

Feasibility Study: National Centre for Climate Change at the former Cockenzie Power Station site, East Lothian



Prepared by

Planning Solutions Consulting Limited

February 2023

Client	360 Steering Group
Title	Feasibility Study: National Centre for Climate Change at the former Cockenzie Power Station site, East Lothian
Version	Final Report
Date	February 2023
Contact details	<p>Planning Solutions Consulting Limited 9 Leigh Road Havant Hampshire PO9 2ES</p> <p>office@pslplan.co.uk</p>

All information, analysis and recommendations made for clients by Planning Solutions Consulting Limited (PSCL) are made in good faith and represent PSCL's professional judgement on the basis of information obtained from the client and elsewhere during the course of the assignment. However, since the achievement of recommendations, forecasts and valuations depends on factors outside PSCL's control, no statement made by PSCL may be deemed in any circumstances to be a representation, undertaking or warranty, and PSCL cannot accept any liability should such statements prove to be inaccurate or based on incorrect premises. In particular, and without limiting the generality of the foregoing, any projections, financial or otherwise, in this report are intended only to illustrate particular points of argument and do not constitute forecasts of actual performance. Please note that the demographic data is supplied by a third party and PSCL cannot be held liability for any inaccuracies in the data provided. This report should not be copied or distributed to any third parties without the express written permission of Planning Solutions Consulting Limited due to the confidential nature and commercial sensitivity of some of the information contained within this document.

Front cover photo kindly provided by 360 Steering Group

Contents

Executive summary

1.0 Introduction

- 1.1 Brief
- 1.2 Context
- 1.3 Report structure
- 1.4 Methodology

2.0 Site review and background context

- 2.1 Location
- 2.2 Local community and site heritage
- 2.3 Accessibility and linkages
- 2.4 The site
- 2.5 Current site condition
- 2.6 Existing planning consents
- 2.7 Current site proposals
- 2.8 Levelling Up Fund
- 2.9 Site SWOT

3.0 360 vision, priorities and offer

- 3.1 The 360 concept: The core vision
- 3.2 The 360 concept: The core aspirations
- 3.3 Vision and aspiration review
- 3.4 The 360 concept: The core offer

4.0 Consultation

- 4.1 Summary of previous consultation
- 4.2 Current consultation

5.0 Market demand assessment

- 5.1 Consumer interest in the 'environment'
- 5.2 Education market
- 5.3 Employment and training
- 5.4 Residential marketplace
- 5.5 Tourism market
- 5.6 Visitor attractions sector

6.0 Competitive landscape

- 6.1 The offer in East Lothian
- 6.2 Nearby community facilities
- 6.3 Other local development projects
- 6.4 Wider landscape of climate change visitor attractions
- 6.5 National climate change centres
- 6.6 Other
- 6.7 Key implications

7.0 Case examples – comparators and evidence

- 7.1 Major comparable attractions – success stories
- 7.2 Arts and culture opportunities
- 7.3 UHI academic model

8.0 Project delivery

- 8.1 Governance
- 8.2 Visitor scenarios
- 8.3 Financial projections
- 8.4 Sources of capital funding
- 8.5 High-level indicative impacts
- 8.6 Risk assessment and management

9.0 Next steps

- 9.1 Critical next steps
- 9.2 Project delivery (design and build)
- 9.3 RIBA Plan of Work
- 9.4 Other considerations – design competition

10.0 Concluding remarks

Executive summary

Introduction

The 360 Group, an East Lothian based community body, has proposed a National Centre for Climate Change, an innovative green space, community park and an art installation of national significance located on the disused former coal-fired power station site between Cockenzie and Prestonpans.

Planning Solutions Consulting Limited was commissioned to carry out an independent feasibility study, jointly funded by East Lothian Council, Inch Cape and Sea Green to test the viability of this proposal.

A majority of people recognise that we are facing a Climate Emergency. Rising sea levels, increasing droughts, wildfires and storms alongside higher temperatures are driving resource scarcity, the mass movement of people and significant negative impacts on the global economy. A connected biodiversity crisis is affecting our life supporting ecosystems. Inger Andersen, Executive Director, United Nations Environment Programme recently commented: *“Every year, the negative impacts of climate change become more intense. Every year, they bring more misery and pain to hundreds of millions of people across the globe. Every year, they become more a problem of the here and now, as well as a warning of tougher consequences to come. We are in a climate emergency. And still, as UNEP’s Emissions Gap Report 2022 shows, nations procrastinate. Since COP26 in Glasgow in 2021, new and updated nationally determined contributions (NDCs) have barely impacted the temperatures we can expect to see at the end of this century.”*¹

Project aims and core offer

The primary rationale for the proposal is simple. The 360 Group, through a National Centre for Climate Change, seeks to provide a facility that increases people’s understanding and skill base and enables them to learn more efficient and effective ways to tackle the climate emergency. There is also a strong driver to create employment opportunities through the development of the National Centre for Climate Change.

The 360 Steering Group believes that the National Centre for Climate Change and Community Park should incorporate a number of core component elements:

¹ United Nations Environment Programme (2022). Emissions Gap Report 2022: The Closing Window — Climate crisis calls for rapid transformation of societies. Nairobi. <https://www.unep.org/emissions-gap-report-2022>

- A **Climate Change Centre** will anchor the development and provide a multi-faceted space including galleries and exhibition areas. The use of cutting-edge immersive exhibits, virtual reality and activities will create engaging and inspiring experiences centred around climate change. The centre will be of a signature design and incorporate supporting catering and retail offers.
- A **strong education** offer, incorporating a learning centre with the potential for drawing in education visits from across the UK and from further afield. There is strong ambition to work in partnership with colleges, universities which will help to create a 'forum' for engaging with the public.
- An **innovative landscaped greenspace**, alongside interpretation of the natural environment and of the growing renewable sector will be a central part of the offer
- **Iconic public artwork** of national importance will help to draw in users and raise the profile of the project
- Working in partnership, there is a desire to incorporate a **skills and training offer** linked to the renewable energy sector providing opportunities for local residents and others and creating **new employment** opportunities

The approach to the project concept by the 360 Steering Group has been shaped by wide-ranging and ongoing engagement with the local community.

Partnership working and governance

The 360 Steering Group recognises that a partnership approach will be critical to the success of the project.

The 360 Group ambition is that the project is taken forward in partnership between the 360-community body (as a charitable company), East Lothian Council, companies working in the renewable energy sector, training providers, education providers, the local community and others. This could take the form of a parent charity with a wholly-owned trading subsidiary operating the centre.

Consultation

Consultation has taken place with stakeholders including the renewable energy companies and there is broad support for the need to tackle climate change. Community Benefit Funds for affected communities associated with renewable energy development are a potential

source of part of the capital funding mix. At this stage of the feasibility work, limited consultation was carried out with Council Officers (however, the relevant papers and reports were accessed and made available).

The market

More broadly, research shows that consumer interest in the environment and climate change is strong and over the last 15 months there has been COP 26, COP 27 and most recently COP 15. This is accompanied by a feeling that governments and businesses should be doing more. The concept for the Centre is focussed on positive messaging about climate change and mitigation to drive positive change.

The market assessment demonstrates that there is a reasonable population base within the two-hour drivetime contour of the development site. Over one million residents live within 60 minutes drivetime of the site, and approximately 70% of Scotland's population live in the 'Central Belt.'

Site connectivity to the public transport network is good with local access by both road and rail. The John Muir Way passes directly by the site and there is also good connectivity to the A1, both providing 'access' to the wider marketplace.

The size of the resident base level demonstrates the importance of visits generated from the tourism markets in East Lothian and Edinburgh.² A critical consideration will be effective marketing to target different user groups markets both for initial and repeat visits (including education and community users) for the proposed multi-faceted facility.

It is recognised that there is an increasing need to provide training and skills development in the renewables sector. There are currently over 730,000 people employed within the energy sector in the UK with over one third of these employed within the renewable sector. Scottish Renewables reported that there were currently over 27,000 FTE jobs in the renewable sector in Scotland in 2020 with that number is set to increase significantly in the coming years.

Climate change skills, education and training opportunities are offered across Scotland by educational institutions, research providers, other organisations and the private sector. The 360 educational facility would focus entirely on this provision and would require partnership working with other providers.

² It should be noted that we are still in COVID recovery mode and inflationary pressures are placing a further burden on the marketplace.

Renewable energy companies have invested heavily in their own workforce training bases, designed to meet their needs. Academic institutions are responding with undergraduate and postgraduate awards based on sustainability, de-carbonisation and the green economy. However, as noted above there is an increasing need for training and skills development across the renewables sector.

Comparators

The National Centre for Climate Change as a visitor attraction is acknowledged in the brief as a key anchor for the project and is an important part of driving throughput, engaging with the community and shaping the financial model (alongside the community park and iconic artwork).

The competitive landscape in Scotland is already complex with multiple and established organisations delivering services / experiences related to the climate emergency. For example, the National Mining Museum Scotland (temporary Carbon Conflict and Climate Change exhibition), Discovery Point Dundee (part of a £12m regeneration programme of the visitor offer) and Scotland's four Science Centres including Dynamic Earth. **It is important to highlight that these demonstrate consumer interest in the broad climate emergency.** As established brands, the potential development of Eden Project North and Eden Project Dundee will soon impact on the supply side of 'environmental' offers in Scotland (which have a community and visitor offer alongside a strong educational focus). At the same time, it again demonstrates demand.

Both the Kelpies and Angel of the North have been reviewed as nationally important transformative and regenerative pieces of public artwork. The 360 public art-work would be comparable but its direct link to the theme of climate change would be an important aspect of the art. The proposed statues would also link back to the two former chimneys which were iconic aspects of the old Cockenzie Power Station which had been recognised as a marker of place for over 50 years.

The University of the Highlands and Islands has specifically been referenced as part of this project. The development of education and training centres across the Highlands and Islands has been of significant benefit to that area both economically and culturally and demonstrates the positive impact of locally based learning resources.

Revenue finance

As a National Centre for Climate Change, the 360 would seek to attract funding from a wide range of sources including Scottish and UK Government and the renewable sector, along

with funding streams related to the educational offer, and visitor numbers and onsite spend relating to the iconic public artwork and visitor attraction element of the centre.

An admission fee will be charged to visitors to enter the National Centre for Climate Change, but access to the external ground which includes nationally important artwork will be free. The site would hope to achieve over 200,000 visits within the first year. This level of footfall is close to that achieved by the Scottish Seabird Centre and Dynamic Earth.

However, the financial projections show a need for ongoing annual revenue support in the order of £365,000 in Year One, increasing to £456,000 in Year Five (this excludes some costs and any budget to refresh the offer in Year Three).

Challenges and risks

Similar to other transformational projects this faces a number of challenges and risks. The former Cockenzie power station brownfield site is in the ownership of East Lothian Council. ELC was successful in a bid to the Levelling Up Fund and has been granted £11.3m for development costs for site remediation. High level development costs for the National Centre for Climate Change are estimated to be in the region of £29.5 million.

Additionally, since this study was commissioned in May 2022, the economic landscape has radically shifted. There is a high level of uncertainty in the marketplace and in March 2022 and again in November 2022 the Scottish Government published an Emergency Budget Review which set out cuts and savings in public spending. The available capital budgets of the Scottish Government and local authorities, key sources of grant funding will be squeezed. It is important to highlight that the project is based upon partnership working with a range of organisations, including the renewables sector which is likely to continue to show positive growth in the immediate future.

Summary conclusion

The Vision and aspirations of the 360 are ambitious and require a collaborative partnership approach.

A National Centre for Climate Change would coalesce around issues relating to social changes required in a Climate Emergency setting. It includes the provision of education and training in an increasing marketplace. This is combined with a visitor attraction which includes large scale public artwork within a community park setting, looking out over the Forth and highlighting both the cultural and natural heritage of the area.

There are unknown factors relating to the site and the economy, alongside a number of risks set out in the main report. There are market challenges and potential competition for audiences and site users. However it is becoming increasingly clear across the world that the climate emergency is one of the most important and growing issues we are facing as a society. Both the history of the site use and its location by the sea are relevant to the climate change emergency.

The development of a National Centre for Climate Change on this site would help to deliver a range of key benefits: locally - employment opportunities and the creation of a community space on a unique and important coastal location; nationally - a visitor experience which would draw in visitors from around the UK; and internationally - a focal point for matters related to the climate emergency.

The future of the 360 will depend upon successful engagement and partnership working with East Lothian Council, the Scottish Government, the renewables' operators, other potential site users and the local communities.

1.0 Introduction

1.1 Brief

This feasibility study has been undertaken on behalf of the 360 Centre Steering Group by Planning Solutions Consulting Limited (PSC) and is focused on testing the concept and potential market for a National Centre for Climate Change. The Scope of Works³ sets the key elements of the concept for a National Centre for Climate Change which has been developed by the 360 Centre Steering Group, which are at the centre of the feasibility study:

- A **Climate Change Centre** will anchor the development and provide a multi-faceted space including galleries and exhibition areas. The use of cutting-edge immersive exhibits, virtual reality and activities will create engaging and inspiring experiences centred around climate change. The centre will be of a signature design and incorporate supporting catering and retail offers.
- A **strong education** offer, incorporating a study space with the potential for drawing in education visits from schools across East Lothian, Edinburgh and from further afield. There is strong ambition to work in partnership with colleges, universities which will help to create a 'forum' for engaging with the public.
- An **innovative landscaped greenspace**, alongside interpretation of the natural environment will be a central part of the offer
- **Iconic public artwork** of national importance will help to draw in users and raise the profile of the project
- Working in partnership, there is a desire to incorporate a **skills and training offer** linked to the renewable energy sector providing opportunities for local residents and others and creating **new employment** opportunities

The approach to the project concept by the 360 Steering Group has been shaped by wide-ranging and ongoing engagement with the local community.

At the Inception Meeting it was recognised that restoring the pier to enable pedestrian access for leisure activities including boat trips would be a latter phase of development.

³ 360 Centre Feasibility Study - Scope of work V3

The concept set out in the brief is constructed from local aspirations for the site underpinned by interlinked elements like community space, nationally important art work jobs, training and education which have the potential to help regenerate the community and to create a vibrant destination. Also recognised by the concept, is the aspiration to work in partnership with the local community, East Lothian Council, renewable energy companies and other stakeholders and public sector bodies.

1.2 Context

Operational from 1968 to 2013, Cockenzie Power Station utilised four 300 megawatt (MW) generating steam turbine units capable of burning 400 tonnes of coal per hour at peak load. One of Scotland's largest baseload power stations, Cockenzie had road and rail access and connections directly to the National Grid. Two large chimneys were landmark features, visible from across the Forth of Firth. Latterly they symbolised carbon emissions.

To comply with an EU Directive on CO₂ and nitrogen oxides emissions, power stations like Cockenzie stopped generating in 2013 as they were considered to be principal contributors to climate change. Cockenzie was one of 200 similar energy plants across the UK and Europe that were closed. In 2015, Scottish Power confirmed that their planned gas-fired power station would not go ahead and they cleared the site in 2015/16 retaining only the electrical sub-station which is an important node on the National Grid.

In 2018 East Lothian Council (ELC) acquired the 81ha site from Scottish Power. The council has long recognised that the site presents a key strategic economic re-development opportunity and there are different opinions on its future use.

"This is a key site of huge importance to the economic future of East Lothian and for the communities that surround it." **Cllr Norman Hampshire**

Two offshore wind turbine developers – Inchcape Offshore Limited (ICOL) and Seagreen have subsequently each gained site planning consents for onshore transmission works and connections making use of some remaining infrastructure and National Grid connection.

ELC currently are considering other uses for the remainder of the site while setting a vision and master plan for works necessary to prepare for future re-development. There is keen local interest in future site uses. The site has value at three levels:

1. The site is referenced in the Revised Draft National Planning Framework (NPF) 4 meaning Scottish Ministers may take an active role in considering future uses.

2. At a Regional/ East Lothian level, the site is a strategic regional asset and is linked to wider ambitions for the Climate Resilience Zone
3. At a Community level (Prestonpans, Cockenzie and Port Seton) – the former power station dominated the local community and provided local employment (100+ jobs) for over 45 years as did the colliery that occupied the neighbouring site on Preston Links until its closure in 1964.

ELC has funded feasibility studies into different proposals for the site (e.g. Cruise Terminal study – please see Section 2.7). This study is one amongst investigations by other parties pursuing their interests in the site in line with commercial opportunities and planned economic growth within East Lothian. Concurrently, ELC is commissioning technical studies on site remediation and are seeking the financial investment necessary, which in mid-January 2023 was secured from the Levelling Up Fund, to prepare the site to be ready for any subsequent development. ELC, and possibly Scottish Ministers, will subsequently determine whether any of these proposals, or elements of them, are viable and capable of being taken forward as part of further site master-planning. It is important to note renewable uses have already been consented on the site.

The 360 Steering Group have invested considerable time in developing their vision and concept and have carried out some local consultation (see Section 4). The Group believes that a National Centre for Climate Change is urgently required to help address the scale and severity of future climate change challenges and social and economic losses in the local community.

Their view is certainly supported by the recent **June 2022 UN Intergovernmental Panel on Climate Change (IPCC) Working Group 2** report on 1.5 degrees which catalogues the real environmental damage, human suffering and increased economic costs scientists think would arise if global average temperatures were to exceed that level.

The group also recognises that the site has a powerful local narrative derived from multiple past industrial processes from 18th century pottery and salt to coal extraction through the coalfired Cockenzie power station and to renewable energy infrastructure in the 21st century. This industrial past, present and future is closely linked to local community confidence, sense of place and identity.

It is important to highlight that over the course of this study that governments and society are facing a cost-of-living crisis and inflationary pressures which are impacting on the economy of Scotland and wider UK. On the 6th of September 2022, the First

Minister of Scotland set out the annual Programme for Government (known as the “PFG”) 2022 to 2023 to the Scottish Parliament. The First Minister commented:

“It is hard to overstate the gravity of the situation we face. This cost crisis puts livelihoods – and lives – at risk. The figures are stark. At the end of last summer inflation was 2%. This week it stands at 10.1%, the highest UK rate since 1982, and is expected to be the highest in the G7 group of leading economies for the next two years. The Bank of England is now forecasting that the UK will enter recession later this year. Interest rates have been pushed to their highest level since 2009...

In the current financial context, where the power of our spending is being eroded by inflation of over 10% and we are spending an increasing percentage of our budget on energy costs for essential public services like hospitals and prisons, these choices become even more stark. The impact of inflation means that the Scottish Government budget for this year is already worth £1.7 billion less than it was in December. And the UK Government's existing spending plans, coupled with Bank of England inflation forecasts, mean that the Scottish Government's funding will fall by 4.5% in real terms next year. If inflation rises significantly higher, the resources available to us will erode even further... All governments must make hard choices, but without the full set of fiscal levers that other governments have at their disposal, including borrowing powers, our choices are additionally constrained. Resources we commit now come from our finite, already allocated, budgets. In addition, these budgets may be impacted, adversely, as a result of decisions taken by the UK Government over the autumn. Right now, to help those who need it most, this means we have to choose just as much what not to do as what to do. Choosing what to do in response to this crisis means choosing what we must reduce, delay or stop in other programmes.”

Climate Emergency

The PFG specifically retains a focus on the climate emergency, now framed that *“addressing the cost crisis is not, and should not be viewed as, separate from addressing the ongoing climate and nature crises”*. To illustrate this, it goes on to set out policies and proposed legislation that have been in the pipeline for some time, like the land reform bill that is currently being consulted on, the new Energy Strategy and Just Transition Plan for the energy sector, and a new climate change plan.

On the National Performance Framework and the outcomes approach, the PFG confirms that the expected review of the national outcomes will begin this year. However, it seems that the previous commitment to a consultation on a Sustainable Development and

Wellbeing Bill has been altered to now explore *“placing duties on public bodies and local government to take account of the impact of their decisions on wellbeing and sustainable development, and the creation of a Future Generations’ Commissioner”*.

