addition to the above monitoring requirement the Accountable Body will require quarterly financial updates on project spend to support the cash flow management of the portfolio. These will detail the actual spend to the period, with forecast outturn over the 15-year duration of the portfolio.

Project lead authorities are also obligated to support the Accountable Body with any progress update reporting as required by the Welsh and UK Governments.

4.9 Accountancy Treatment

Accounting for Income and Expenditure

All income and expenditure is accounted for within the financial statements of the Project Lead Authority.

4.9.1 Revenue Requirement

The Welsh Government has acknowledged that revenue funding will be required to support the delivery of projects within the City Deal portfolio. The revenue requirements by projects of the City Deal are to be managed locally by the Project Lead Authorities. The Welsh Government recognises that the four local authorities will need to manage their capital funding to enable revenue expenditure to be supported. To achieve this through the use of the Local Authorities' capital receipts, Local Authorities will reference to the latest direction from Welsh Government Ministers on the use of capital receipts. This was issued under section 15(1) (a) of the Local Government Act 2003, along with accompanying guidance. Specific revenue funding will be detailed within project business cases and funded through partner investment.

4.9.2 Balance Sheet Accounting

Assets generated through the life of the programme will be accounted for and held on the balance sheet of the Local authority in which constituent area the asset is completed or the partner in which the asset is generated. Local authorities will account for assets in line with the relevant legislation and accounting standards. Partners will account for the assets in line with their own industry standard or accounting policies adopted.

4.9.3 Value Added Tax

Value Added Tax (VAT) is included where appropriate within the forecasts and estimates demonstrated. For objectives delivered by local authorities, VAT is excluded from forecasts and estimates under the application of Section 33 of the VAT act 1994. This Act refunds to (mainly) local government bodies the VAT attributable to their non-business activities and exempt business activities, providing it is considered an insignificant proportion of the total tax they have incurred. Projects or components of projects that are delivered by parties, other than that of local authorities, are subjected to VAT in the manner as regulated by the industry or sector in which they operate, except where regulatory standards dictate a specific treatment or application. Project business cases will identify and detail the application of VAT and include within forecasts and estimates as appropriate.

4.10 Financial Risk Management and Assurance

4.10.1 Financial risks

The portfolio financial risks are monitored and managed as part of the City Deal's overall risk management arrangements. The City Deal Programmes and Projects maintain, manage and monitor their own risks in line with guidance from the Green Book and the City Region's Accountable Body and SBCD Programme Management Office. The project operates a risk register and issues log, specifically including any financial risks identified. These risks will be monitored and updated with mitigating control actions through the SILCG Programme Board as a standing item and then regularly presented to the SBCD Programme Board and Joint Committee, through the Portfolio Management Office.

Financial issues, dependencies and interdependencies

The SILCG Programme Board maintains a log of any financial issues, dependencies and interdependencies at both programme and project level. This log will be considered alongside the financial risk register outlined above. The Accountable Body will work through the Section 151 Officer Working Group to determine any actions necessary to address identified issues and will present recommendations for required action to the SBCD Programme Board, Economic Strategy Board and Joint Committee for approval. Regular updates on financial issues, dependencies and interdependencies will also be provided to the SBCD Programme Board and Joint Committee via the Portfolio Management Office as appropriate.

4.10.2 Assurance – internal audit

The review of the effectiveness of the system of Internal Control and Governance arrangements is informed by the work of the Internal Auditors, from which the Project Lead Authority and project

board gain assurance. Internal Audit is required to undertake their work in accordance with the standards as set out in the Public Sector Internal Audit Standards (PSIAS) established in 2013, which are the agreed professional standards for Internal Audit in Local Government.

As required by these Standards, the Head of Internal Audit as appropriate to the Project Lead Authority will undertake an independent review and report findings to the Project Lead Authority and Project Board. The format of the Annual Report complies with the requirements of the Code of Practice. The Strategic and Annual Audit Plans are approved annually by the Project lead authority and Project board. In addition, the Internal Audit Unit undertakes fraud investigation and pro-active fraud detection work.

4.10.3 Assurance – external regulators

The Audit Wales as External Auditor to the Project Lead Authority reviews and comments on the financial aspects of Corporate Governance which include the legality of financial transactions, financial standing, systems of Internal Financial Control and standards of financial conduct and fraud and corruption.