Local Government and tourism

One of the big announcements impacting local government is the plan to introduce Local Visitor Levy (i.e. tourist tax) legislation. The PFG states this will: *“create a discretionary power for local authorities to apply a levy on overnight visitor stays in accommodation, applying in all or part of their area, to help fund relevant local activities and services”*.

Edinburgh City Council has campaigned long and hard for the right to tax tourists, and with over 5.3 million overnight stays in 2019 alone, it is easy to see why the Council leader views the PFG announcement as *“fantastic news for the city”*. However, perhaps not so good for East Lothian as many visitors will be coming out from Edinburgh!

Then just a day later on the 7th September the Deputy First Minister made a statement to Parliament which included the following:

“This is not just a cost of living crisis as some characterise it. The costs of doing business, the cost of third sector support and the cost of public services are all rising as well.

Indeed, in all of my experience, now and during my previous tenure as Finance Secretary, there has never been a time of greater pressure on the public finances.

In short Presiding Officer, the Scottish Budget is at the absolute limits of affordability.”

1.3 Report structure

Please note this is a strategic feasibility study. Qualified input will be required on technical site surveys and plans when they are required as this is a complex site with a past industrial legacy. Beyond what we have supplied, specialist advice is also recommended on any future company structure at the time they are adopted by the 360 Steering Group and on requirements like employment, insurance and tax. Specialist architect and landscape architect input to advise on the internal and outdoor space will be required. **Please note there is a separate Non-Technical Appendices which should be read in conjunction with the main report.**

The report is structured as follows:

- **Section 1** - Includes the study context provides an overview of the brief and background information to the project.
- **Section 2** - A summary of the wider site in terms of its location alongside accessibility and linkages, neighbouring uses, the current condition of the site, known site issues, policy implications, existing planning consents and the recent masterplan (prepared for the whole site).
- **Section 3** – Describes the vision, concept and core offer, key priorities and information is being ‘tested’ as part of this feasibility study. Wider considerations such as sustainable design and have also been considered and high-level capital costs have been identified.
- **Section 4** – Records the consultations undertaken by others during previous master planning work with the public and stakeholders about the site’s future and ELC commissioned studies from 2016 -2021.
- **Section 5** - To provide wider market context consumer interest in the environment reviewed. Importantly the wider landscape of education provision, mainly in Scotland, linked to climate change is identified. The market analysis has also considered training linked to the renewable energy sector and existing renewable energy employment training provision.

The analysis considers the core market elements in terms of the available residential marketplace living within four drivetime catchments of the site (0 to 30, 31 to 60, 61 to 90 and 91 to 120-minutes) including forecast population growth and passing traffic.

A noted in the brief: *“the visitor centre must be the anchor which the institution is built around and should be at the heart of the business plan and the centre’s design.”* Therefore both the tourism and visitor attraction sector trends have been reviewed.

Section 6 - The competitive landscape considers current visitor offer in East Lothian and planned developments in and around Edinburgh and an audit of local community spaces and facilities.

We have extended specific reference to places to visit / attractions which provide experiences which are linked to climate change in Scotland, the UK and overseas,

which helps to demonstrate how ‘attractions’ are used to engage with the largest and broadest base of different audiences. Reference has also been extended to the provision of national climate change centres.

- **Section 7** - Comparable attraction case examples, each with a strong focus on education and learning, are examined, two of the case examples have a very strong environmental focus, are thought-leaders and are considered as more than ‘traditional’ visitor attractions. Key learnings have been identified and an overview of sites which have not been successful is included. Public artwork in a visitor and destination identity context are examined - including the Kelpies and the Angel of the North. The UHI academic model has also been included as a further case example.
- **Section 8** - Project delivery sets out information on the different governance options. A visitor model has been produced and this forecasts visitor numbers over a five-year period. A five-year trading profile has been prepared and this has been flexed based on low and high throughput scenarios. A commentary on capital funding has been provided. Indicative impacts have been set out and key risks from financial, market and operational perspectives have been identified along with mitigation strategies to minimise the risks.
- **Section 9** - Conclusions and recommendations sets out our summary remarks.

1.4 Methodology

Our approach has been based on:

Task	Activity
1. Site review as of mid-2022	<ul style="list-style-type: none"> • Inception meeting with client – online • Site visit with client group led by Ray Montgomery • Stakeholder consultations
2. 360 vision, concept and core offer	<ul style="list-style-type: none"> • Discussion with client and stakeholders and through desktop research
3. Market analysis with post COVID and current ‘cost of living’ reflections	<ul style="list-style-type: none"> • Desktop research into regional and national data sources

	<ul style="list-style-type: none"> • Application of the Drivetime Geometric Buffering Method
4. Competitive landscape	<ul style="list-style-type: none"> • Desktop research into the provision of the wider 'competitive' landscape
5. Comparators and case studies – what can we learn?	<ul style="list-style-type: none"> • Desktop research and investigation into comparator sites and attractions and industry standards
6. Project delivery	<ul style="list-style-type: none"> • Desktop research and analysis • Application of data from comparators

We have also used our sister company's operational experience of managing visitor experiences two of which have a strong education focus. These include:

- CONKERS a 120-acre discovery park in the National Forest (www.visitconkers.com)
- The Cotswold Country Park and Beach, a water sports and parkland offer (<http://www.cotswoldcountryparkandbeach.com/>)
- Kent Life, a 28-acre heritage park and farm attraction (<http://www.kentlife.org.uk/>)

2.0 Site review

2.1 Location

The former Cockenzie Power Station site lies on the shore of the Firth of Forth between Cockenzie/Port Seton and Prestonpans, parts of which are designated as Conservation Areas. The cleared former Cockenzie Power Station site was acquired by ELC from Scottish Power in 2018 to support ambitions to promote economic growth and create employment opportunities in the local area. It is important to recognise the former mining activities at Preston Links (and across East Lothian) and the Waggonway which carried coal from Tranent to Cockenzie Harbour.



Former Cockenzie Power Station with landmark chimneys (photos supplied by 360 Centre - Jim Connachan and Jim Nisbet)

Significant technical work is taking place to fully understand and plan for the necessary infrastructure and environmental, economic and sustainability work needed to support the site's future redevelopment in safe and sustainable ways. Its coastal location increases site vulnerability to sea level rise and flooding.

2.2 Local community and site heritage

The 360 Steering Group set out below a summary of the importance of the site and the community involvement and use:

“The ‘Cockenzie site’ is land that has been well used by the communities of Prestonpans and Cockenzie and Port Seton for generations and continues to be, including visitors to the area – whether driving, cycling or walking or staying at the local holiday parks. The benefits this green space has brought to local people and our wider communities is immeasurable.

The Green Hills and extended green space contribute significantly to the health and well-being of our communities, allowing space for children to run, cycle, play, picnic, sledge, putt, roll Easter eggs and fly kites; for adults to enjoy similar activities, for clubs to train, for dogs to be walked, for horses to ride, for hands to be held, lips to be kissed and for prams to be pushed. A viewing point for fireworks, a look-out point to Fife and ships in the Forth, a place for battlers to battle and for communities to come together.

In particular, the power station site has a long connection to the community through the employment and sense of being part of the community. So much so that when the two chimneys were demolished it brought the whole community out and the sense of loss was overwhelming. There was no cheering when they fell, there was only silence. This is why there is much sensitivity around its future.

So when the community did a thousand hands joined together to “save our coast” from The Energy Park proposal, again the petition and event made a huge impact.

The roads and pathways around the site are well worn by pupils from the local High School, whether on cross-country or sponsored walking activities or just making their way from one community to another. Whether simply visiting a friend down or up the road, walking the John Muir Way, following the cycling route, driving to the rugby club in Prestonpans or to get your fish from the harbour, these roads and pathways are vital links for social and recreational activities in all age groups.

The site of the Battle of Prestonpans is a site of national significance and historical importance. It is a site that deserves protection and respect for those who have fought and fallen in the shaping of our country.”



Images provided by the 360 Steering Group – Community Action Day

As highlighted by the 360 Steering Group, the wider 'Cockenzie site' has hosted a wide range of events, including the following:

- Two hugely popular Three Harbour Arts Seafood Festivals brought together local produce, art & music. Brought thousands of people to The Greenhills:
 - Three Harbours Arts Festival held annual major exhibitions in the Cockenzie Powerstation canteen with a range of international, national and local artists. This included installations in Cockenzie Harbour, Prestonpans boatyard, and floating sculptures in the water.
 - Three Harbours Arts Festival lit up the two chimneys with light installations and projections which could be seen across The Firth of Forth, in the centre of Edinburgh and for many miles into Fife. International violinist Tasmin Little also performed next to the chimneys while the light installation changed colour in time to her recital live and she held workshops in a tepee on site.
- Demonstration against proposed Energy Park brought thousands to hold hands around the Greenhills under the phrase "Keep our Coast" through the Coastal Regeneration Alliance (CRA). The CRA held a number of large scale meetings through the area.
- A community apple orchard was planted in 2002 behind the national grid building.
- The Coastal Regeneration Forum planted a wild flower garden on the newly established earth bugs along the edge of the Greenhills.
- Major launch event for the Battle of Prestonpans Tapestry, which major national press and media coverage. This was the start of a series of tapestries that now form a tapestry trail across Scotland including The Great Tapestry of Scotland building in Galashiels.



Three harbours Festival - lighting up the chimneys. Tasmin Little performed played to chimneys being lit up



*Three Harbour Arts Seafood Festival
Images provided by the 360 Steering Group*

2.3 Accessibility and linkages

As a coastal location it should be noted that site access routes are limited to a 180-degree radius with the Firth of Forth being to the north. Road access to East Lothian and the site from the west side of Edinburgh and central Scotland means either using the city bypass and A1 (T) or crossing the city. There are some road congestion issues at peak times. From a tourism (and other development) perspective access infrastructure with a number of offsite 'linkages', includes:

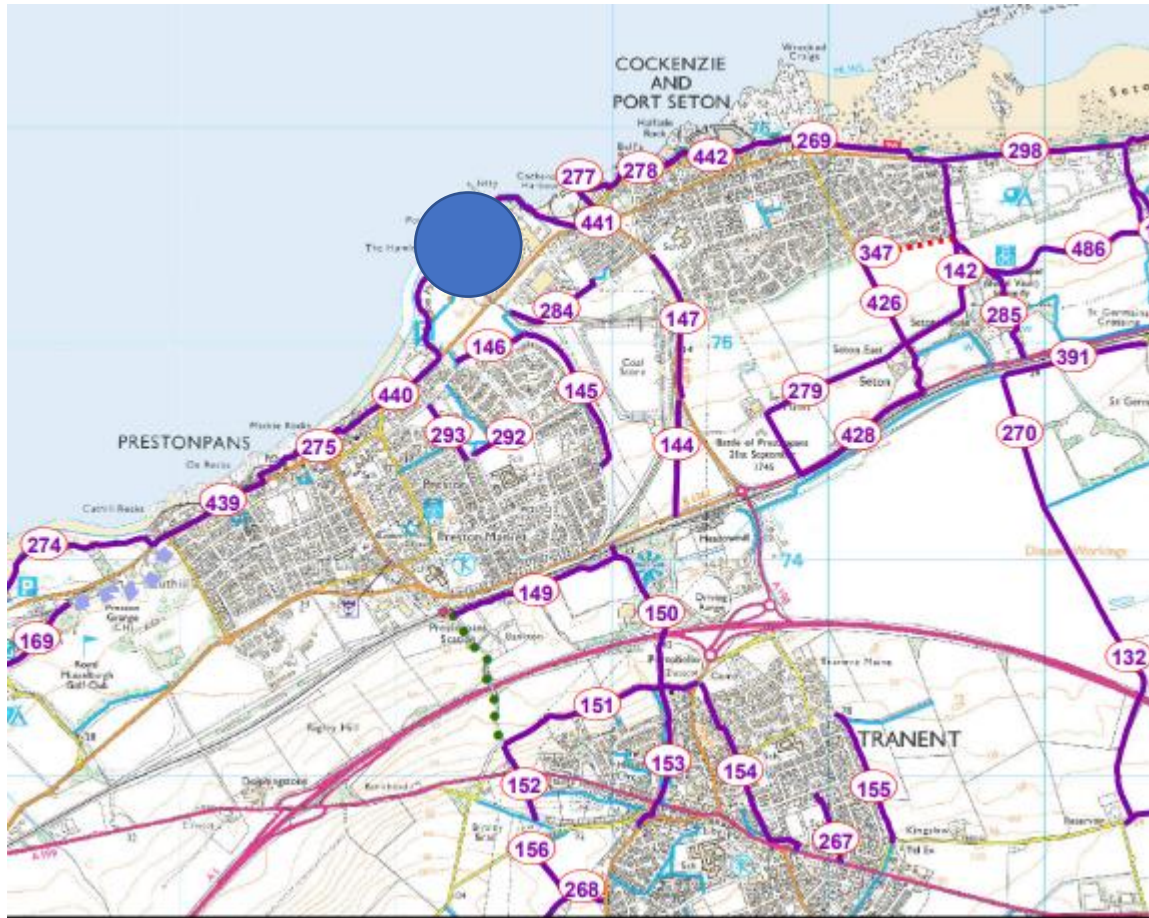
- Two existing roadway entrance points off the B1348, which passes directly in front of the site, provides access through to Musselburgh and North Berwick. The East Lothian Coastal Trail and Golf Course Road follow the B1348 through the site

- Prestonpans railway station is approximately a 20-minute walk from the site with the train journey to Edinburgh taking approximately 15 minutes (albeit with a limited hourly service)⁴
- There are regular buses servicing Prestonpans and Cockenzie (e.g. # 26,111,118 bus operated by Lothian Buses and the # N26, X26 bus managed by East Coast Buses)
- The John Muir Way (JMW) is one of Scotland's Great Trails extending between Helensburgh and Dunbar and passes immediately in front of the site on the seaward side. John Muir is a well-known environmentalist and 'father' of national parks in America and was born in nearby Dunbar. Muir was noted for being an important environmental thinker.⁵
- The map extract below shows a range of other core paths in the vicinity of the site. NCN National Route 76 from Kirkcaldy to Berwick upon Tweed passes by the site
- The site is a short drivetime of the Tranent Junction of the A1 (T). This provides onward links west to Edinburgh and Edinburgh Airport via the bypass. South on the A1(T) is Newcastle and the north of England.

⁴ Previously there was a rail link to the coal store

⁵ <https://johnmuirway.org/about/why-john-muir/>

Extract from Core Path Plan



2.4 The site

The former Crockenzie Power Station part of the area is called the ‘site’ in this study. It is a brownfield site comprising the remediated, mostly concrete, structures from the demolished power station on land reclaimed from a previous tidal section of the shoreline between the B1348 and the sea wall.

The site of direct relevance to this study is believed to be approximately 12 ha of which 2.8 ha are optioned to Inchcape. This excludes the 6.9 ha Greenhills area to the west and the Seagreen option and Scottish Power holding to the south. The ICOL has PIP consent for the Onshore Transmission Works to accommodate works enabling a National Grid connection for the Inchcape offshore windfarm.



Source: Base photo supplied by East Lothian Council

Discounting the site option area secured by ICOL and space for roads, boundary treatments etc and assuming any remediation conditions are satisfied etc the remaining 8 ha of the site might be available for development. In principle, this could include a National Climate Change Centre and other related facilities. However, as the overall site Master plan evolves, other preferred site uses may emerge. These may or may not be fully complementary and could affect the land package shares.

As potential 'neighbours,' it is important that the 360 concept fully recognises the established national strategic importance of this site in terms of energy production and any issues that might bring. The Energy Zone has attracted interest from companies involved with hydrogen and energy storage. On the positive side, the renewable energy focus on the

site complements the climate change narrative being developed by the National Centre for Climate Change and is an integral part of the 'story' and the future of the site. The National Centre for Climate Change concept is based on strong community involvement and partnership working.

The 'Greenhills' of Preston Links were formed, over the original shoreline between the B1348 and the sea, from spoil and other materials from the Preston Links Colliery that closed in 1964. Beyond that lies Prestonpans. Preston Links incorporates a car park and access to the Prestonpans beach. From the 'Greenhills' there are panoramic views to be enjoyed, particularly of sunsets on the wide-open western horizon and up to the 15th century Fa'side Castle. It has been noted that due to uncertain ground conditions⁶, it could be difficult to introduce physical structures requiring major excavation and ground works on Preston Links. Artwork, requiring limited penetration into the ground may be viable.



Looking over the site from Preston Links and looking over the lower site level

To the east of the site, immediately beyond the site boundary, lie the historic villages of Cockenzie and Port Seton with conservation areas, listed buildings and historic working harbours.

⁶ Local concerns have been raised over buried materials (including asbestos) on this part of the area. [Claim drilling into Greenhills would open up 'Pandora's box' of health hazards | East Lothian Courier](#)



Port Seton Harbour and towards the former power station site from Cockenzie Harbour

To the north of the site is the Firth of Forth. The route of the John Muir Way coastal path offers attractive views across the Firth to Fife. The path follows the sea wall and passes the entrance to the former Cockenzie Power Station jetty.



Views of the jetty from Preston Links and foreshore walkway with John Muir Way

The site overlooks the sea with attractive sunsets being photographed from the site. The outdoor space, a core part of 'offer' will help the profile of the overall site in a positive way.

The shoreline either side of the site is designated (SSSI, Ramsar and a Special Protection Area). Within the site there is reported wildlife mainly in the form of birdlife. It is recognised that parts of the East Lothian coast area of international importance and is a world class destination for birdwatchers. There is supporting visitor infrastructure in terms of Levenhall Links, Aberlady Bay Local Nature Reserve and the Scottish Seabird Centre. Fly ash from the power station was pumped to Levenhall Links and now forms attractive wildlife habitat.

To the south of the site and the B1348 is the Scottish Power owned and existing 275Kv Cockenzie substation which is connected to National Grid and the associated road frontage.



View of the existing substation from the site and roadside

The substation dominates the landscape and is visible from the Prestonpans Battlefield Viewing Point.



Looking from the Battlefield Viewing Point towards the site

From a heritage perspective, it is important to recognise that the Battle of Prestonpans is integral to the history of the wider site. The wider site incorporates a community orchard and agriculture land holdings, and we understand also has some informal recreational usage. The East Lothian Education Trust own a footpath that crosses part of this area. Another section of this area has PIP consent for Seagreen Offshore SWOL Onshore Transmission enabling a second renewable energy National Grid connection. Planning consent has been sought by ELC for a new road access to service the site from the B1348 beside the bunds from the old coal store. A spur railway line, from the main East coast railway, which was used to transport coal to the site, is located within this area (a conveyor belt system was then used to transport the coal to the power station).

The new town of Blindwells, currently under development to the southeast of the wider site, will see the introduction of up to 6,000 homes. As identified in the 2020 ClimatEvolution study, with the former power station site, the wider area offers potential for an integrated approach to build climate change resilience⁷ and there is a potential role for a National Centre for Climate Change to act as a focal point.

2.5 Current site condition

The original Power Station was developed over two levels - the lower level, which formerly housed the main power station with the boilers and turbines and the upper level which consisted of ancillary supporting uses and two chimneys. The two levels are relatively flat, which makes the site accessible.

The whole site is now bare and advice provided by ELC's project manager⁸ during site visit indicates that the site is:

- Underlaid almost entirely by at least 1 metre of reinforced concrete onto bed rock
- Water cooling pipework is present under parts of the site
- Covered by concrete to a depth of 10 metres where load bearing structures such as tanks and chimneys were originally located.
- Un-serviced with utilities - these were removed when the site was cleared. However, water, electricity and fibre are nearby. Previously foul water was treated on site and there is no mains sewer connection on site.
- Covered, in part, by crushed rubble derived from demolishing the retaining walls and buildings. ELC has advised that it is not aware of any contaminants although further testing will need to be carried out.

⁷ [Draft ClimatEvolution SPG | East Lothian Council](#)

⁸ Ray Montgomery Personal communication

- The lower level retains water and even through dryer periods needs to be regularly pumped out. In its current state, this is likely to make development of the lower level challenging without significant remedial work. Surface water, ground water and saltwater ingress are drained via a subsurface drainage network to the lowest point on the site from where it is pumped into the original cooling water discharge point which has been retained.
- The site jetty requires a complete survey to assess its condition and to accurately identify the cost of any restoration work or alteration to allow alternative uses. As part of an earlier optioneering study to review the potential to introduce a cruise ship terminal at the power station site, AECOM carried out a visual inspection of the jetty, the report noted⁹:

“The design of the jetty was carried out in 1963 and the jetty can be classed as being at the end of its serviceable design life. Summary of findings from visual inspection: The steel support piles and structural steel bracing all show signs of corrosion but there are no signs of buckling of the piles or failure of any of the structural steel bracing; Top surface concrete deck elements show minor signs of structural cracking but no signs of distress in the structure; Underside of concrete deck elements shows areas of exposed reinforcement, leaching and staining and minor signs of structural cracking but nothing unexpected for a structure of this age in a severe marine environment and conditions.”

The lowest point of the site ‘void’ is currently estimated to be five metres below the B1348 road. There is a high and medium flood risk on significant sections of the site¹⁰. SEPA flood risk assessment maps indicate that the lower section of the site has an annual 10% chance of flooding with adjacent areas given 0.5% annual chance of flooding indicating a high to medium likelihood. The lower site level has to be regularly pumped out and during Storm Arwen (November 2021), seawater was pushed over the seawall, further flooding the site.

Forecast rises in sea levels also present a growing risk for the East Lothian coastline. Given its location, sea level rises could impact significantly on the site in the future. The Met Office has projected future sea level scenarios for Leith – please click [here](#) – it is reasonable to assume Cockenzie could be similarly affected. There are design options to mitigate against flood risk.

⁹ Cockenzie Cruise Berth Creation of a Cruise/Port Related Facility on the Site of the Former Cockenzie Power Station, Cockenzie High Level Optioneering Study Aecom

¹⁰ <https://www.sepa.org.uk/environment/water/flooding/flood-maps/>

Work, commissioned by ELC, is underway to examine the feasibility of infilling the lower sections of the site to make. It is estimated that 130,000 cubic metres of material is required. Infill material would be supported by retaining walls sufficient to support two story buildings and light industry type structures. Drainage networks will be required to capture surface and ground waters and to reduce hydraulic pressures on retaining structures. Inundation from sea water remains a threat and pumping facilities may be required. Full details are unknown at this stage.

One option includes using infill material taken from the bunds on the southern part of the area across the B1348 that previously shielded the coal store. The volume of material in the bunds is estimated to be 400,000 cubic metres, more than sufficient to provide enough infill. However, testing is required to check if the material in the bunds is suitable. The proposed new road would also need to be in place to move material from the bund across the B1348 and into the site void. In respect of aiming to address these issues, ELC has been successful in securing funding from the Levelling Up Fund (Round 2).

It is recognised that if the lower 'void' level was left unfilled this could be used, subject to assessment, to create a wetland habitat which presents further opportunities for interpretation linked to biodiversity and climate change.

2.6 Existing planning consents

As of mid-2022, at least two live applications have planning consent on the site. More may follow. A planning application¹¹ by Skyrora to test space rocket engines on part of the wider site was refused in 2019 (which highlights some commercial interest in the overall site). The 360 Steering Group has commented that most of these proposals have limited employment opportunities.

2.6.1 Inch Cape Offshore Ltd (ICOL)

In 2019, Scottish Ministers granted planning permission in principle (PIP) with conditions for an onshore substation, electricity cables and associated infrastructure to Inch Cape Offshore Ltd (ICOL) on part of the site.

ICOL is an equal joint venture between Edinburgh based renewable and sustainable energy company, Red Rock Power Limited and Ireland's leading energy company, ESB. The ICOL Wind Farm will be located 15km off the Angus coast and incorporate up to 72 turbines, generating up to 1GW of clean energy. The INOL onshore transmission works will be designed to bring approximately 1,000MW of power ashore. In order to support their

¹¹ [19_00588_P-EXTRACT_OF_MINUTES_OF_MEETING-2832586.pdf \(eastlothian.gov.uk\)](#)

onshore transmission works including buildings and transformers weighing over one hundred tonnes, INOL will need to construct a firm and level platform on a least part of the site. Inchcape's footprint will be approximately just under three hectares and should include:

- Point on the seawall where the power comes ashore (under grounded)
- Flood prevention works – e.g. bunding key features
- Security fencing around the site and a retaining wall
- Landscaping and tree planting
- Access from the B1348

A large building (size to be confirmed) will be introduced with some surrounding bunds, fencing and trees. Construction design and materials are likely to be industrial in form and function. High voltage inputs and valuable materials like copper will mean robust fencing for both facility safety and security. This is likely to be intrusive in terms of visual appearance and may detract from the remaining setting of the site / offer. A photo montage¹² attached to the planning application indicates the expected switch gear building style.



ICOL Building type photomontage looking from bund to the south west at 380m distance (image to be updated when available)

During discussions between the 360 Steering Group and ICOL, the question of the external appearance of the building and boundary treatments has been raised and it is hoped that the design could offer some mitigating features, rather than an 'industrial box' style.

The onshore transmission works would allow ICOL to connect their offshore wind farm into the National Grid. The COVID pandemic interrupted planning timescales and in 2021 ICOL submitted a further PIP to allow for additional time. Detailed design and engineering

¹² [21_01474_PPM-FIGURE_6_8_VP6_PHOTOMONTAGE-3099656.pdf \(eastlothian.gov.uk\)](#)

matters sufficient to cover approval of matters specified in conditions attached to the PIP are being brought forward for submission later in 2022. Site works may commence in 2023.

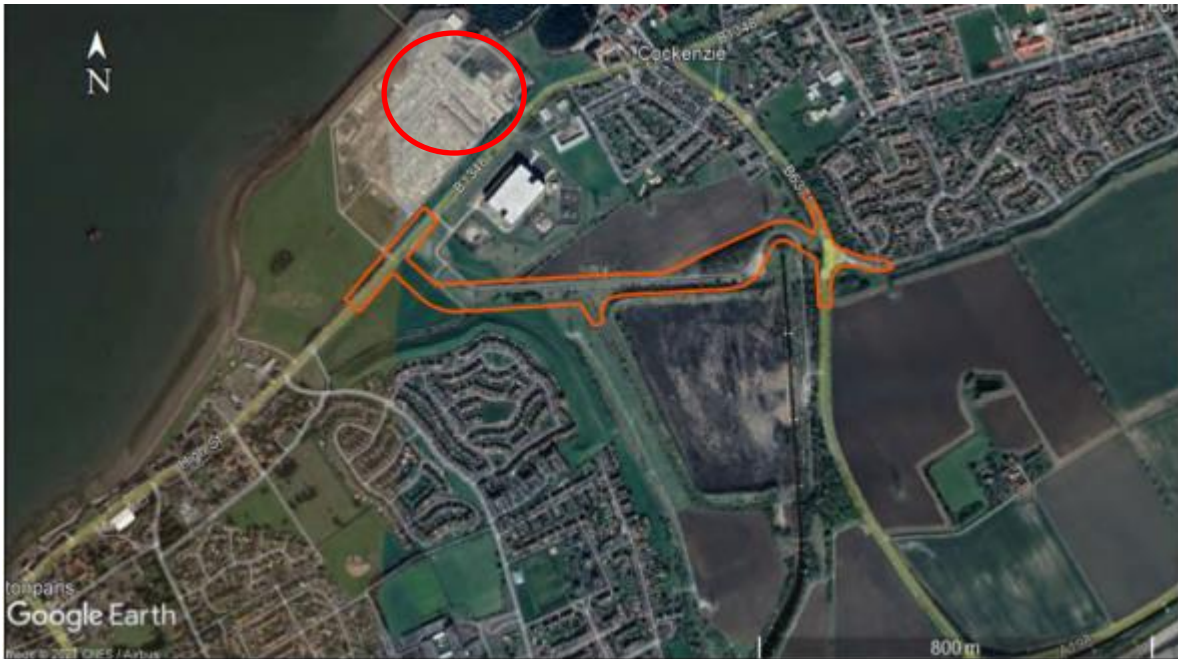
2.6.2 Seagreen

In August 2021, East Lothian Council approved PIP for Seagreen to construct another onshore substation with associated underground cabling on a site south of the B1348 between the Scottish Power substation and the redundant coal store. Infrastructure similar to that required for the ICOL transmission works will be installed.

Seagreen 1A is an offshore wind farm development owned by SSE Renewables (49%) and TotalEnergies (51%). Seagreen is an array of 150 turbines 27km off the Angus coast. 114 of the 150 consented turbines have a grid connection into Tealing, north of Dundee, and construction on this grid connection started earlier in 2020. Power from Seagreen 1A, the remaining 36 turbines is approximately 500MW and is coming ashore at Cockenzie to be fed into the National Grid. A submission from Seagreen 1A on their matters specified in conditions is expected soon.

2.6.3 New road infrastructure

A planning application has also been submitted by ELC as site owners for a new road to assist with access to the two substations, as well as facilitating development on the wider area. The proposed road would link the Alder Road junction on the B6371 approach to Cockenzie with the existing B1348 road. Doing so, would help to reduce traffic within Cockenzie and Port Seton. The new road would largely follow an existing service road to the former power station coal store and be complemented by a lane, set back from the main roadway, to encourage safe active travel. Work on this project may start by Winter 2022.



Cockenzie Link Road Plan (Source Preliminary Sources Study Report for ELC December 2021)

A clear ambition of the 360 Steering Group is to encourage active travel and public transport use.

2.7 Current site proposals

In addition to the consents given to two onshore renewable energy transmission works and grid connections, and in tandem with the 360 Centre Study, other proposals are being considered for the site including:

2.7.1 Cruise ship terminal

A study prepared by AECOM in January 2021 indicated a capital cost to provide a cruise berth of between £44 and £80m with a payback period of between 16 and 21 years. The report also notes cruise shipping can be a marginal business and that dedicated facilities come about where a large cruise operator is willing to commit to its use. Researchers contacted cruise operators, who indicated that investing in cruise terminals is not something they perceive to be worthwhile, as they focus on profit from investment in vessels.

The report noted that existing facilities in the Forth serve many existing cruise requirements and developing a port to compete directly with Forth Ports does not appear to be a viable alternative. Forth Ports were invited to give confirmation as to whether Forth Ports would agree to the exploration of a partnership or joint venture at Cockenzie. Subsequently, Forth Ports have announced their proposals for a significant investment of c. £40M on an outer berth at the Port of Leith. This enhanced facility is intended to allow the larger cruise liners

to berth, including those not able to enter the shipping lock, as per the current arrangement. Bringing passengers ashore in Leith takes them closer to Edinburgh's tourist attractions.

2.7.2 Subsea fibre connections and data centre

The Scottish Futures Trust (SFT) commissioned a report (June 2021) to investigate the cost, complexity, and deliverability of a number of subsea fibre connection options from the North coast of Scotland to Edinburgh via Cockenzie¹³ and onwards to the rest of the UK and Europe. The report notes that:

“Cockenzie, situated near several major roads and less than 15 km from the boundary of The City of Edinburgh, this is the proposed site of a potential new data centre and the area is well served with options for diverse backhaul. Both BT Openreach and Zayo have duct infrastructure close by and it is understood that other operators are also in the area. Securing a new, diverse backhaul path from this site should be readily achievable.”

Datacentres powered by renewable energy and international fibre connections are key parts of the digital and data economy. A further Scottish Futures Trust study¹⁴ (revised in September 2021) identified Cockenzie as the highest scoring (based on land availability, renewable power supply, connectivity, and hazard risk) potential site on a national shortlist of 15 other sites for a data centre. The report concludes:

“An excellent opportunity to marry huge renewables with a large-scale site. There are multiple fibre carriers running close to the site onto Edinburgh, a large population nearby to support data centre customer base and the geographical advantage of potentially attracting subsea connectivity from mainland Europe.”

2.7.3 ClimatEvolution options

The 2020 ClimatEvolution Vision and Action Plan¹⁵ identified a number of options that may be suitable for the site / wider site including:

Orientation / National Climate Resilience Centre

The Orientation / National Climate Resilience Centre is similar to the 360 proposal.

Under Theme 3 Culture Heritage and Leisure identifies *“the opportunity for a new National Climate Resilience Centre, located in the Climate Resilience Zone and built and powered*

¹³ [Microsoft Word - SFT27D1V1.2 Subsea Connectivity Feasibility Study - Final Issue.docx \(hostinscotland.com\)](#)

¹⁴ [Site-Selection-Shortlist-Revision-1-20210928.pdf \(hostinscotland.com\)](#)

¹⁵ [Proposed ClimatEvolution SPG | Local Development Plan | East Lothian Council](#) Page 31

using sustainable construction methods with carbon neutral maintenance systems This would be a signature building and could spotlight the Climate Transition Zone through being subject of an international design competition.

The centre would form a main arrival point to the Climate Resilience Zone, providing orientation and ticketing. There is an opportunity for the centre to be powered by geothermal energy and would be an exemplar building showcasing the best in sustainable architecture. The centre would have a strong educational function linking to STEM subjects and higher education establishments.

The centre could be supportive of, linked, or be a part of the Prestongrange Visitor Centre, eg physically via the active travel network as well as conceptually by demonstrating a vision of transition ‘from coal to carbon neutral’ as a means of storytelling and promoting place identity within the Zone.

It could also be supportive of and linked to the proposed Battle of Prestonpans visitor centre, that could be located within Blindwells 1, via the active travel network and cultural heritage trails. An orientation centre, whether within Prestongrange or within a purpose-built new building could form an integral part of the Climate Resilience Zone’s branding strategy alongside the wayfinding strategy. The centre would promote the key themes and central concepts of the Climate Resilience Zone from an early stage within its evolution and will evolve with the Zone over time. Further study would be required on likely footfall, costs and relationships between these visitor attractions in order to assess feasibility.”

The 2020 ClimatEvolution Vision and Action Plan¹⁶ under Theme 5 Strong Communities, Regeneration and Enterprise identifies two further projects relevant to the site.

Cockenzie Centre for Excellence in Sustainable Building

“The scale of building required in Scotland exceeds that currently being met. A substantial amount of new homes may be created within the Climate Resilience Zone area itself; building requires a skilled labour force, and there are new technologies and construction methods emerging. A centre of excellence at Cockenzie could help meet local demand and is future-proofed for viability beyond the life of the New Town through an excellent location: close to the A1, close to water and with the potential of an upgraded rail network. This would be part of a number of uses accommodated at Cockenzie. This could also provide a framework to promote education, skills development and new job opportunities linked to a

¹⁶ https://www.eastlothian.gov.uk/downloads/file/30096/draft_climateevolution_spg

just transition to a low carbon economy in association with regional City Deal programmes and local facilities.”

Training Hotel and Kitchen Garden

“An excellent opportunity to meet all of these opportunities and provide local training opportunities lies in creating a 5-star training hotel, with a large kitchen garden attached to service the hotel.”

In respect of the points above, The 360 Steering Group and ELC have a shared vision in a number of aspects and could potentially work in partnership alongside local communities. There may also be opportunities linked with geothermal energy production.

2.8 Levelling Up Fund

East Lothian Council have made a submission to the UK Government’s Levelling Up Fund for financial support to undertake necessary works to allow site redevelopment opportunities to proceed. In mid-January 2023, it was announced that just over £11.2 million of funding was secured.

Works and activities arising from the successful bid are likely to include appointing a site master planner. The 2017 Master Plan needs refinement to reset the vision, accommodate policy changes, clarify constraints and to anticipate potential future development needs. Parts of the aims and objectives of the Levelling Up Fund is to deliver positive outcomes for local communities.

Works to prepare the site and gain necessary consenting processes include:

- Consideration of the overall development potential
- Identifying constraints, particularly flood risk and mitigation measures and core infrastructure
- Independent technical feasibility studies and site investigations. For example, ground investigations, flood risk assessment, hydrological survey, ecological surveys, traffic impact and management assessments.
- Technical studies and work to:
 - Infill the lower level on the site
 - Repair the seawall
 - Raise the level of the seawall and improving the JMW as it passes the site
 - Remove the bridge and diverting people around the old cooling water outlet
- Opportunities to divide the site into development parcels

- Development links as part of the wider Blindwells project
- Using the site as a potential Climate Evolution Zone
- Exploring future investments in association with Scottish Enterprise, Scottish Futures Trust and Scottish Development International regarding the potential marketplace for UK-wide or international investments
- A marketing strategy to market the site UK-wide and internationally.

We set out as **Appendix One** key policy implications and information on the earlier masterplan.

2.9 Site SWOT

We set out below a SWOT analysis setting out the key strengths, weaknesses, opportunities and threats associated with the former Cockenzie Power Station site.

Strengths	Weaknesses
<ul style="list-style-type: none"> • The proposed 360 Centre site has roadside visibility with passing traffic • Good offsite linkages and macro access and adjacent John Muir Way • Adjacent and nearby public transport available (bus and rail) • Existing informal recreation use of adjacent Preston Links • Some existing nearby services available • Unique history of the site which is linked to energy – from coal extraction through to the power station and now renewable energy 	<ul style="list-style-type: none"> • Difficult and costly to develop Preston Links due to ground conditions, but ‘form’ contrasts to the ‘flat’ power station site (could provide ‘over spill’ area) • Coastal location will have maintenance / cost implications in terms of taking the project forward • Proposed ICOL building splits power station site and Preston Links • The concrete ‘slab’ covering the site will make it more difficult to create a natural and attractive landscape • Wider site has competing interests (which may also be drawn to the concrete slab area) • Overall high cost to take project forward

<ul style="list-style-type: none"> • Community support for change and regeneration • To date positive engagement with ICOL and Seagreen • Coastal location with the sea as a key indicator for climate • Attractive backdrop of sunsets and waterside setting 	
<p>Opportunities</p>	<p>Threats</p>
<ul style="list-style-type: none"> • Through an innovative offer (including visitor centre and external grounds) there is an opportunity to tell the story of the energy production and the climate emergency and how it is being addressed through uses on the site. Opportunities linked to education based visits to be accommodated within the centre • Potential for an ‘iconic design’ (to reflect national / international significance of the climate emergency) and create market awareness • Potential to incorporate large-scale public art feature • Regeneration of the site to address social deprivation and create employment and health and wellbeing opportunities 	<ul style="list-style-type: none"> • Losing the ‘support’ of the community • Unknown ground conditions (risks/costs/project delays) • The Levelling Up Funding has been secured, which could significantly increase the economic value of the power station site (and attractiveness of the site to the commercial market) which could compete for space with the Climate Change Centre • Ongoing flood risk and rising sea levels (albeit Inch Cape will be developing part of the site) • Ongoing maintenance cost of the jetty (if integrated within the scheme at a later phase) • Undiscovered site conditions

<ul style="list-style-type: none"> • Opportunity to become a ‘stopping off’ point and / or gateway to the John Muir Way • Introduction of roadside signage from the A1 and Prestonpans railway station (perhaps, creating a themed route from the railway station) • Secure further renewable energy developer support and also link funding to green industries • Alternate uses for part of the site could potentially be related to wildlife e.g. creating a wetland area within the lower level which would add to the attractiveness of the site • Opportunity to draw interested parties together with a single purpose and to engage with ELC and local community groups • Levelling up Fund will help to reduce the capital requirement by creating a development-ready site 	<ul style="list-style-type: none"> • Increase in requirements of space allocated to more commercial uses could impact on opportunities for other schemes • Visual impact of Inch Cape and Seagreen built facilities on the site setting • Site tenure not secured on favourable financial terms • Climate Emergency • Risk of lack of support from potential project partners
--	--

3.0 360 vision, priorities and offer

3.1 The 360 concept: The core aspirations

The 360 proposal mandate in the vision document is built around aspirations identified by the 360 Steering Group from community consultations and conversations over recent years. Principally the proposal will create a facility centred on climate change that attracts a wide range of users.