5.0 The Management Case

5.1 Introduction

The purpose of the Management Case is to put in place the arrangements for the successful delivery of the project. It provides evidence that the capability and capacity is in place to govern and deliver the project, and arrangements are in place to manage project risks.

5.2 Project Management Governance Arrangements

The project will be delivered using proven project management methodologies to ensure the outputs, benefits and outcomes are achieved in a controlled, well managed and visible set of activities.

The implementation strategy embraces the principles of project management based on proven standards and quality management in line with Managing Successful Programmes (MSP) and Projects IN Controlled Environments (PRINCE2) project management methodologies.

5.2.1 Project & Programme Governance Framework

The EAMPF project will adhere to the existing SILCG programme governance arrangements detailed in the structure below. As above the EAMPF has its own project team and governance arrangements which align to and provide regular reports to the SILCG governance as detailed below:

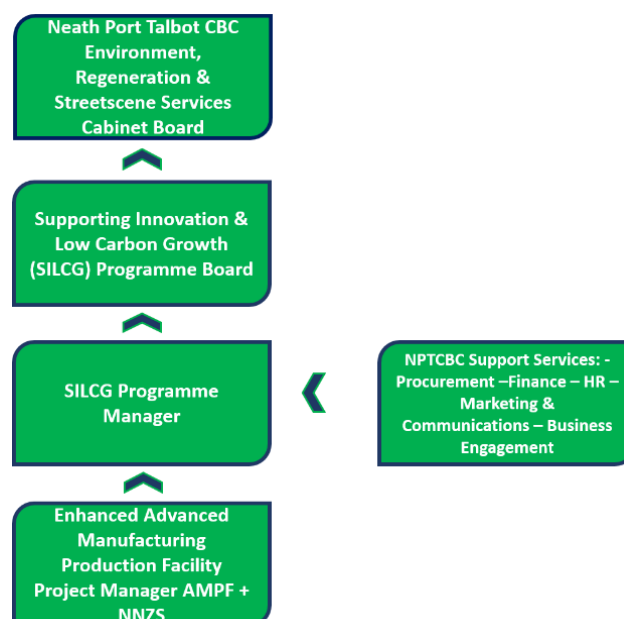


Figure 5.1 EAMPF Project governance structure

5.2.2 SILCG programme board

The SILCG Programme Board governs and oversees the SILCG Programme, (and therefore the EAMPF project) reporting directly to each of the partner governance structures and the SBCD governance arrangements as per the structure below.



Figure 5.2: City Deal governance structure

The SILCG Programme Board is chaired by the Programme SRO and includes representatives from each of the project partners and the SBCD Portfolio Management Office.

The Board is responsible for:

- Overall strategic decision making and programme leadership,
- The approval of project timescales and plans,
- The approval of key procurements and recruitments,
- Overall project and budget monitoring,
- The allocation of funds between key project components,
- Approval of any major changes to the project,
- Ensuring that benefits are realised (as per the plans set out below),
- Project assurance and post-project evaluation (as per the plans set out below).

Programme Board membership is as set out below:

Table 5.1 SILCG Programme Board membership

Organisation	Name	Role
Neath Port Talbot CBC	Nicola Pearce	Director – Environment and Regeneration Programme & Programme SRO
Neath Port Talbot CBC	Simon Brennan	Head of Property & Regeneration
Neath Port Talbot CBC	Lisa Willis	Strategic Funding Manager
Neath Port Talbot CBC	Brett Suddell	SILCG Programme Manager
Neath Port Talbot CBC	Julia Lewis	Strategic Funding Officer Project Coordinator
Swansea University	Dave Worsley	SWITCH
Swansea University	Miles Willis	SWITCH
University of South Wales	Jon Maddy	Hydrogen stimulus project
Swansea Bay City Deal PoMO	Jonathan Burnes	SBCD Portfolio Director

5.2.3 Programme SRO

The SRO is accountable for the EAMPF project, and for ensuring that it meets its objectives and delivers the expected benefits.

5.2.4 Programme team

The SILCG Programme Manager will liaise with the EAMPF project manager, and will drive forward the delivery of the programme and ensure progress towards outputs, outcomes and impacts and linkages to other developments in the region.

5.2.5 Support services

Support services for the programme including HR, legal, procurement will be provided by Neath Port Talbot CBC.