The supporting documentation accompanying the brief notes that: *“The visitor centre must be the anchor which the institution is built around and should be at the heart of the business plan and the centre’s design.”* The ‘building’ is intended to include core elements of interpretation and learning alongside education and training uses.

Job creation

Through the regeneration of the former power station a key driver of the project is to introduce new employment opportunities for the local community.

Partnership working

As noted in the supporting 360 Steering Group documents the success of the project is reliant upon working in partnership with a broad range of parties, including:

- East Lothian Council
- Renewable energy companies
- Educational institutes (from schools through to universities and research centres)
- Training programme
- Local community

Climate Change Policy Alignment

Climate change is front and centre of public policy in Scotland and the UK and moving social behaviour toward lower carbon options is essential. Over the last few decades, Scotland has become warmer with shifting rainfall patterns and rising sea levels. Recent years have been the warmest on record and emission reduction targets have not been met. The Scottish Government remains absolutely committed to ending Scotland’s contribution to climate change by 2045 in a just and fair way.

3.2 Vision and aspiration review

3.2.1 The 360 concept: The core vision

The 360 Vision identified by the Steering Group is expressed as:

*“It’s a 360° vision that could be accommodated on this site within a major new centre – the 360 Centre – that would have local, national, and international importance. Our centre would look **outwards** at the marine environment – a key indicator of climate change; **downwards** towards the industrial heritage of the mines which stretch out under the Forth but are now themselves being explored to provide much needed clean green geothermal energy; **upwards** to the sky – where the carbon we’ve released is warming the planet; **around** at the rich tradition of arts, culture, and innovation along our coast - the murals and tapestries, the artists and musicians who live in the communities as well as **back** to where we have come from – to the importance of the industrial heritage which has shaped both the communities and the land over the past hundreds of years and finally, **forwards** towards a vision of the future for the next generations to come.”¹⁷*

3.2.2 Core priorities

The vision and aspirations of the 360 Steering Group are broad. We have assumed that a National Centre for Climate Change should be focused on social change in a Climate Emergency setting.

We have set out a logic map based on three assumed core priorities that might be sought after people visit and engage with the 360 Centre.

Core priority 1	<i>People are aware of the action that is taking place to tackle climate change and understand how it relates to their lives.</i>
Input	<ul style="list-style-type: none"> • A modern sustainable building(s) providing space for the visitor offer, education and training • External green space focused on the environment, habitats, and species • Large scale public art installations as climate and community beacons • As a latter phase, a restored jetty enabling public access for leisure activities including boat use¹⁸
Output	<ul style="list-style-type: none"> • Consistent messaging to visitors, audiences and the community on the impacts of climate change

¹⁷ [Vision_Final.pdf \(the360centre.com\)](#)

¹⁸ At a site meeting, it was agreed that the jetty structure would be part of a later phase for potential development. In our view the ongoing maintenance costs are likely to be significant and this could represent a significant liability over the long-term.

Outcome	<ul style="list-style-type: none"> • Knowledge, skills, confidence and leadership to create an enabling environment for Net Zero lifestyles • Engagement and conversations with those in society who are not currently engaged with the Climate Emergency and its implications. Climate 'distress' that affects people's health and wellbeing is reduced
Impact	<ul style="list-style-type: none"> • East Lothian meets Net Zero targets by 2045 • More young people are up-skilled • People report being more hopeful around the risks and impacts of climate change • Knowledge acquisition drives behaviour change

Core Priority 2	<i>People are actively participating in shaping and delivering just, fair and inclusive actions that mean climate change is mitigated and place and community are adapting to its effects.</i>
Input	<ul style="list-style-type: none"> • Education and training, especially for young people in knowledge and skills for a green and low carbon economy
Output	<ul style="list-style-type: none"> • Collaboration with delivery organisations like schools, colleges, renewable energy and supply chain providers to ensure education and skills are delivered to young people and those in the 'green' workforce
Outcome	<ul style="list-style-type: none"> • Employment, skills
Impact	<ul style="list-style-type: none"> • Creation of jobs on site and elsewhere

Core Priority 3	<i>Acting on climate change is normalised and encouraged in businesses, households, communities and places across East Lothian and elsewhere.</i>
Input	<ul style="list-style-type: none"> • Effective interpretive and communication activity in and around the centre and wider landscaped external environment • Site based and outreach installations and programmes on arts, culture, creativity and potentially heritage • Partnership working to help people make connections between climate change and nature, biodiversity and the marine environment around Cockenzie • A place-based approach through installing green and amenity space provision, public art, and active travel infrastructure

Output	<ul style="list-style-type: none"> • More visitors and local households understand the changes needed to help Scotland get to Net Zero by 2045 and feel inspired and empowered to act
Outcome	<ul style="list-style-type: none"> • People better understand and visualise potential impacts of climate change on them and their community • Positive Climate Change mitigation and adaptation actions increase and evolve as a result of change in culture and behaviours. Nature loss slows and is remediated
Impact	<ul style="list-style-type: none"> • More space is made for nature and there are more connections with nature • A place-based approach is strengthened with community benefits and social well-being • There are stronger partnership working arrangements and the 360 centre is a valued and respected collaborator • There is a Scotland wide contribution from a 'national' centre on a 'nationally' significant development site

Indicators that can track progress direction against its intended priorities will be required.

3.3.2 Values

The 360 group would adopt the following values for the project:

1. The Group will ensure that the community voice is both represented and heard with positive engagement with other stakeholders on the site.
2. The project will be welcoming, inclusive and accessible.
3. The project focus is on climate change, and we will listen to and engage with experts to ensure an evidence-based approach.
4. The Group will continue to encourage a participative community with two-way dialogue on community heritage and well-being benefits.
5. The Group will be open and transparent to make sure people can see and understand our actions.

3.4 The 360 concept: The core offer

As developed by the 360 Steering Group the offer incorporates:

3.4.1 National Centre for Climate Visitor Centre

The core component elements of the National Centre for Climate Visitor Centre, which will act as the orientation point for the site could include:

- Reception area / welcome space with linked retail
- Four galleries / exhibition spaces focused on a climate change theme and could include:
 - Climate change impacts on our natural environments, including the maritime environment
 - Climate change impacts on our way of life
 - Mitigation - including renewable energy – slowing the pace of change
 - Adaptation – to predicted change

The focus would be agreed with the interpretation / design team.

- Education room (a key element will be to ensure the education visit are focussed on the gallery spaces and external environment)
- Meeting space (with ultra-fast digital connectivity and supporting services)
- Café space (kitchen, food prep. chill room, storage etc). Potential opportunity for 'soil to plate' scheme using locally sourced produce (although this would have cost implications)
- Toilets for visitors (including Changing Places facility)
- Volunteer space
- Limited office space
- First aid room
- Staff welfare space and toilets
- Storage

- Plant room
- Working yard and maintenance space (storage for equipment for landscape maintenance)

The design of the building itself might include a platform to give elevation above the site for views out to the Firth of Forth and observation of winter sea duck assemblages offshore and marine mammals.

A critical consideration for one of the gallery spaces is a requirement that is it recognised as a flexible space, whereby the exhibits, will need to be designed in such a way whereby they can be readily 'moved' to enable the space to be used for social functions and other uses e.g. for pop-up events.

In terms of conference uses, it is recognised there is existing provision within Edinburgh with supporting nearby overnight accommodation. The conference market is a very competitive arena to enter, but the National Centre for Climate Change would be a unique venue.

The **catering** offer will be a key part of the visitor experience and will service not only general visitors, but also people attending social functions outside of the core operating hours of the centre. Through messaging (interpretation in the café) and actual operating procedures (e.g. sourcing locally grown and seasonal produce), the café can promote sustainable living. There may even be an opportunity to introduce a plot to plate scheme using produce grown onsite, although this will impact on pricing points. Both the retail and catering offers are important part of creating a memorable experience for different users.



At Hornsea Freeport Yorkshire local produce is actively promoted and Cawl at the Gower Heritage Centre

The café will overflow into the external space with a tensile cover to provide additional covers and an alcohol licence will be required. There could be an opportunity to introduce an external catering kiosk (not costed for), which would be open on a seasonal basis.

We have considered the introduction of **studio spaces** within the centre but we believe to some degree this would replicate the offer at Cockenzie House and could lead to displacing businesses / people from Cockenzie House.

Community involvement in the site is seen as critical, but it should not compete with or duplicate existing community provision by other third sector bodies or the council. This could include space for community events as well as an outdoor play space (energy/science themed) linked to a café to attract parents, friends and relatives and carers with young children on a regular basis. See external space description below.

3.4.2 Learning and education

A key focus of the National Centre for Climate Change is linked to education and learning, whereby the centre is an educational resource where general visitors, special interest visitors, schools and others can be informed in an inspiring way about the climate

emergency. There is a desire to work in partnership with universities. The Centre will also be a physical base for providing outreach services for schools and other groups.

When thinking about learning, this should not just focus on formal 'learning'. Within the galleries and external grounds there will be opportunities informal learning through the provision of inspiring and engaging interpretation from film projections through to interactives and to onsite 'Climate Explainers' who, through hands-on activities, will provide learning opportunities related to the climate emergency. An interpretative design agency will need to be commissioned to develop an interpretation plan and costings for the scheme.

Additionally, helping to animate the space, there may be opportunities for Edinburgh College to demonstrate the use of virtual reality technology through sessions which can be delivered onsite (in effect helping to raise awareness of Edinburgh College, acting as a 'hook' to encourage people in to further and higher education).

Moving beyond formal education linked to school visits, there may be opportunities to work with universities who could further enhance the interpretative experience. For example, PhD students and others giving inspiring talks to general and specialist visitors. Subject to securing revenue funding, there may be opportunities to introduce a 'scientist in residence.' Please see: <https://www.curiousdirective.com/scientist-in-residence>. Although, there is a need to consider the close proximity of Dynamic Earth in Edinburgh (see case example).

These initiatives can be used to help deliver core messages and strategic objectives of the 360 Centre Steering Group.

3.4.3 Training centre

A **training centre** which is linked to the renewables sector is seen as a critical element of the project. As set out in the supporting documents provided by the 360 Steering Group, this would be reliant upon working in partnership with a third-party operator, for example an energy company or specialist training provider to take this element forward. If taken forward this is likely to be a latter phase of development.

3.4.4 High-level schedule of accommodation

We identify below an **indicative accommodation schedule** for the National Centre for Climate Change (excluding training use). It is not intended to be definitive but to form a framework for development by the project team and for cost purposes. The proposed design could be a modular building, which will include core areas to accommodate specific

activities with the potential of adding more space in subsequent phases (for example if the need for a training offer is taken forward as a latter phase).

Indicative schedule of areas	Indicative sqm
Entrance foyer, pay point and linked retail	240
Four themed discovery zones / exhibition spaces (focus to tbc)	1,600
Dedicated education room	60
Meeting space	80
Café space (kitchen, food preparation, chill room storage) - excludes external space	210
Toilets for visitors (including Changing Places)	90
Office space	60
First aid room	12
Staff / volunteer welfare space and toilets	50
Back of house functions (plant room, cleaners' store)	70
Storage (exhibitions/discovery zones)	120
Circulation	130
Indicative SQM	2,722

3.4.5 External environment – community park

Careful consideration will need to be given to how the ‘centre’ sits and interfaces with the landscape itself. On entering the site, in our view it will be critical to create a strong sense of arrival (showing you are entering a special place for a National Centre).

It is envisaged that the external area would be a core component element of the ‘offer.’ The landscape scheme will need to transform the site to create an environment where people want to spend time. The proposal focusses on re-landscaping the hard concrete to create an attractive environment by introducing new habitats, helping to attract wildlife, leading to the creation of zones linked by a network of pathways.

Given the ‘concrete slab’, exposed coastal location (with potential issues of flooding related to sea and freshwater intrusion) and visitor use, careful consideration will need to be given to planting in terms of resilient native species with minimal landscape maintenance requirements. Careful consideration will also need to be given to drainage of the landscape as the concrete will act as a barrier (potentially retaining water). Given the climate emergency, some visitor sites are replanting with more drought resistant species. It is also important to acknowledge and embrace the marine environment with direct frontage onto the site.

The external space could incorporate viewing points to enable visitors to observe wildlife, landscape and sunsets from the site and interpretation would be linked to climate change. A key element is to ensure that the space is animated to attract people to visit, and in our view, it would be beneficial to introduce different types of play equipment – which could range from natural play through to more themed ‘science play’. This will also help to drive visits from local residents. External performance space and service connections would enable music and theatre events to take place onsite. Lighting would enable use of outside space during hours of darkness and support Christmas and Halloween activities, for example.

More structured adventure experiences like climbing walls and high ropes courses could be used to mimic renewable energy structures like turbine bases and towers and transmission pylons. Although this would be considered as a latter phase of development subject to visitor numbers. Adventure activities are ideal opportunities for students to engage in team building and puzzle-solving. Teachers could opt to include adventure packages as part of educational visits.



Play at Pensthorpe and barefoot walk at CONKERS



Viewing platform at Conkers

Coupled with the signature / iconic artwork, this in itself will create an accessible ‘destination’ and to some degree could be thought of as a ‘park by the sea.’

It is envisaged that the external environment will be a free to access public space, but fenced to secure the site outside of the core operating hours.

It is worth highlighting that in comparison to the Eden Project, CONKERS and the Centre for Alternative Technology, the size of the external space is limited.

The pier would add a new dimension to this project, but is outside of the scope of this assessment and it could form a latter phase of regeneration of the site, which could include running boat trips. But there will be significant capital expenditure required to bring the pier up to a usable standard and there will be high ongoing maintenance costs.

3.4.6 Public art

The central element of the proposal for the external area is the introduction of a **landmark public art feature**. Local artist Andrew Crummy has already designed a number of statues of women which as noted in the Vision document *“could represent the women of our communities - the women miners from earlier years, the miner’s wives, the fisher wives – but also have resonance globally as women of the world – as mother earth.”* The statues also

‘re-represent’ and hint to the former power station chimneys which previously dominated the landscape for decades. As set out below, iconic public artwork has been successfully introduced at a number of other sites.

It is felt that there is the potential for one of the sculptures to be accessible (via the introduction of a lift) to create a viewing platform. This would add significantly to the capital cost of the project and present additional ongoing cost implications (maintenance and staffing) and capacity would be limited. Perhaps, an alternative option would be to introduce access via the use of a ‘ramp’ (please see: <https://www.arup.com/projects/camp-adventure-tower>).

The siting within the boundary of the 360 site would need to be considered in respect of the Inch Cape building which is of significant mass and scale (potentially detracting from the artwork and dominating the landscape). Also, consideration may need to be given to a ‘topple’ zone of any large-scale artwork.

3.4.7 Pay zone

We would envisage, it will be important to create a pay zone whereby an admission tariff is introduced to enter the National Centre for Climate itself. A membership scheme can be introduced to offset the general admission cost and to encourage local use.

Additionally, consideration will need to be given to the location of the café space. It should be free to enter to encourage frequent local use, use by people exploring the external landscape and by John Muir Way users. Not everyone will want to enter the Centre itself. Please note there will be no charge to enter the external environment / community park.

3.4.8 Car parking

Provision will be made for car parking spaces including accessible spaces (for visitors and staff), alongside coach parking and motorcycle spaces. Consideration will need to be given to overflow car parking spaces for peak day and events (there is the nearby beach car park). Provision should be made for the introduction of charging points for EVs and E bikes.

3.4.9 Sustainable transport

The site is accessible via public transport and the John Muir Way passes immediately by the site. The Scottish Government funds free bus travel for young people under 21 and older people over the age of 60 and there are various other travel card incentives for the use of public transport. Nearby in Musselburgh, the ‘Active Toun’ project is prioritising walking, wheeling and cycling along three routes with potential links to Cockenzie.

Whilst there are opportunities to encourage visitors to use public transport and to cycle / walk to the centre e.g. via a discount on admissions¹⁹ and through marketing activities, in reality and for the foreseeable future, the majority of visitors are likely to arrive by private car even if this is not encouraged.

Consideration has been given to introducing a shuttle bus from hubs like railways stations and/or a population centre like Edinburgh but it is felt that the visitor throughput is unlikely to justify the introduction of the shuttle bus service. There are high costs associated with running the service, even on a seasonal basis and these would have to be passed onto visitors. RHS Garden Wisley in Surrey and close to the M25, which attracted over 1.2m visitors in 2019,²⁰ has introduced a 14-seat shuttle bus running the 8 miles between Woking Train Station and Wisley with a nominal charge of £1 to £2 per person. The ticket has to be booked in advance.

Whilst travel patterns have changed over the last two and half years it should be noted that arrival times to attractions are generally outside the peak morning rush hour period.

3.4.10 Sustainable design

Running throughout the design and operation of the '360 Centre' is a commitment to adopting clear principles for the project's sustainability. These objectives may set a target within the framework of an established 'standard' such as BREEAM or Passivhaus or may take form of broad and / or precise principles associated with embodied carbon, energy loss, renewable technologies, materials, health and wellbeing.

As noted, previously the concrete capping on the site needs careful management in terms of drainage and a suitable Sustainable Urban Drainage System (SUDS) will be required on the site. Other site users will need to address drainage too and there may be some synergies.

The UK General Building Council's Net Zero Building Framework Definition sets out a useful framework for considering and categorising sustainability priorities. It adopts 4 categories in order of application:

1. Reduce Construction Impacts
2. Reduce Operational Energy Use

¹⁹ To encourage sustainable modes of transport, visitors who travel to the site via public transport or walk or cycle could be offered a discount on the admission tariff

²⁰ During 2019 the four RHS gardens (Wisley, Harlow Carr, Hyde Hall and Rosemoor) attracted 2.3 million visitors (Annual Report and Consolidated Financial Statements for the year ended 31 January 2020)

3. Increase Renewable Energy Supply
4. Offset Any Remaining Carbon.

Regardless of whether the project attains to be 'Net Zero Carbon,' the framework sets out a sensible categorisation of sustainability objectives for all projects. If considered in a holistic manner will often dramatically improve whole life costs - that being the cost of construction, operational costs including energy and maintenance, and cost of demolition, disposal and / or reuse. However, it is critical that aspirations are established at the beginning of the project and maintained as a key benchmark whereby the project is tested at each stage of its advancement.

The following is an indicative early-stage sustainability statement setting out some of the principles that will be relevant to the development of a future brief:

1. **Reduce Construction Impacts:** Carbon emissions during the construction phase will need to be considered throughout the future design development process. For example, offsite construction methods could offer the potential to dramatically improve efficiency over traditional onsite construction methods
2. **Reduce Operational Energy:** Energy demand and consumption throughout the project's life should be reduced through a holistic consideration of the design, specification and construction of the development above all other measures. The proposed scheme will therefore address sustainable principles from the outset by adopting a general approach that sequentially looks to: reduce the amount of energy that the building uses; maximise the free gains that are available to the site; and address the energy source
3. **Increase Renewable Energy Supply:** There is opportunity in every project to look at the supply of energy through renewable means such as geothermal or solar panels supplying hot water and photovoltaics or wind energy providing electricity, with biomass and heat pumps supplying heat. However careful consideration must be given to the priority this element of the objective is given. Technologies such as these can be expensive, both in capital cost and maintenance, prone to poor maintenance and operation, particularly where there is a constant change in users and operators, and often over-sold and over-designed, resulting in inefficiencies
4. **Offset Any Remaining Carbon:** Seen largely as the 'get out of jail free' card, this can be and should be considered only when things have gone wrong.