5.2.6 Project plan

The project plan / implementation plan will be used to control and track progress and delivery of the project and resulting outputs, outcomes and impact. It describes how, when and by whom a specific project activity, milestone or target will be achieved.

Detailed project plan Gantt chart will be developed as project progresses.

The project plan summary with key milestones is below:

Table 5.2 EAMPF programme key milestones (Calendar year).

Activity	Milestone	Status
Outline Business case approval	Q4 2023	Under review
Enhanced Advanced Manufacturing Production Facility building specification workshops / Design Brief	Q1 2024	Further discussions continuing
Operator Procurement	Q2 2024	Initial Scoping
Enhanced Advanced Manufacturing Production Facility Procurement	Q2 2024	Future development
Design phase	Q3 2024 – Q3 2025	Future development
Construction phase commenced	Q3 2025	Future development
Construction complete	Q4 2026	Future development
Facility Opens	Q4 2026	Future development

5.2.7 Outputs, outcomes and impact

Table 5.3 below shows the project’s outputs, outcomes and impacts which contribute to and deliver the SILCG Programme Investment Objectives and programme level impact that will be monitored and reported on.

The table shows the baseline of the original AMPF project outputs as approved with the SILCG PBC, the projected outputs generated by the NNZS, and the combined outputs from the combined EAMPF.

Table 5.3 Project outputs

Outputs	AMPF OBC (1)	NNZS (2)	Enhanced AMPF (1&2 combined)
Land Developed	0.81ha	-	0.81ha
Premises Created	4,000m2	1,000m2	5,000m2
Jobs Accommodated	111	29	140
Jobs Created/safeguarded	88 (+10 construction)	15	113
SMEs accommodated	15	-	15
SBCD Investment	£17.2M	£5.3M	£22.5M
Public Sector	-	£50M+	£50M+
Private Sector	£500K/yr (to 2033)	£5.5M	£9M
No. of Courses per annum	-	50+	50+
No. of Individuals trained by 2033	-	3,500	3,500

5.3 Use of Specialist Advisors

Specialist advice has been used for the development of the business case, however the SRO and SILCG Programme Board retain ownership of the business case and its development. The project will use specialist advisors in the following areas.

Table 5.4 Project specialist advisors

Category	Specialist Advice
Business case development	NPT Strategic Funding Programme Office Swansea University Industry Wales Economic Strategy Board SBCD PoMO
Financial	Neath Port Talbot CBC, Financial Services

Legal	Neath Port Talbot CBC, Legal Services
Technical	Neath & Port Talbot CBC, Architectural Design Office.
Programme / project management	Neath Port Talbot CBC, Strategic Funding Programmes Office
	SILCG Programme Manager
Programme / project assurance	Neath Port Talbot Council Internal Audit Welsh Government Integrated Assurance Hub SBCD

5.3.1 Stakeholder Working Group

A Stakeholder Working Group will be established to provide impartial advice to the project team and partners. The group will include industry experts, academia, and government.

The working group will consider scoping of the facility, skills for the green economy and ensure alignment to the Skills and Talent Project, SWIC and other Skills groups

Terms of reference will be agreed including declarations of interest and the purpose of the group.

5.4 Change and Contract Management Arrangements

The EAMPF project team will follow the change control procedure as established by the SILCG Programme Board, in line with the PoMO change control procedure. This will provide an acceptable procedure for the delivery of change over the life of the project to manage anticipated and unexpected change.

Neath Port Talbot will lead on project procurement activity and has an existing contract management process in place.

5.5 Benefits Realisation Arrangements

The necessary management arrangements will be put in place to ensure that the project delivers its anticipated benefits. The benefits arising from the EAMPF project for the SILCG programme were identified in the Strategic Case and were assessed in the Economic Case.

The SILCG Programme Manager and EAMPF Project Manager will update the SILCG a benefits realisation plan and benefits register in accordance with the HM Treasury Green Book guidance. The benefits register is based on the funded outputs and realisation of wider spending objectives and is an integral part of project and programme management meetings. The benefits register is owned by the SILCG Programme Board.

Benefits Register is at Appendix 3.

5.6 Risk Management Arrangements

The EAMPF Project Manager will develop a risk management strategy and further develop the risk register. A SILCG programme risk register is in place and is regularly updated and reported to SILCG Programme Board. The project risk register is aligned to the SILCG programme risk register and in turn the SBCD Portfolio Risk Register.

Risk Register at Appendix 4

5.7 Programme Assurance

The SILCG programme has developed a programme level Integrated Assurance and Approval Plan (IAAP) (Appendix 7) which is a live document with regular updates.

As detailed in the IAAP the SILCG programme and its projects will be subject to the SBCD Assurance Framework and Office of Government Commerce (OGC) Gateway Reviews.

Following approval of the OBC for the National Net Zero Skills Centre of Excellence, the SILCG Programme Business Case will be updated to also include the Skills project. This will be reviewed and approved through the SILCG Programme Board and SBCD governance structures for information.

Once the Programme Business Case has been updated, a Gateway review will be undertaken on the SILCG Programme, with terms of reference for the review to be developed with the SILCG SRO and PoMO.

5.7.1 Monitoring during implementation

A SILCG Programme Monitoring and Evaluation plan will be developed for the project which will align to the SBCD Monitoring and Evaluation plan.

The project Monitoring and Evaluation processes replicates those set out in the SBCD Monitoring and Evaluation Plan. The plan is targeted at Programme / Project SROs, the Portfolio Management Office and SBCD Programme / Project teams. For this project, the SRO will ensure that the project team makes appropriate arrangements to collate, monitor and communicate project milestones, deliverables and benefits realisation. The M&E Plan will align to the revised HM Treasury and the UK Government's Project Delivery Guidance. The M&E plan will be applied at project level where a two-way cascade of outputs and outcomes will be required to understand performance and impact of the project. The tools and templates used to monitor and evaluate activity include:

- Monthly highlight reports
- Quarterly monitoring reports
- Annual reports
- Benefits realisation plan – continually updated and reported quarterly

- Integrated Assurance and Approval Plan (IAAP)
- Construction Costs Impact Assessment
- Financial Monitoring (including private sector investment status)
- Milestone evaluations as agreed with the Portfolio Management Office

Monitoring and Evaluation requires a periodic assessment of project implementation and performance activities and the evaluation of their results in terms of relevance, effectiveness, and impact. Monitoring and Evaluation activities will provide all levels of the governance structure with information on the progress and impact made towards achieving the project's milestones, outputs and outcomes. This information will be shared with the relevant bodies through periodic updates and reviews.

5.7.2 Post implementation and evaluation arrangements

The Post Implementation Review will involve a detailed review of the outputs and benefits of the project. The timescale for carrying out this review after the project closure will be decided by the Programme SRO and SILCG Programme Board. The review team will be independent to the programme.

The Programme Manager will ensure a Project Implementation Review and a Post Evaluation Review will be carried out in line with HMT Green Book guidance.

5.8 Contingency Arrangements and Plans

The Project Manager will have quarterly monitoring meetings with the SRO and SILCG Programme Board to review project progress, risks, issues and performance against targets, timescales and budget.

5.9 Communication and Dissemination Arrangements

There will be a coordinated approach to branding, communications and marketing.

An initial stakeholder mapping has been carried out and stakeholders have been identified from Welsh and UK Governments, industry including Industry Wales, academia in relation to RD&I and skills. This mapping will inform the project communications plan in line with the good practice example of the power / interest matrix in the diagram below.

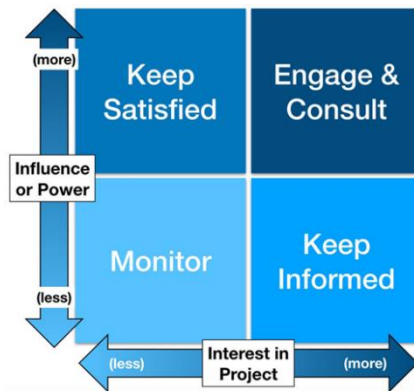


Figure 5.4 Stakeholder power/interest matrix

At pre-approval stage, the following stakeholders have been identified and engagement activity has been undertaken in developing the project business case.

Stakeholder	Engagement activity to date
Welsh Government	Policy workshops Project meetings
UK Government	Policy workshops Project meetings
Industry Wales	Regular engagement meetings
South Wales Industrial Cluster (SWIC)	Engagement meetings
Further Education Colleges	Regular Engagement Meetings
Higher Education Establishments	Regular Engagement Meetings