The 360 Centre should be sited to optimise 'free' aspects of climate. These include useful solar gain, shading and sheltering, together with useful wind and ground conditions. Traditionally, buildings were sited to achieve these aims and the principle of 'wrap up warm and face south' can frequently be seen in individual and groups of buildings throughout the landscapes of Scotland. This must be carefully balanced however, as when buildings are designed to collect solar gains through southerly facing windows, consideration must be given to solar shading and the provision of adequate thermal mass in the building in order to avoid overheating in the summer.

Whilst compact building forms are inherently energy efficient, this efficiency may be undone when habitable rooms are so deep that they require mechanical ventilation and electrical illumination. Traditionally, buildings were designed to be climatically responsive and to promote occupant comfort, energy use and health through natural ventilation and daylighting. This suggests that building form and layout should be based on shallow building depths, however, where deeper rooms are required because of functional needs, the building section should be designed to enable roof or clerestory lighting.

A well-insulated and well detailed building envelope is imperative to prevent heat loss. Consequently, whilst windows provide for views and daylight, they also let a lot of heat out of the building in cold weather. The location, size and type of glazing is therefore important going forwards. For energy efficiency as a general rule, it is better to place smaller windows on north elevations and larger ones on the south, noting that there may be exceptions to this where northlight is more important than solar gain.

With a well-insulated and airtight fabric, there must be a designed ventilation system, ensuring that systems are supplied with effective control systems so that building users can effectively manage the energy use of the building. This will all serve to reduce the operational energy of the building.

In an extension to the internal environment of the building, energy use and human comfort in external amenity spaces can also be improved by considering how siting, layout and landscape may shelter the building from the cold windy conditions that often prevail in exposed coastal sites. This can be supplemented by landscape and tree planting can be used for shelter belts.

Local materials which naturally and commonly found within the locality give the area an identity and familiarity to both its visitors and residents. Identifying these and incorporating them into the proposal in innovative ways will give the building a strong sense of place. It is further noted that building materials have an embodied energy content related to

extraction, processing, manufacture, transportation, fast mining on site, maintenance and demolition. Materials should, therefore, be selected from natural, renewable resources and be locally sourced, minimising their embodied carbon, and reducing construction impacts. There could be the possibility to re-use turbine components and other waste materials from the renewable industry.

In terms of the use of renewable energy, it is interesting to note that former underground mineworks, often flooded at the end of their working life, could offer a source of renewable geothermal energy. Mine water heated naturally underground is pumped to the surface where a heat exchanger increases the temperature of the water providing heat. Beneath the 360 Centre, the disused mine workings of the Lothian Coalfield offer potential, although mine water is often contaminated. So, while heat can be removed, mine water needs to be treated before it can be discharged which adds to the expense.

There is precedent elsewhere. Eden Geothermal Ltd was set up by three partners: Eden Project, EGS Energy Ltd, and Bestec (UK) Ltd to unlock the geothermal energy deep in the granite beneath Cornwall to heat site Biomes, greenhouses and offices.

3.4.11 Naming

The name is one of the most important and fundamental elements of a successful brand. The name is a 'key' element and through its status as a registered trademark, gives the organisation important intellectual property rights.

A clear ambition for the project is to engage with a broad range of audiences – therefore careful consideration needs to be given to the 'name' of the 'project'. Currently, the name which has been adopted is 'National Centre for Climate Change', which is narrow in its focus, is unlikely to have broad market appeal.

The name selected, depending on the market place it is entering and competing in, must be:

- Appealing and memorable
- Linguistically and culturally appropriate
- Pronounceable and spellable
- Differentiated

We would suggest that a naming consultancy is engaged to explore opportunities for a more appealing name and that once a name or names have been short listed that they are market tested with potential customers of (focus groups, surveys etc.) This will help to ensure that an appropriate name is selected. Also, consideration should be given to the trademark. This has not been costed.

The importance of naming is demonstrated by the Moray Firth Wildlife Centre which was renamed the Scottish Dolphin Centre which had a positive impact on visitor numbers.

3.4.12 High level indicative capital costs

We set out below a high-level range of capital costs (set at a medium level).

Indicative capital cost schedule	Medium
Building	12,247,200
FFE	2,041,200
Exhibition / gallery spaces (see below)*	-
Kitchen and café	300,000
Landscaping and car parking (tbc)	-
External signage and interpretation	250,000
Viewing tower	500,000
External play	400,000
Public art (est)	6,000,000
Website	40,000
Sub-total	21,778,400
Contingency @ 20%	4,355,680
Professional fees @ 15%	3,266,760
Indicative fees (please see exclusions below)	29,400,840

Note:

- Estimates are subject to site surveys²¹, detailed input from a design team and QS. They exclude preliminaries, ground / other investigations, anomaly factors,

²¹ Surveys could include by are not limited to topographical and measured surveys, flood analysis, drainage surveys, Ground Penetrating Radar Surveys to identify utilities / pipework, geotechnical survey of existing ground conditions, ecological surveys, archaeological surveys, invasive species mapping, tree surveys, transport surveys, utility capacity survey, structural survey of pier etc

upgrading / increasing the capacity of the infrastructure / services required to service the project, flood alleviation / mitigation works, drainage treatment, removal of contaminated materials, additional road infrastructure, site remediation works (e.g. filling the void etc) and the 360 Centre Steering Group's staff costs to manage and deliver the project.

- Excludes any costs associated within the site remediation work associated with the Levelling Up Fund application.
- Figures are net of VAT.
- There will be other items which also need to be accounted for such as IT infrastructure, till systems, legal fees, potential land acquisition costs. This is alongside start-up costs e.g. pre-opening recruitment, marketing, branding, stock purchases, training etc.

The schedule of indicative capital costs does not take into account increasing tender prices or inflation. Contractors are currently extremely concerned about risk – largely due to supply and cost insecurities. It is therefore particularly challenging to accurately cost at this stage. Please note costs are likely to increase in the coming periods. In respect of the exhibitions the 360 Steering Group should seek funding from the operators in the renewable sector.

*Whilst we have not included any costs for [interpretation / exhibits](#) as this will depend on the scheme taken forward, we set out below an indicative cost range.

- **High Technology fit out:** benchmark data is circa £5,000 per m². This budget would allow for an intense AV experience in high technology gallery. The majority of displays would be interactive, with a significant hands-on experience.
- **Medium Technology fit out:** benchmark data is circa £3,500 per m². A medium fit out will have an element of AV and the visitor will be able to interact with the experience. This would include an element of feature lighting and film
- **Lower Technology fit out:** benchmark data is circa £2,000 per m². This budget would allow for very little AV. Exhibits and objects tend to be displayed in showcases with minimal control. Lighting would be limited to track and spot lights.

Please note interpretation and exhibition costs are increasing.

VAT arrangements are complex, and specialist professional VAT advice should be sought.

In principle, buildings have to demonstrate to HMRC's satisfaction that 95% of floor space is solely for charitable purposes to obtain full VAT zero rating relief for the construction of a new building. This is a tough test to meet and 360 will need to work with its appointed architects to calculate if it can meet the 95% 'solely' test and determine if the calculation for the apportioned business use (floor space or any other fair and reasonable methodology) is 5% or less.

If 360 does not qualify for VAT zero-rating relief for the whole construction of the proposed National Centre for Climate Change, then there is an opportunity for 360 to recover some of the VAT that the building contractors must charge. This would involve 360 applying for a VAT registration on a voluntary basis, with all other taxable activity being undertaken by the new trading subsidiary.

4.0 Consultation

4.1 Summary of previous consultation

Extensive consultation has been carried out over a number of years from community action days through to presentations aiming to secure a future which is shaped by the community (this includes the development of a Coastal Regeneration Forum). The consultation activities have received coverage in the press.

To develop a picture of public views about the site, we have summarised previous community and stakeholder consultation work relating directly to the former power station site and undertaken in 2016, 2017, 2019, 2020, 2021 and the summer of 2022.

During November 2021, the 360 Steering Group carried out an online survey seeking feedback on the vision for the 360 Centre. There were responses from 65 people (48 from Cockenzie, Port Seton or Prestonpans, and 14 from elsewhere in East Lothian). With a total population of approximately 16,000 in mid-2020, this is a small sample size. Community engagement will be an ongoing activity to help inform the project as it is taken forward.

Out of 63 responses:

- 53 (84%) supported a visitor centre
- 56 (89%) supported public art and green space
- 48 (76%) supported education and training
- 40 (64%) supported green ferries

Out of 65 responses, on site priorities were:

- Job creation 47 (72%)
- Training opportunities for young people 45 (69%)
- Increasing tourism 42 (65%)
- Educating the public on climate change 42 (65%)
- Creating a public space for local access 53 (82%)
- Not wanting to see it remain empty 7 (11%)

Individual comments

- *“It has the potential to do for our area what the Seabird Centre has done for North Berwick. And we deserve a Kelpies with play areas, lovely walks, inclusive of everyone and with a nod to our heritage, and education on where we are heading.”*

- *“The site being a blank canvas with amazing views and a fantastic infrastructure already. Plenty of travel links including easy cycling routes.”*
- *“A major tourist destination, with an engaging and forward-looking core, servicing a large part of the population in Scotland and N East England. Fits a post covid and Green 'holiday near home' agenda. Parts accessible to low-income families. Links to other projects such as Dynamic earth. Opportunities to explore the nature and heritage of the local coastline by sea can make for exciting days out. Focal point for local groups working with young people and groups involved in heritage, archeology, folk music etc.”*
- *“Dignity back into our community. Having somewhere to show our Heritage and teach our children about it and be proud.”*

The most common concerns expressed related to funding availability, securing community support and the impact on local transport infrastructure. Use of the site for larger ‘green ferries’ generated the highest number of negative comments.

Individual comments

- *“Significant challenge in identifying the best option for use of the centre in line with long term commercial viability. Finding the balance between being economically sustainable while having a positive relationship with the local community.”*
- *“Apart from funding and planning etc there will be the usual NIMBY local hostility over things like traffic, young people congregating in the area, etc. Important to get Government, ELCC, local media and social media to pull their weight in supporting this initiative.”*
- *“Visitor centre proposals and art installation/enhanced green space use appear strongest in terms of viability. Proposals for a training centre and green ferries are not necessarily concerning but perhaps suggest the need for deeper consideration of the financial challenges those options may hold.”*

Specific suggestions were made to consider incorporating:

- Promotion of herbal medicine
- Education on local wildlife, such as a seal rehab facility

- Small business sheds or huts on site
- Independent shops or cafes
- A memorial to the artist John Bellany

During the summer of 2022, additional research was carried out by the Steering Group. This generated 228 signatures of support and a further 94 emails of support. Comments received include:

- *“I’m really interested to hear more about the proposed 360 centre project at Cockenzie and ways of supporting it. It sounds like a fantastic project. Can you add me on to your list of supporters so I can hear updates and ways of helping. Thank you.”*
- *“I am keen to be involved in any way that is useful in the amazing project. Happy to have a chat about what I can do to help out. Like most I’m time poor but am passionate about seeing this go forwards :-)”*
- *“I am a strong supporter of the idea of a 360 centre. The family and I live in Cockenzie, and I can see the great benefits such a project will bring to the community. I can see the huge amount of work that is done already. I am not sure what I can do for the initiative, but I will be happy to be contacted if any needs arise.”*
- *“It’s really wonderful to see an imaginative project taking shape on the site of the old power station. I’m in Dunbar and fully support this new initiative. Well done for getting this far and good luck in the future. If I can be of any help, please let me know.”*

We set out as **Appendix Two** information from other consultation carried out, including:

- June to September 2020 – ELC used their online consultation hub to seek public responses on the ClimatEvolution Vision and Action Plan
- October 2019 – OPEN and PBA Stantec were commissioned by a multi-agency steering group, led by ELC, to produce a strategy and action plan for the creation of a “Climate Resilience Zone” within the western part of East Lothian – including the former power station site

- February 2017 – Peter Brett Associates carried out second stage community consultation to provide feedback on zoning and scenario options
- November 2016 – Peter Brett Associates carried out first stage community consultation to inform the Masterplan design and delivery strategy

4.2 Current consultation

As part of feasibility study, the client group identified a number of stakeholders and interested parties to engage. We spoke with representatives from Edinburgh College, SSE, Seagreen, Inch Cape Offshore Limited and the Scottish Association for Marine Science.

The consultees expressed positive support for the project and are broadly supportive, but there is a concern around the long-term financial viability of the project. The renewable energy companies highlighted the opportunities linked to the Community Benefit Funds for both offshore projects and the potential for sponsorship and/or funding linked to CSR. In respect of the Community Benefit Fund, other community groups could ‘compete’ for the fund. There are also some opportunities for informal support such as PR advice.

However, they were reluctant to support the project on an ongoing basis as commercially this is unlikely to be seen as a responsible direction of travel (it could be viewed as a liability or risk).

Once the Feasibility Study is finalised, this should enable more meaningful discussions to take place between the Steering Group and in particular renewable energy companies.

5.0 Market demand assessment

5.1 Consumer interest in the 'environment'

There are consumer trends which impact on the proposals for the multi-faceted Centre, including, but not limited to increasing consumer interest in the 'environment' – this can be seen on a number of different levels, for example:

- The RSPB has over one million members and the Annual Report notes *“2021 Big Garden Birdwatch, which took place between 29 and 31 January 2021, was our biggest ever. More than a million people took part in the mass birdwatch”*²²
- People 'reconnecting to nature' throughout the cycles of lockdowns over the last 30 plus months
- Extinction Rebellion (XR), a grassroots movement in the UK has grown to approximately 130 groups over a short period of time and through their activities have helped to raise awareness of the climate crisis we are facing (in 2019, XR Youth was launched)
- Greta Thunberg, who has raised awareness of climate change initially through her pioneering action in Sweden. Latterly this has extended across the globe (which has acted as a catalyst for school children in other countries).
- More locally, the East Lothian Climate Action Network, which was officially launched in October 2022
- Changing consumer behaviour on an individual level with people shopping locally, purchasing seasonal produce, reducing the use of single use plastics etc.

Whilst there is consumer interest²³ and a desire for change and interest in the 'environment' the challenge for the project is how to create an engaging offer which will not only attract people to visit and engage in the first instance, but more importantly generate repeat visits and inspire behaviour change.

²² RSPB Annual Report 2020–2021

²³ <https://yougov.co.uk/topics/politics/articles-reports/2021/11/09/concern-environment-reaches-record-high-yougov-top>

The key finding of a January 2022 study - *Public awareness of climate risks and opportunities in Scotland*²⁴ gives some indications of public attitudes at that time:

“Echoing recent trends, concern about climate change in Scotland was high and increasing, and a majority felt that Scotland was already feeling the effects of climate change. When asked what the specific impacts on Scotland were likely to be, respondents tended to focus on weather-related impacts, and extreme weather was generally seen as becoming more common in Scotland.

Weather-related events were generally seen as more of a serious problem for Scotland overall than for respondents’ local areas. Perceived seriousness of weather-related impacts was linked to personal experience of those events, and most respondents had experienced at least one type of extreme weather impact.

Risks to both the natural and built environment were also more likely to be seen as a problem for the whole of Scotland than for respondents’ local areas. Awareness of the risks to the natural environment was generally high, particularly coastal erosion and threats to wildlife. Similarly, awareness of risks to the built environment and infrastructure was high, particularly in relation to damage to roads, rail or bridges.

Respondents generally recognised the need for action to address the impacts of climate change but were fairly moderate about the perceived efficacy of individual or household actions. There was a sense of confidence in collective action, for example the community coming together to respond to impacts. While respondents were clear in their view that the Scottish Government had most responsibility for preparing Scotland for the impacts of climate change, they were less convinced about whether action would be taken.

Most respondents had already taken, or planned to take, at least one action to help address the impacts of climate change. There was a tendency towards actions like supporting people in their local community, as opposed to, for example, making changes to their properties (which may have been driven by a perception that actions were not relevant or possible for properties).

Concern about climate change and perceived seriousness of risks varied between groups and by location. It tended to be higher among women, younger people (aged 16-34), those educated to a degree level and homeowners. Those living in Glasgow, Lothian and the

²⁴ [cxc-public-awareness-of-climate-risks-and-opportunities-in-scotland-january-2022.pdf](https://www.climatexchange.org.uk/cxc-public-awareness-of-climate-risks-and-opportunities-in-scotland-january-2022.pdf)
([climatexchange.org.uk](https://www.climatexchange.org.uk))

Highlands and Islands tended to have higher levels of concern or be more likely to say they had experienced certain types of extreme weather (e.g. heatwaves and flood impacts in Glasgow and Lothian, wildfires in Highlands and Islands)."

5.2 Education market

5.2.1 Education - schools

The Curriculum for Excellence sets out the direction of travel in respect of education and 'climate change' is considered as a core theme. As noted, *"The Scottish curriculum, and education system, also have a crucial role to play and provide learners with many opportunities to develop the skills, capabilities, attributes, knowledge, motivation and behaviours to live sustainable lifestyles as informed and committed global citizens. Principally, Learning for Sustainability is an entitlement for all learners within Scotland's curriculum and all education practitioners are expected to reflect the principles of Learning for Sustainability within their practice."*²⁵

Climate change is addressed through different subject areas, for example:²⁶

- Science – *"develop curiosity and understanding of the environment and my place in the living, material and physical world... develop an understanding of the Earth's resources and the need for responsible use of them... express opinions and make decisions on social, moral, ethical, economic and environmental issues based upon sound understanding"*
- Social studies *"I can carry out a geographical enquiry to assess the impact and possible outcomes of climate change on a selected region and can propose strategies to slow or reverse the impact."*

Days out and educational trips are a key part of the offer which schools provide, particularly primary schools. For example, the attractions managed by our sister company welcome some 50,000 school visits per annum. Education group visits can be an important source of visits during mid-week term time periods, which are often more difficult periods to attract visitors. Also, they are often booked well in advance to allow for effective 'staffing'. Education-based services can help also to open up access to specific funding pots and sponsorship opportunities.

²⁵ <https://education.gov.scot/improvement/self-evaluation/climate-change-in-scottish-education/>

²⁶ <https://education.gov.scot/documents/All-experiencesoutcomes18.pdf>

Alongside delivering opportunities for formal learning, school trips can also have a number of benefits for participating schools and children, which are linked to:

- Social skills and team work
- Improved motivation and engagement with learning
- Personal wellbeing

We have noted a number of key trends in respect of organised school visits which bring a risk of a decline in trips:

- Rising costs (particularly related to transport)²⁷
- Time pressure in schools
- Health and safety (particularly, as we are continuing to deal with COVID-19²⁸)

In the future, trips may prove increasingly difficult to justify unless the entire cost is passed on to parents.

In our experience, it is more straightforward to generate education visits from primary schools rather than secondary schools. Education visits are dependent on a number of different factors including:

- Location / distance to travel / accessibility to public transport
- Range of programmes on offer (links to the Curriculum for Excellence, which includes a focus on STEM subjects and sustainability)²⁹
 - CFE Links are likely to include Sciences, Technologies, Social Studies and Literacy
- Facilities
- Availability of engaging ranger / staff led or teacher self-led activities
- Pricing
- Marketing
- Accreditations e.g. Learning Outside of the Classroom Quality Badge

²⁷ Dynamic Earth has secured funding to offer a transport subsidy

<https://www.dynamicearth.co.uk/learning/transport-subsidy>

²⁸ During 2020 and 2021 a number of heritage and other attractions provided free online content to help parents with home-schooling.

²⁹ <https://www.gov.scot/policies/schools/school-curriculum/>

In terms of the market in Scotland during 2019, 2.4% of visits to attractions were generated by school visits.³⁰

In the table below, we set out a breakdown of the school-aged children available within both the 0 to 30 and 31 to 60-minute drivetime contours of the site.

Age	0 to 30 minutes	31 to 60 minutes
5-7	8,721	22,968
8-9	5,449	14,546
10-14	14,975	38,488
15	3,169	8,038
16-17	6,479	16,594
Sub-total	38,793	100,634
Total combined	139,427	

The size of the available schools-based education marketplace available within the overall 60-minute drivetime catchment is limited. Within the immediate 30-minute catchment there are just under 30,900 school children aged 5-17 and this increases to some 100,000 within the 31 to 60-minute drivetime catchment. (Please note in the data provided, it is not possible to provide disaggregated data for children aged 4 and 18). It should be noted that Dynamic Earth already offers a number of climate change related programmes.

5.2.2 Universities and research centres

Excluding the Cockenzie site focus, the marketplace is quite crowded with climate change 'actors' currently delivering offers, experiences and programme with similarities to the vision and proposals for the 360 Centre.

Academic studies and research - Scotland

The [ClimateXChange Centre](#)³¹ is one of five centres of expertise that provides independent advice, research and analysis to support the Scottish Government as it develops and

³⁰ Moffat Centre (2020): Scottish Visitor Attraction Monitor 2019, Glasgow School for Business and Society, Glasgow Caledonian University: Glasgow, UK.

³¹ [ClimateXChange | Scotland's Centre of Expertise on Climate Change](#)

implements policies on adapting to the changing climate and the transition to net zero. ClimateXChange brings scientists and policy makers together to create policies that are informed by the best available evidence. ClimateXChange has been funded by the Scottish Government on an annual basis since 2011 and is based at the Edinburgh Climate Change Institute. In June 2022, it was announced that the centre along with three other centres specialising in climate research in Scotland had secured over £35m in funding.³²

The [Edinburgh Climate Change Institute \(ECCI\)](#), hosted by [Edinburgh University](#), described as “*the leading climate change hub for Scotland and beyond*”. ECCI is home to a dynamic ecosystem of businesses, charities and public sector organisations, delivers four Masters courses and has supported over 25 start-ups.

The [University of Edinburgh’s Business School](#) has a dedicated centre for business, climate change and sustainability (B-CCaS). Part of its mission is to work across institutional, market, Government, organisational, community and individual levels. For almost 15 years the Business School has been researching and teaching on issues related to Climate Change.

Stirling University hosts [Scotland’s International Environment Centre \(SIEC\)](#), a pioneering collaboration that will create an ‘innovation community’ in the Forth Valley, driving the creation of a net zero regional economy and acting as a global exemplar of low-carbon growth. Established as part of the Stirling and Clackmannanshire City Region Deal, SIEC is funded through an investment of £17m from the Scottish Government and £5m from the UK Government, with additional funding leveraged through private and match-funded investment. The investment builds on the University’s global reputation for environmental science, and the Forth Valley’s established status as a hub for environmental and conservation activity in Scotland.³³

The [University of the Highlands and Islands \(UHI\)](#) hosts several climate change related centres and projects including [Research - Centre for Living Sustainability \(uhi.ac.uk\)](#), [Blue Economy — Scottish Association for Marine Science, Oban UK \(sams.ac.uk\)](#), [The Environmental Research Institute \(eri.ac.uk\)](#)

[The Crichton Carbon Centre](#), based in Galloway, is an independent, environmental not-for-profit organisation established in 2007. With a focus on peatlands and education, the centre combines scientific research, practical knowledge and direct action to achieve real results in

³² <https://edinburghcentre.org/news/Major-Investment-in-Scottish-Centres-of-Expertise>

³³ [Scotland's International Environment Centre | About | University of Stirling](#)

sustainability. They aspire to lead the way in taking climate action and building climate resilience, keeping carbon where it belongs³⁴.

The [Supergen Offshore Renewable Energy Centre](#) brings together eight university partners including three universities in Scotland (University of Edinburgh, University of Aberdeen and University of Strathclyde) with a focus on providing cutting-edge research which covers the wind, wave and tidal offshore renewable sector. The Hub was established in 2018 with £5m of core funding from the Engineering and Physical Sciences Research Council and received a further £4m in funding in 2019.³⁵

The [Royal Scottish Geographical Society](#) offers training through its Climate Solutions professional or accelerator programme giving detailed or quick and simple courses to gain significant understanding of one of the most important issues of our generation: climate change. It will help prepare individuals and organisations for this transformation, and outline where the opportunities lie³⁶.

The [Net Zero Technology Centre](#) was created in 2017 as part of the Aberdeen City Region Deal (ACRD), with £180 million of UK and Scottish government funding to maximise the potential of the North Sea. The Net Zero Solution Centre was opened in 2019. In 2020 the centre purposes were redesigned to focus on developing and deploying technology for an affordable net zero energy industry³⁷.

In late September it was announced that 17 primary schools in [Orkney](#) will receive copies of *Gaia's Energy Adventure!* which helps young children to understand about offshore renewable energy. This initiative was made possible by a donation from Fred. Olsen.³⁸

[OffshoreWind4Kids](#) is an organisation which provides demonstration days, around the world for children to learn about engineering, technology and renewable energy. During June 2022, a number of demonstration activities were organised in Scotland.³⁹

The [University of Cambridge Institute for Sustainability Leadership \(CISL\)](#) is a globally influential Institute developing leadership and solutions for a sustainable economy. Through

³⁴ [Environmental charity | Carbon Centre | Dumfries](#)

³⁵ <https://supergen-ore.net/>

³⁶ [Climate Solutions | The Royal Scottish Geographical Society \(rsgs.org\)](#)

³⁷ [Our purpose \(netzerotc.com\)](#)

³⁸ <https://fredolenseawind.com/news/renewables-education-for-all-orkney-primary-kids-with-fred-olsen-donation/>

³⁹ <https://fredolenseawind.com/news/fred-olsen-seawind-and-taylor-hopkinson-team-up-to-bring-offshorewind4kids-family-event-to-scotland/>

their Climate change knowledge hub, CISL works with leaders and companies in many different ways to build the knowledge, capability and collective action to lead transformational change for a safe and stable climate.

5.2.3 Key implications

- Climate Change is a core element of the Curriculum of Excellence
- Importantly, the education marketplace regenerates every September with a new intake of school children
- There are opportunities for “education” on a number of levels from:
 - (a) Developing a formal offer which ties in with the Curriculum (either led by a member of staff or teacher led)
 - (b) Informal learning through the interpretation onsite and activities (for example, Science Explainers) and events (which can also target general visitors)
 - (c) Offsite outreach work in schools within East Lothian and Edinburgh
- The curriculum does change and a careful watching brief will be required to ensure that any future education offer meets the needs of education providers
- There are also potential partnerships with Higher Education bodies and the private sector to support young people engaging in nature-based solutions and demonstrating tools like remote sensing, robotics and data analytics are essential in the climate change sector and are transferable skills
- Several of the above education opportunities are relatively straightforward to deliver, although there would be associated costs for 360 Centre staff-led and outreach programmes
- Whilst a number of universities and research centres have existing ‘bases,’ there could be opportunities for collaboration with the National Centre for Climate Change
- Established educational and other organisations in Scotland, including the nearby University of Edinburgh have secured funding or are working in partnership to

take forward different programmes linked to the climate emergency. A National Centre would present an opportunity to form a partnership with these organisations

5.3 Employment and training

5.6.1 Renewable energy employment training

The need arises from a commitment to increase energy produced offshore with an ambition to reach 50GW by 2030⁴⁰. It is estimated that between 2022 and 2030, some £154.8 billion could be invested in new project capacity (an annual average spend of £17.2 billion).

This will require significant investment in taking offshore projects forward, critically including investment in sourcing new talent and providing initial and ongoing training to support the development of the workforce.

Currently the total size of the UK offshore workforce is just over 31,000 people (an increase of 16.1% from 2020). This is broken down to 19,591 direct jobs (an increase of 22.4% from 2020) and 11,491 indirect jobs (5.2% from 2020).

(97,465 with a mix of 61,361 direct and 36,104 indirect jobs) **with Scotland potentially accounting for 29,434 of these positions.**⁴¹

“So, unless we get our people strategy right, we won't be able to meet our ambitions. We know that there are skills challenges across the energy sector, and that there will be huge growth in demand for certain skills as the net zero transition accelerates.

Already we are seeing electrical engineering and digital skills including data analysis in high demand. These are key roles in project delivery, and we will need ever more of these to hit 50GW. That's why, as an industry, we're investing huge amounts in attracting and developing talent in the sector....

⁴⁰ <https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy>

⁴¹ Offshore Wind Skills Intelligence Report May 2022 V5, Offshore Wind Industry Council

Developers invest in recruitment, apprenticeships, and upskilling to meet the needs of individual projects or a series of projects. But a project by project approach can't deliver the rapid rise in workforce needed for our 50GW target and the wider net zero transition.

We need to intensify our work with Government, other sectors, training providers and educational institutions to develop an approach that brings new talent through from schools to industry and smooths the path for workers from declining industries into offshore wind...

Critical skills gaps and skills shortages are those that will inhibit the delivery of projects within the immediate future. There are several skills gaps and shortages which need to be addressed across the industry including and for example:

- *High level electrical skills including Senior Authorised Persons*
- *Digital skills e.g., data analysts/scientists etc and engineers with an understanding of data analysis and presentation*
- *Consenting skills, particularly amongst SNCBs and regulators but increasingly within the industry. The OWIC Pathways to Growth workstream has been undertaking work in this area including online training modules released in Q1 of 2022.*
<https://www.owic.org.uk/p2g-learn-osw-consenting>

Over the longer term anticipated skills shortages include electrical technical and engineering skills (particularly substations, High voltage (HV) and cables); the ability to manage significant sized projects and multiple contractors; high level digital specialisms including data analytics, artificial intelligence, robotics, digital engineering/science, machine learning, Supervisory control and data acquisition (SCADA) related skills, software development; and on and offshore logistics.

Gaps are anticipated with general digital literacy e.g., engineers with data analytical abilities. Floating wind projects are anticipated to require high numbers of people in fabrication and welding.

Whilst the focus of the Offshore Wind Sector Deal commitments was on the post-16 age groups, at industry level there has been a growing desire for work to be undertaken throughout the education system. Research suggests that some of the key decisions which will influence children's careers are made whilst they are still in primary school.

Industry is keen to do more in collaboration with each other as well as with government and education providers.”⁴²

5.3.2 Existing renewable energy employment training provision

SSE have their own [Training Centre in Perth](#), opened in 2012 close to their Headquarters. Over 2,000 trainees are expected to pass through the Training Centre each year. The ‘state-of-the-art’ Training Centre in Perth offers skills training to school leavers and apprentices. It provides trainees with development opportunities and the operational skills for working in all parts of SSE, including electricity generation, electricity and gas networks, home services, energy efficiency, electrical and utility contracting and smart meter installation. Scottish power has a similar training centre in Cumbernauld.

In 2021, [nine new Renewable & Energy Efficiency Training Centres](#) were launched by Michael Matheson, cabinet secretary for Net Zero, energy and transport, with support from ESP⁴³ and funding by SP Energy Networks’ £20 million Green Economy Fund. SP Energy Networks’ fund supports the delivery of the Scottish Government’s plans to meet climate change targets, boost local economic growth, improve air quality across the country and deliver a better future, quicker for local communities.

In order to manage the project, ESP established the Energy Efficiency Training Network comprising of nine colleges. Six new centres have been created in Ayrshire College, Borders College, Edinburgh College, Forth Valley College, Fife College and Glasgow Kelvin College with upgrades to two existing centres in South Lanarkshire College and West College Scotland, a diagnostic centre in West Lothian College and the creation of four centres of excellence for insulation in Edinburgh College, South Lanarkshire College, West College Scotland and West Lothian College. Many of these centres are close to the Cockszie site.

The investment and training achieved by this project will position Scotland’s Colleges at the centre of upskilling programmes and increase both commercial and curriculum activity for the colleges. Colleges are therefore in a strong position to help drive the skills needed to create green jobs and accelerate the Just Transition to net-zero by 2045.

[Clyde Training Solutions](#) based in Clydebank have invested in developing a dedicated training centre linked to the offshore, maritime and renewables sectors. Clyde Training Solutions was established in 2016 and is part of the Northern Marine Group. Global Wind Technology based in Glasgow offer a number of training courses linked to the offshore

⁴² Offshore Wind Skills Intelligence Report May 2022 V5, Offshore Wind Industry Council

⁴³ ESP is a collaboration of Scotland’s colleges and industry partners established to increase Scotland’s capability and capacity to deliver the right skills for the energy, engineering and construction sectors.

renewables sector. Clyde Training Solutions in September 2022 announced plans to develop a new centre in Aberdeen which appears to be related to the drilling well control sector.

Also, [EPSRC and NERC Centre for Doctoral Training in Offshore Renewable Energy \(IDCORE\)](#) is an established partnership involving The University of Edinburgh, University of Exeter, Strathclyde University, and the Scottish Association for Marine Science. This is a funded programme which from 2019 has the objective to train fifty Engineering Doctorate (EngD) students. The course is based at the University of Edinburgh.

In late December 2022, it was announced that the [Energy Training Academy](#), a 12,000 square foot facility located in [Dalkeith](#), has appointed a director and manager to drive the business forward in 2023. The focus is on providing a range of training courses e.g. upskilling in renewables for traditionally trained gas engineers and work placements will also be offered. The Academy is a partnership between the Edinburgh Boiler Company (EBC) and HeatFix Scotland.

Additionally, we need to be aware that strategically Aberdeen, as the hub for the oil and gas industries, is likely to be well placed to become a hub for the renewables sector (and associated training opportunities), as the transition from oil and gas to renewables continues. Clearly, Aberdeen has access to a trained workforce with expertise in delivering offshore energy projects in the North Sea and the supporting harbour and wharfage infrastructure. Investment (estimated up to £400m) has been secured to take forward the new South Harbour project which is planned to open in 2022.

We set out as **Appendix Three**, information on green jobs and the need for training and development alongside nature-based employment training.

In terms of skills and training the Minister for Higher Education and Further Education, Youth Employment and Skills Jamie Hepburn announced in late September 2022 that there will be an independent review of the skills and training delivery across Scotland, which demonstrates the changing world we are living in. The Minister noted *“Priority projects will adapt the education and skills system to make it more agile and responsive to our economic needs.*

They will support and incentivise people and their employers to invest in skills and training throughout their working lives.

And they will expand Scotland's available talent pool to give employers the skills pipeline they need.

Our system needs to respond to the increasing numbers of people we expect will require upskilling and reskilling.

As I have laid out, it needs to adapt to shifts in our economy and workplaces as a result of digital transformation, the demographic change of an aging population and an aging workforce and the imperative to respond to the climate emergency and work towards net zero.”⁴⁴

5.3.3 Key implications

- Transferrable knowledge and skills in the workforce will be essential to allow movement between existing and emerging nature- based jobs and understanding employment pathways within and between sectors.
- There are established training centres which have been developed by energy providers and industry training providers.
- There are also established colleges and universities which are placing themselves at the forefront of providing training and skills development linked to the climate emergency.
- The training market is competitive and training is being delivered by a range of providers.
- The opportunity to provide training at the site or online will be reliant upon attracting a third party (industry or university) as a delivery partner.
- Whilst the market is competitive, it is important to recognise the forecast growth in demand for training provision in respect of the renewable energy sector.

⁴⁴ <https://www.gov.scot/publications/ministerial-statement-announcement-independent-review-skills-delivery/>

5.4 Residential marketplace

5.4.1 Drivetime analysis

In terms of exploring the opportunities to develop a visitor experience with associated public art and community uses at the site, it is important to understand the local and wider sub-regional demographic profile. Visitor flows generated from the tourism market are subject to seasonal variations and a number of 'attractions' have limited or reduced opening hours in winter.

The local residential market, particularly within the core 0 to 60-minute drivetime contour is likely to be a key source of 'visitors' (including members of the local community) and represents an important driver of users, particularly outside of the main tourist season. As a new 'centre' without national awareness or profile, it is more challenging to attract people to visit from outside the one-hour drivetime catchment.

As part of this study, we have carried out a demographic analysis of the residential population living within the 0 to 30, 31 to 60, 61 to 90 and 91 to 120-minute drivetime catchments.⁴⁵ We set out as **Appendix Four** how the drivetime catchments are calculated.

Within the immediate 30-minute drivetime catchment, the population reaches 263,270 residents and within the overall 60-minute drivetime catchment, the size of the residential market reaches just over 1 million residents (1,021,345).

Within the 61 to 90-minute catchment, this increases by a further 1.858 million residents and within the overall two hour drivetime catchment the available size of the residential marketplace increases to 3.815 million residents (please see table below).

⁴⁵ All demographic data and maps supplied by CACI: '©CACI Limited 2022'

Drivetime contour (minutes)	Population
0 to 30	263,270
31 to 60	758,075
61 to 90	1,858,027
91 to 120	936,583
Total	3,815,955

It is important to note that the further residents are located away from the site, the propensity to visit will decrease. At the same time, the size of the competitive marketplace will increase i.e. people have many more alternative / leisure / tourism / recreation places to visit and options open to them.

Age profile

The table below sets out an overview of the age of residents living across all four drivetime catchments.

The figures within each drivetime catchment are compared to the national average as an index (100 equals the national average). Where the figures differ from the average by plus or minus 10% the cell is highlighted accordingly. For example, in the 31 to 60-minute catchment for young adults aged 20 to 24 index is 121 and this signifies the proportion of the population in this catchment is 21% above the national average.

It is interesting to note that across all four drivetime catchments the representation of young children 0 to 14, (a generation who will be impacted on and need to be inspired to take action in respect of the climate and biodiversity emergencies), are all below the index figure. This is most pronounced for children living within the 31 to 60-minute drivetime catchment. For example, for children aged between 10 and 14, the representation is 12% below the index.

Population by Age	0 to 30 minutes			31 to 60 minutes			61 to 90 minutes			91 to 120 minutes		
	Area Profile	Area %	Index av=100	Area Profile	Area %	Index av=100	Area Profile	Area %	Index av=100	Area Profile	Area %	Index av=100
0-4	16,109	6.1	99	43,349	5.7	93	104,020	5.6	91	49,344	5.3	85
5-7	8,721	3.3	97	22,968	3.0	89	57,944	3.1	92	29,203	3.1	92
8-9	5,449	2.1	97	14,546	1.9	90	36,983	2.0	93	18,861	2.0	94
10-14	14,975	5.7	98	38,488	5.1	88	103,164	5.6	96	53,255	5.7	98
15	3,169	1.2	98	8,038	1.1	87	21,906	1.2	96	11,548	1.2	101
16-17	6,479	2.5	100	16,594	2.2	89	43,787	2.4	95	22,915	2.4	99
18-19	6,502	2.5	95	21,312	2.8	108	52,292	2.8	108	26,878	2.9	110
20-24	15,446	5.9	86	62,397	8.2	121	131,500	7.1	104	64,332	6.9	101
25-29	15,543	5.9	87	59,795	7.9	116	128,501	6.9	101	53,460	5.7	84
30-44	52,887	20.1	98	165,649	21.9	107	381,445	20.5	100	171,816	18.3	90
45-59	56,381	21.4	109	149,827	19.8	101	388,338	20.9	107	203,042	21.7	111
60-64	16,857	6.4	106	43,888	5.8	96	111,042	6.0	99	62,151	6.6	110
65-74	23,497	8.9	103	60,083	7.9	91	162,170	8.7	100	90,695	9.7	111
75-84	15,617	5.9	107	37,448	4.9	89	101,339	5.5	98	58,364	6.2	112
85-89	3,843	1.5	100	9,162	1.2	83	22,923	1.2	84	13,872	1.5	101
90+	1,795	0.7	90	4,531	0.6	79	10,673	0.6	76	6,847	0.7	97
Total population	263,270			758,075			1,858,027			936,583		

For adults from the core family market, those aged 25 to 44 (25 to 29 and 30 to 44), the picture is more mixed. The representation of adults aged 25 to 44 living within the 0 to 30 and 91 to 120-minute catchments are below the index figure by between 2 and 16% respectively. The reverse is true for adults living within the 31 to 60 and 61 to 90-minute drivetime catchments where the representation is either directly in line with the index or up to 16% above the index figure.

The high representation of young adults aged 18 to 19, 20 to 24 and 25 to 29 living within the 31 to 60-minute drivetime catchment is linked to the presence of Edinburgh University, Heriot-Watt University, Queen Margaret University, Edinburgh Napier University, plus Edinburgh's College group, Scotland's Rural College and a range of specialist institutions involved in language and professional learning. Edinburgh is the third most popular city in the UK amongst international students.

Within the immediate drivetime and 91 to 120-minute catchments there is a higher representation than the index figure of older adults aged between 60 and 84. Within both the 31 to 60 and 61 to 90-minute catchments, the reverse is evident (apart from adults aged 65 to 74 living within with the 61 to 90-minute catchment, which are directly in line with the index figure).

Economic activity

In the table below, we set out a breakdown of the economic activity of residents living within all four drivetime catchments.

Across both the 0 to 30 and 31 to 60-minute drivetime catchments, the percentage of residents who are economically active are either directly in line or just above the index figure, by 1%. The reverse holds true for residents living within the two outer catchments – the representation of adults who are economically active is 3 and 4% respectively below the index figure.

Interestingly, across the 0 to 30, 31 to 60 and 61 to 90-minute catchments, the representation of adults who are in full-time employment is between 2 and 9% above the index.

Not unexpectedly, the representation of students in full-time education living within the 31 to 60, 61 to 90 and 91 to 120-minute catchments is above the index figure by up to 24%.

Across the two outer (61 to 90 and 91 to 12-minute) drivetime catchments, the representation of adults who are unemployed is significantly above the index by between 12 and 27%.

Within the immediate catchment, the representation of adults who are unemployed is directly in line with the index and for those living within the 31 to 60-minute catchment the representation is below the index figure by 2%.

Across all four drivetime catchments, the representation of people who are aged between 16 and 24 and classified as unemployed is above the index figure, by between 3 and 35%.

Across three of the drivetime catchments (the 0 to 30, 61 to 90 and 91 to 120-minute) the representation of people who are classified as retired is above the index figure by up to 17%.

Within the 0 to 30, 61 to 90 and 91 to 120-minute drivetime catchments, the representation of residents classified as either long-term sick or disabled is respectively 7, 50 and 30% above the index figure.

Economic Activity	0 to 30 minutes			31 to 60 minutes			61 to 90 minutes			91 to 120 minutes		
	Area Profile	Area %	Index av=100	Area Profile	Area %	Index av=100	Area Profile	Area %	Index av=100	Area Profile	Area %	Index av=100
Economically active	135,380	69.9	100	408,358	70.5	101	949,052	67.8	97	464,903	66.9	96
- Employee full-time	77,334	39.9	104	243,006	41.9	109	547,965	39.2	102	259,864	37.4	97
- Employee part-time	27,670	14.3	104	72,384	12.5	91	178,588	12.8	93	92,988	13.4	98
- Self employed	15,647	8.1	85	43,154	7.4	78	90,102	6.4	68	50,459	7.3	76
- Unemployed	8,530	4.4	100	24,960	4.3	98	78,187	5.6	127	34,395	4.9	112
- Fulltime student economically active	6,199	3.2	93	24,854	4.3	124	54,210	3.9	112	27,197	3.9	113
Economically inactive	58,212	30.1	99	171,187	29.5	97	450,023	32.2	106	230,386	33.1	109
- Retired	29,127	15.0	108	76,012	13.1	94	200,944	14.4	103	112,907	16.2	117
- Full-time student economically inactive	9,117	4.7	81	43,113	7.4	129	77,433	5.5	96	42,295	6.1	105
- Carer (looking after home or family)	7,522	3.9	91	19,104	3.3	77	50,953	3.6	85	24,190	3.5	82
- Long term sick or disabled	8,837	4.6	107	22,537	3.9	91	89,190	6.4	150	38,474	5.5	130
- Other economically inactive	3,609	1.9	86	10,421	1.8	83	31,503	2.3	104	12,520	1.8	83
Unemployed aged 16-24	2,771	1.4	115	7,414	1.3	103	23,468	1.7	135	10,332	1.5	120
Unemployed aged 50-74	1,402	0.7	89	4,420	0.8	94	13,728	1.0	120	6,717	1.0	119
Unemployed: never worked	1,256	0.6	92	3,031	0.5	74	12,122	0.9	123	4,914	0.7	100
Long-term unemployed	3,103	1.6	93	9,152	1.6	91	31,330	2.2	129	13,670	2.0	114
All people aged 16 to 74	193,592			579,545			1,399,075			695,289		

Social grade

In the table below, we set out a breakdown of the social grade of residents living within all four drivetime catchments.

Social Grade	0 to 30 minutes			31 to 60 minutes			61 to 90 minutes			91 to 120 minutes		
	Area Profile	Area %	Index av=100	Area Profile	Area %	Index av=100	Area Profile	Area %	Index av=100	Area Profile	Area %	Index av=100
AB: Higher/intermediate managerial /admin / professional	17,537	20.5	92	66,471	25.1	112	103,867	16.3	73	52,776	17.5	79
C1: Supervisory, clerical, jr managerial/admin/professional	27,769	32.5	105	91,269	34.4	111	201,659	31.7	103	96,735	32.1	104
C2: Skilled manual workers	17,797	20.8	100	45,884	17.3	83	133,195	20.9	100	64,709	21.5	103
DE. Semi-skilled and unskilled manual workers, on state benefit, unemployed, lowest grade workers	22,357	26.2	101	61,558	23.2	90	197,376	31.0	120	87,043	28.9	112

The representation of residents from the AB (higher / intermediate managerial /admin / professional) social grade is significantly below the index figure for residents living within the immediate drivetime catchment and for residents within both the 61 to 90 and 91 to 120-minute catchments. For the latter two catchments, this is particularly pronounced as the representation is some 27 and 21% below the index. However, for residents within the 31 to 60-minute catchment, the reverse holds true – the representation of residents from the AB social bracket is 12% above the index figure.

Encouragingly, the representation of residents from the C1 social grade (supervisory, clerical, junior managerial / admin / professional) catchments is above the index across all four drivetime by between 3 and 11%.

For residents from the C2 (skilled manual workers) social grade group – the representation of all four drivetime profiles is mixed. Within both the 0 to 30 and 61 to 90-minute catchments the figure is in line with the index. But for the 31 to 60-minute catchment, the figure is significantly below the index (-17%), whereas for the 91 to 120-minute catchment the figure is 3% above the index.

The representation of people who are classified as DE social grade (semi-skilled and unskilled manual workers, on state benefit, unemployed, lowest grade workers) is significantly above the index figure, by 20% and 12% for residents living within the immediate both the 61 to 90 and 91 to 120-minute drivetime catchment. For residents within 31 to 60-minute catchment, the representation of residents from the DE social grade

is below the index figure by 10%. For residents living within the immediate 30-minute catchment the representation is 1% above the index figure.

5.4.2 East Lothian demographic characteristics

Whilst the above provides a detailed overview based on specific drivetime catchments, it is important to consider the characteristics of the local community, the ward of Preston, Seton and Gosford (PSG).⁴⁶

East Lothian Council produces a range of ward profile data and in terms of the [size of the available market](#):

- The 2020 mid-year population estimates show that 17,714 people live in this ward, which accounts for 16.4% of the population of East Lothian
- The 2018 based population projections show a minimum 0.1% overall increase in the size of the residential population base within this ward to 17,998 residents in 2028. This is the lowest increase across all wards (East Lothian overall increase 7.2%)
- NRS Population Projections show that the working age population and those aged 15 and under will decline as a percentage of the whole in both PSG and East Lothian, and those aged 65 and over will increase. Please see table below.

Source: Source: East Lothian Council, Ward Profile - Preston, Seton and Gosford

In terms of the [social / economic characteristics](#):

- 6 data zones in PSG are within the 20% most deprived across East Lothian, and 8 data zones are within the 20% least deprived across East Lothian
- The lowest ranked data zone in the ward (High St East. Robertson Av. Prestonpans) is the second most deprived in East Lothian
- This data zone is also within the 10% most deprived in Scotland
- SIMD2020 shows that 10.9% of the population of PSG is classed as income deprived, higher than the East Lothian figure of 10.2%. The proportion of the population that is considered to be income deprived in this ward ranges from 2% to 27% across the data zones
- In September 2021, 1,607 residents in this ward claimed Universal Credit, 57.5% higher than in February 2020, compared to a 57.1% increase across East Lothian as a whole

⁴⁶ Source: East Lothian Council, Ward Profile - Preston, Seton and Gosford
https://www.eastlothian.gov.uk/downloads/file/23523/preston_seton_and_gosford_ward_profile_2021

- 8 of the 24 data zones in this ward fall within the 20% most educationally deprived in East Lothian

5.4.3 Forecast population growth

In the table below, we set out the forecast population growth over the 2018 and 2043 period for East Lothian and adjoining or nearby local authority areas.

Projected total population (persons)						
Area	2018	2023	2028	2033	2039	2043
Scotland	5,438,100	5,495,578	5,537,116	5,562,901	5,574,058	5,574,819
City of Edinburgh	518,500	537,073	552,585	566,377	579,521	586,566
East Lothian	105,790	109,742	113,403	116,613	119,812	121,743
Midlothian	91,340	97,726	103,945	109,588	115,675	119,637
Scottish Borders	115,270	115,873	116,435	116,554	116,266	116,138
West Lothian	182,140	188,014	192,812	196,707	200,806	203,320

Source: (C) Crown copyright. Data supplied by National Records of Scotland

As can be seen for all five local authority areas, the forecast population growth, apart from the Scottish Borders is at least 10% in terms of percentage growth over the period (with Midlothian recording the highest percentage increase). Across the five local authority areas, this represents an overall increase in the actual size of the population base of some 134,000 people over the 25-year period.

This growth can also be reflected in the development of housing at Blindwells, Dunbar, Longniddry, Gullane and Tranent.

5.4.4 Passing traffic on the local road network and the John Muir Way

The Department for Transport carries out [vehicle counts](#), a mix of estimates and manual counts, on the road network across the UK. There are no count points along the length of B1348 / High Street as it passes directly in front of the development site.

However, on West Loan Road, which joins the B1348 / High Street (just after Prestonpans Beach), based on a manual count during 2019, the average annual daily traffic flows were 3,260 or 1,189,900 annually,

The closest count point on an A road is on the A198 to the north of the Tranent Junction with the A1, where a manual count in 2019 established that the average daily flow of vehicles was 21,720 (of which 18,126 were cars or taxis). This represents just under 8 million (7,927,800) vehicle movements annually. As a comparison on the A1, just past the Tranent Junction, the comparable figure is just over 11 million vehicles per annum.

The [John Muir Way \(JMW\)](#) is one of Scotland's Great Trails and is an internationally recognised walking route linking Dunbar to Helensburgh. The route passes immediately alongside the seaward side of the development site. Research⁴⁷ was carried out among users and of those interviewed, the average time spent on the JMW was approximately an hour and twenty minutes (some 25% spend less than 30 minutes and 40% spend between 31 and 60-minutes). There are levels of repeat usage of the JMW with 72% visiting at least six times over the last 12-month period. Daily Spend levels on food / drink by day visitors using the JMW is £4.40.

5.4.5 Key implications

- Socio-demographic profile presents some challenges and has implications in terms of potential tariffs in future alongside spend in secondary areas such as catering, retail and events. Highlights the need to ensure 'offer' is accessible to families on low incomes
- Need to introduce employment generating uses at the former Cockenzie Power Station site and potentially provide training opportunities
- Proximity to large base of university students presents opportunities for temporary staff during the peak summer period (which coincides with the holiday people for students). Recruitment is an ongoing challenge in the sector
- Low residential base within the hour's drivetime contour emphasises importance of the tourism base. This perhaps highlights the need for a diverse 'business' model – generating revenue from multiple 'sources'
- Unlike inland development sites, a challenge that coastal sites face is that approximately 50% of the 'drivetime catchment' covers the sea (reducing the available size of the market)

⁴⁷ User Monitoring Interim Report, Prepared by STR 12/11/2020

- Over the long-term, there is forecast to be an increase in the size of the residential population (the available size of the market)
- People moving into the new large-scale residential developments will be seeking quality experiences / days out on their doorstep, which the overall offer at the site could be well placed to serve
- There are significant vehicle movements on the local road network (and more widely on the A1). A critical part of a future marketing strategy could be to allocate a budget to introduce offsite Brown Tourist signage, which still remains an effective marketing channel. Additionally, promotional signage should be introduced on the John Muir Way and at the relatively nearby beach car parks (particularly at the three Longniddry car parks)
- Whilst user numbers remain unknown on the John Muir Way in respect of the site location, users of the JMW passing by the 360 Climate Change Centre are likely to be drawn to the experience and potentially use its facilities (café and toilets). Consideration needs to be given to the location of any catering provision to ensure it is accessible and outside of any potential payzone (to attract people passing by and local community users)

5.5 Tourism market

*“Tourism is a key sector for East Lothian in terms of employment opportunities and bringing visitors and visitor spend into the local economy. Visitors are particularly attracted to the area for the natural landscape, the leisure activities, including golf, and the food and drink offer. This is reflected in the ELC Strategy which sets an objective for East Lothian to become ‘Scotland’s leading coastal, leisure and food and drink destination’”. **East Lothian Economic Development Strategy, Review and Refresh, Annex 4, October 2018***

5.5.1 Volume and value of tourism in East Lothian and Edinburgh

In summary, STEAM tourism data for East Lothian covering the period 2009 to 2020 highlights:

- The economic impact of tourism, at historic prices increased from £202.31m to £278.80m by 2019 (during 2020, due to COVID, the economic impact decreased to £110.73m)

- Total visitor numbers have declined slightly from 1.39m in 2009 to 1.37m in 2019 (similar to the above during 2020 visitor numbers declined to 480,000). Although encouragingly between 2017 and 2019 there was year-on-year growth recorded
- Total staying visitors have increased slightly from 418,250 in 2009 to 422,370 in 2019, although they peaked at 457,030 in 2015. However, overnight visitors staying with friends and relatives have increased from 123,930 in 2009 to 141,510 in 2019
- The economic impact of staying visitors, at historic prices, has increased significantly from £164.71m in 2009 to £228.96m in 2019 – representing year on year growth between 2012 and 2019
- The number of day visitors has declined over the period from 971,720 in 2009 to 948,770 in 2019. However, between 2017 and 2019 there was strong growth in day visitors (899,28 to 948,770)
- The economic impact has increased from £37.60m in 2009 to £49.84m in 2019.⁴⁸ The economic impact of day visitors is considerably less than overnight / staying visitors.

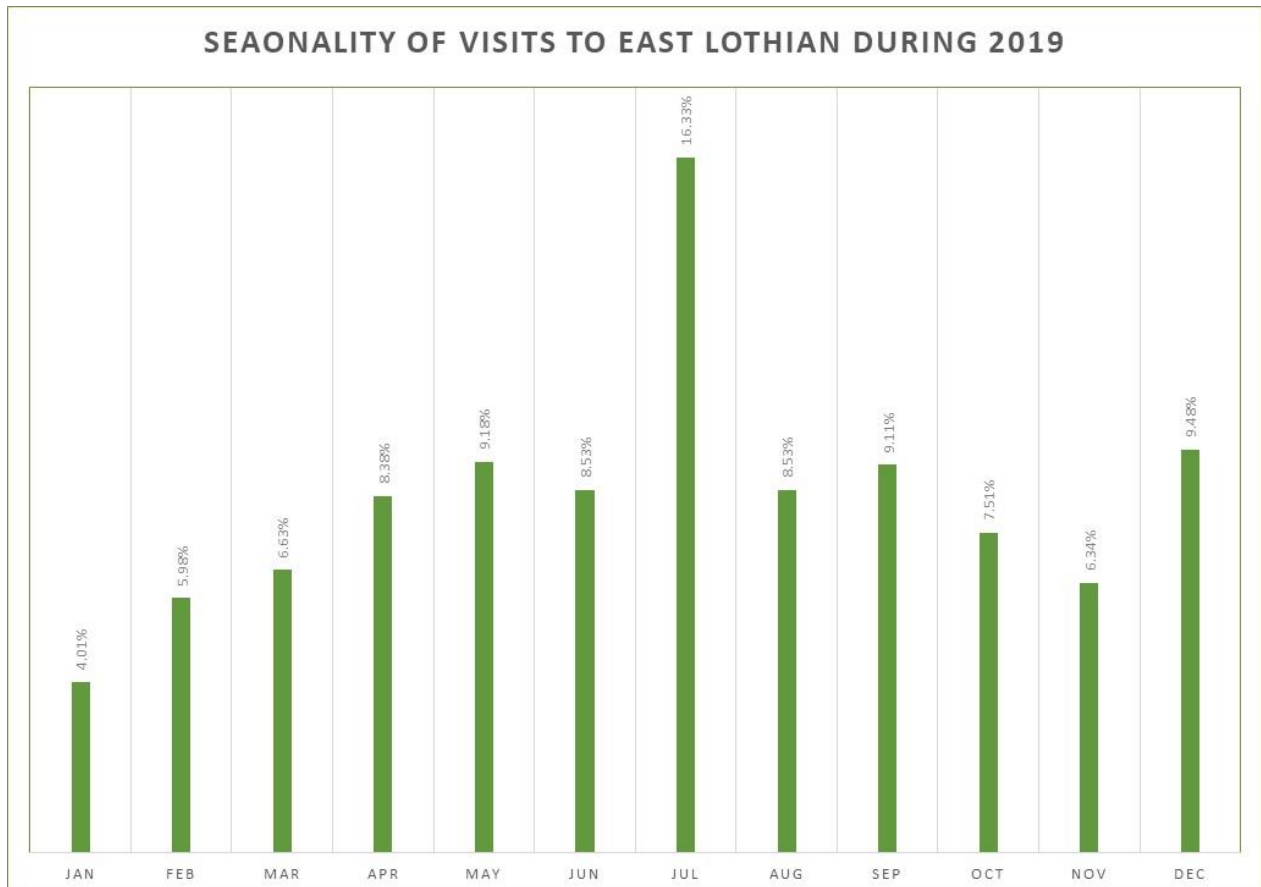
We set out in the chart below the seasonality of visitation patterns to East Lothian. The peak period between April and September accounts for just over 60% of visitors.

It is worth highlighting that in 2019, [the City of Edinburgh](#) generated⁴⁹:

- 2,206,000 international visits (a 12% decline on the previous year, although both bednights and spend increased)
- 2,697,000 domestic overnight visits (a 7% increase over the previous year)

⁴⁸ Source: Source: STEAM Final Trend Report for 2009 to 2020, East Lothian Council, Issued June 2021

⁴⁹ Insight Department: Edinburgh and Lothians Fact Sheet, 2019. Visit Scotland. Published 2020



Source: STEAM Final Trend Report for 2009 to 2020, East Lothian Council, Issued June 2021

It is important to highlight recently released Scottish Tourism Index (November 2022) which highlights the very challenging nature of the tourism sector.⁵⁰

5.5.2 Visitor profile

East Lothian Council commissions modules of visitor research, which help to build up a profile of visitors to East Lothian. The latest research was published in January 2022⁵¹. The research was impacted on by COVID, but in summary:

Origin of visitors to East Lothian

We set out below information on the origin of visitors to East Lothian:

- During 2021, 64% of visitors to East Lothian came from Scotland, visitors from Edinburgh accounted for 26% of the overall sample size. The percentage of visitors visiting East Lothian from Scotland has declined from 79% in 2003 to 71% in 2018.

⁵⁰ <https://www.etag.org.uk/2022/11/findings-from-the-latest-scottish-tourism-index-survey/#:~:text=58%25%20felt%20their%20holiday%20choices, costs%20for%2060%25%20of%20Scots.>

⁵¹ East Lothian Visitor Survey Final Report By STR Prepared for East Lothian Council January 2022

- During 2021, 32% of visitors were from England (visitors from the North West and Merseyside accounted for 6% of visitors, Yorkshire and The Humber 6% and the North East 5%). Visitors from England to East Lothian increased from 12% in 2003 to 23% in 2018.
- The percentage of people visiting East Lothian from overseas has declined from 9% in 2003 to 7% during 2018 and 2% during 2021

We set out as **Appendix Five** further detail on the tourism market.

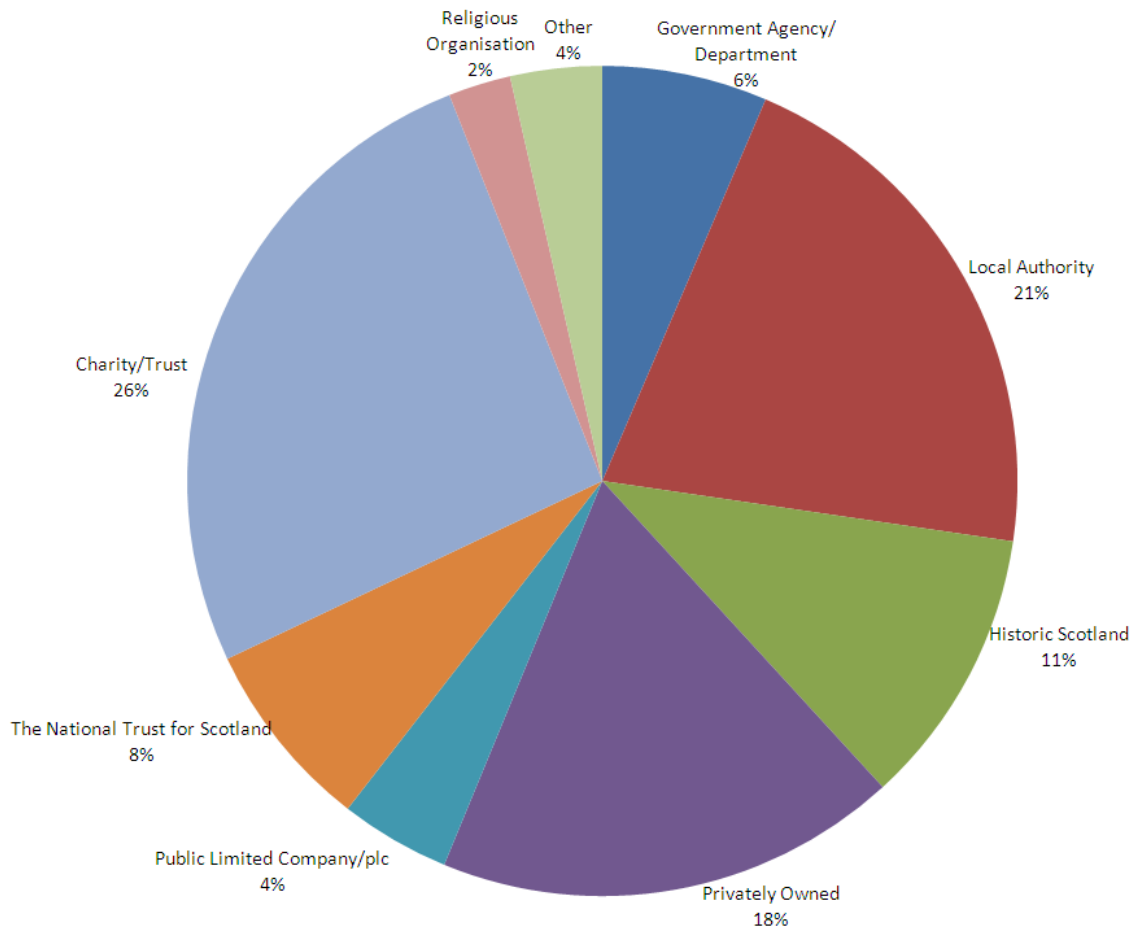
5.5.3 Key implications

- Depending on the quality of the offer and how this resonates with local communities, the visiting friends and relatives' market segment could be an important sector to target. In terms of the positioning, if the attraction and wider offer appeals to local communities, the 360 Climate Change Centre could become a 'must see' attraction which local residents will take people to.
- The market to East Lothian in actual 'visits' is dominated by the day visitor market and we have to recognise that there is an overlap between this market and the residential market set out in the wider market analysis. Therefore, we need to avoid 'double counting'.
- The seasonal nature of the market, common to many destinations, indicates the potential need to introduce periods of closure during the winter period.
- The Edinburgh market is important to East Lothian. The proximity of Edinburgh has a number of advantages and disadvantages e.g. by rail and road you can readily reach Prestonpans – offering good access to this market. At the same time, Edinburgh is home to some of the largest / most important attractions (by visitor volume), which to some degree 'dominate' the attractions' landscape. Also perhaps, Edinburgh overshadows East Lothian as a destination.
- There is a recognised gap in provision of some types of accommodation, which impacts on the potential to generate additional staying nights (directly attributable to the 360 Climate Change Centre) during the peak season.

- The lack of hotels able to accommodate large groups of people attending conferences reduces the 'direct' economic impact of the 360 Climate Change Centre within East Lothian as some of these "visitors" could well end up staying outside of East Lothian.
- Compared to higher profile towns or destinations in East Lothian, to a large degree the study area has a low market profile in respect of the tourism sector
- A high level of repeat visits amongst visitors to East Lothian (81% have previously visited) emphasises the need to reinvest in the offer at the 360 Centre to generate a level of repeat visits
- It is important to note the nearby presence of Haven's holiday village (Haven Seton Sands Holiday Park), which has a 'self-regenerating' market on a weekly basis
- **Given inflation and cost-of-living crisis there is a high degree of uncertainty in the market place, which is likely to have a significant negative impact across the tourism sector and wider economy of Scotland and the UK**

5.6 Visitor attractions sector

The visitor attraction marketplace consists of a wide range of types of attractions from country parks through to museums, science discovery centres and theme parks. Running alongside commercial operations are government bodies such as Forestry and Land Scotland and third sector organisations such as the National Trust for Scotland and the Scottish Wildlife Trust who manage a number of heritage properties, landscapes, reserves and visitor centres.



In terms of the visitor attractions sector in Scotland, the Moffat Centre for Travel and Tourism Business Development at Glasgow Caledonian University publishes an annual report – the Scottish Visitor Attraction Monitor⁵². Below, we set out a ‘snapshot’ of the sector from 2019 using data from the report. The 2019 report is based on 735 survey responses (with 687 completed) received from attractions (the survey was distributed to 822 attractions). In terms of ownership of attractions, charities and trusts account for about one third.

5.6.1 Admission

During 2019, attractions (both paid and free) reported a 4% increase in overall visitor numbers from 62.72m in 2018 to 65.21m.

Looking at former VisitScotland areas, Edinburgh and Lothian generated the second highest total number of visits during 2019 at 17.27m (although this represents a 1% decline on the

⁵² Moffat Centre (2020): Scottish Visitor Attraction Monitor 2019, Glasgow School for Business and Society, Glasgow Caledonian University: Glasgow, UK.

figure recorded in 2018). Greater Glasgow recorded the highest number of visits at 19.08m (a 15% increase compared to the previous year).

5.6.2 Free vs paid for attractions

Free attractions accounted for the largest proportion of visits at 44.72m compared to 20.54m for paid attractions. However, if we review data provided for attractions in Edinburgh and Lothian, the difference is not so pronounced with free attractions accounting for 9.92m visits and paid for attractions accounting for 7.35m visits.

Looking at the geographical location of attractions for those located in a coastal region, the split between paid for and free admission attractions is just over 140,000 visits (in favour of free attractions). Free attractions generated 3.76m visits and paid for attractions 3.61m.

In the table below we set out the top 10 attractions in Scotland (both paid for admission and free to enter).⁵³

Top Ten Paid and Free Attractions 2019			
Paid for Attractions		Free Attractions	
Edinburgh Castle	2,167,366	National Museum of Scotland	2,210,114
Edinburgh Bus Tours	614,928	Kelvingrove Art Gallery and Museum	1,832,097
Stirling Castle	609,698	Scottish National Gallery	1,583,231
Urquhart Castle	547,518	Riverside Museum	1,364,739
Glenfinnan Monument	462,235	St Giles' Cathedral	1,271,991
The Scotch Whisky Experience	385,733	Royal Botanic Garden Edinburgh	893,263
The Royal Yacht Britannia	357,271	National War Museum	805,934
Culzean Castle and Country Park	333,965	Regimental Museum of The Royal Scots	800,607
Loch Ness by Jacobite	321,980	Gretna Green Famous Blacksmiths Shop	772,448
Robert Burns Birthplace Museum	261,283	V&A Dundee	621,123

Source: Moffat Centre (2020): *Scottish Visitor Attraction Monitor 2019*, Glasgow School for Business and Society, Glasgow Caledonian University: Glasgow, UK.

5.6.3 Visitor profiles

It is important to understand the composition of visitors to attractions. For example, based on a sample of 106 attractions, 81.1% of visits generated to these attractions were by adults and only 18.9% by children.

⁵³ The free category excludes country park type of attractions

If we look at the proportion of visits generated by adults and children at different categories of attractions another picture starts to emerge. For example, at transport related attractions, 90% of visitors are adults and 10% are children, whereas at outdoor / nature types of attractions, the split is 59.2% adults / 40.8% children.

Within Edinburgh and Lothians region, the breakdown is broadly in line with the national figures – some 81.5% adult and 18.5% children.

5.6.4 Revenue⁵⁴

The average adult admission charge in 2019 was £8.46, for concessions the figure was £5.91 and for children £4.35. The average spend on admissions at paid for attractions was £5.01.

In comparison within Edinburgh and Lothian, the average admission spend per visit was £5.55, slightly above the national average for Scotland.

Looking at the category of attractions, the average admission spend achieved per visit varies widely from £4.43 for wildlife / animal-based attractions through to £15.08 for transport related attractions. Discounts are often offered on admission tariffs.

Spend in secondary areas:

- Average retail spend per visit was £1.96 (£1.03 at free admission attractions and £2.37 at paid for attractions). This compares to £2.19 for Edinburgh and Lothian
- Average catering spend per visit £1.40 (£0.47 at free admission attractions and £2.09 at paid for attractions). This compares to £1.26 for Edinburgh and Lothian. It should be noted people who visit attractions in large urban centres have many alternative offsite catering options open to them which could impact on the catering spend levels being achieved.

We set out as **Appendix Six** further information on the visitor attractions sector

5.6.5 COVID and visitor attractions

We have to recognise that COVID has had a significant, and in some cases, devastating impact on the visitor attractions sector, particularly for indoor attractions. At the same time, a number of outdoor based experiences from forests through to beaches and country

⁵⁴ Figures include VAT

parks have reported significant increases in visitor numbers (which has led to other unique pressures and challenges).

Over the last two and a half years, the attractions' sector has been abruptly shut down and gone through cycles of reopening and closure. At the same time, there has been unprecedented support from Government to help the sector from a temporary reduction in the standard VAT rate through to furlough payments and government grants.

The attractions and wider tourism sector is resilient and has recovered from other significant 'events', for example, Foot and Mouth in 2001, the recession in 2008 and terrorism incidents.

However, after three summers, COVID-19 remains with us and there could well be further interpretations to 'recovery'.

5.6.6 Key implications

- Seasonality of the attractions' market has implications in terms of managing cashflow during the shoulder months and importantly the need to build activity programmes which can generate income during the quieter months. There may even be a requirement to introduce periods of closure during part of the shoulder season.
- It also highlights the importance of potentially integrating alternative or non-traditional sources of revenue. However, balancing the requirements of an operational attraction (including a space with signature pieces of public art), alongside educational, conference and training uses, is not straightforward. This will be a complex 'offer' to market and developing a brand in the marketplace which multiple audiences recognise will be challenging. Careful consideration will also need to be given to naming the proposition.
- Looking at the breakdown of employment within the attractions sector, the use of volunteers is critical to the operation of attractions. Managing volunteers is a resource intensive exercise and would require as a minimum a part-time volunteer co-ordinator position.

- It is important to note that a number of the 'top ten' attractions by visitor numbers benefit being part of a 'portfolio' of attractions managed by organisations which operate more than one site, which helps to achieve efficiencies of scale.
- COVID has impacted on the availability of funding for councils, both from a capital funding and revenue support perspective.
- Additionally, increasing inflation has placed further pressure on operators (with increasing staff costs and energy prices) which has squeezed margins. From the customers' perspective, disposable income is decreasing which has implications for the leisure / attractions sector. Clearly, the public art element with no admission fee will be beneficial.
- It will be important to monitor the impact which current inflation is having on the sector in terms of visits and also rising operating costs.

6.0 Competitive landscape

6.1 The offer in East Lothian

As part of the 'competitive landscape' in East Lothian, we need to understand about the current provision of 'attractors' and places of interest which compete for the attention, time and spend of visitors, local residents and other potential users.

- The '[great outdoors](#)' is a key attractor for visitors to East Lothian – from the attractive coastline through to the Lammermuir Hills. There is a well-developed network of cycling and walking trails, alongside 'driving routes' for people to explore. Clearly, the coastal location and integrated community park element of the experience links in with the outdoor offer within the wider area.
- There is a strong and developing offer linked to [birdwatching and the natural environment](#) – from Aberlady Bay Local Nature Reserve through to Levenhall Links and the iconic Bass Rock. North Berwick is home to the nationally recognised Scottish Seabird Centre and the Scottish Ornithologists' Club, a membership based, organisation is located in an attractive building in Aberlady, which also hosts events and exhibitions.
- There has been investment in the [activity sector](#) – the development of Foxlakes, a successful water-based activity experience and the Belhaven Surf Centre. There is increasing interest in outdoor activities such as cycling, open water swimming and stand-up-paddle boarding.
- There is an [established programme of events](#) and as set out in Section 5.2.2, a key market segment is people attracted to events. High profile events include the Edinburgh International Festival, The Fringe, Fringe by the Sea, the European Land Art Festival and Stone Stacking Championships, the Lammermuir Festival and the 3 Harbours Art Festival (which would have strong links to the public art element of the 360 Climate Change Centre).
- East Lothian has a [rich and diverse heritage offer](#) - from the Battle of Prestonpans through Scotland's oldest railway route (the Waggon Way). There are established heritage attractions and places of interest from stately homes through to castles, museums and memorials. These include Cockenzie House and Gardens, Lennoxlove House, Dirleton Castle, the Miners' Memorial Sculpture and the ruins of Tantallon

Castle. There is a range of museums including The National Museum of Flight and Prestongrange Museum⁵⁵.

- This is alongside a number of attractive **characterful villages** and **small harbours** which all add to the appeal of East Lothian
- Equally, East Lothian also has an international reputation for its **'golf offer'** which is a key draw for local, regional, national and international visitors. East Lothian regularly hosts national and international golf tournaments.

In **Appendix Seven** we set out a snapshot of the established visitor attraction base within East Lothian. Alongside the established attractions within East Lothian, we have to be conscious of the provision of nationally important attractions in Edinburgh such as the Royal Botanic Gardens Edinburgh (893,000) and Edinburgh Castle (2.167m), each of which pre-COVID attracted significant numbers of visitors.⁵⁶

A more competitive landscape – 'activities' competing for the time of visitors and residents

The chart below can be considered alongside the provision of shopping centres, digital entertainment (e.g. Netflix) and online gaming, all of which compete for our leisure time and spend.

⁵⁵ The National Mining Museum Scotland is also located within a short drivetime

⁵⁶ Insight Department Edinburgh and Lothians Factsheet 2019. Visit Scotland. Published December 2020



Whilst this section refers to the competitive landscape, as shown in the diagram above, there is an opportunity for the National Centre for Climate Change to work in synergy and partnership with other attractions.

6.2 Nearby community facilities

It is also important to note the provision of existing ‘facilities’, in the community such as the nearby Cuthill Park, Polwarth Park, Mary Murray Park which provide ‘free’ green space to local residents. Within the immediate and wider area there are also a number of ‘community centre’ facilities, not of insignificant size, provided by the council including:

- The Pennypit Family & Learning Centre
- Prestonpans Community Centre
- Port Seton Community Centre
- Longniddry Community Centre
- The Fraser Centre: Cafe; Cinema; Venue 3 Winton Pl, Tranent EH33 1AF

All of the above play an important role in their local community – providing services, activities and a physical space to meet.

It is interesting to look at the [Ridge](#) in Dunbar, which has helped people to access support and training within East Lothian. Interestingly, *“its social enterprise, The Ridge Foundations CIC undertakes commercial contracts; its SQA-accredited Construction and Rural Skills training provision for struggling pupils is via a paid-for contract with the Council; end uses for restored historic buildings include opportunities to generate rental alongside delivery of social purposes. The physical restoration of waste ground garden sites and derelict historic buildings create a legacy which will be enjoyed by generations to come. And the high quality skills being generated as part of this work will mean that the community has access to a skilled (and passionately committed) local workforce to maintain this.”*

6.3 Other local development projects

Within the wider area, other current developments and project which could impact on audience demand for the 360 Centre and audiences might opt for other competing locations which include the Granton Waterfront regeneration project, the Forth Bridge Experience, Wavegarden and Wildshore developments. Again, this presents opportunities for joint promotion and partnership working.

We set out as **Appendix Eight** further information on these developments.

6.4 Wider landscape of climate change visitor attractions

6.4.1 Scotland

Energy companies such as Scottish Power Renewables are managing visitor centres linked to the renewable energy sector. For example, [Whitelee Windfarm Visitor Centre](#) located off the M77 to the southwest of Glasgow offers a hands-on interactive experience alongside a cafe and an extensive network of trails for walking, cycling and horse riding. There is no admission fee and car parking is free. During 2019/2020 the centre attracted just under 76,000 visitors and 4,200 education based visits. The centre is managed by the Glasgow Science Centre (which itself has an experience centred around energy use, Scottish Power has worked with Glasgow Science Centre to create three lessons exploring climate change through STEM subjects).

Part of the SSE group, the [Pitlochry Dam Visitor Centre](#) showcases the rich history of hydroelectricity in the north of Scotland. The exhibitions address climate change, species, and habitat management. Free to enter the centre provides a café and meeting space. It was awarded a Green Tourism gold award in 2020.

[Cruachan Visitor Centre](#) in Argyll is part of the Drax Group and addresses the pump storage element of renewable power and its contribution to addressing climate change. Guided

tours of the 'Hollow Mountain' are £7.50 for adults. A key message is inspiring future engineers. It was awarded a Green Tourism gold award in 2019. Drax also operate a visitor centre at Tongland Hydroelectric Power station in Galloway.

In November 2021 the Minister for Culture, Europe and International Development opened a new climate change art and science exhibition, Carbon Conflict and Climate Change, opened at the [National Mining Museum Scotland](#), which is located in Newtongrange. The exhibition was temporary, but during 2021 the museum also developed a STEM Climate Change workshop for primary school children with a focus on energy, including renewables. The exhibition was a joint initiative between the Museum and the British Geological Society. The project was part of one of the seven Climate Beacon projects by Creative Carbon Scotland.⁵⁷

[The Ecology Centre in Fife](#) is a social enterprise providing education and volunteering opportunities. They support a Seagrass Officer as part of the Restoration Forth and is part of a network of six community hubs along the Fife and East Lothian Coast. The Restoration Forth Project is a £2.4 million project aimed at restoring four hectares of seagrass and 30,000 native oysters within the Firth of Forth over the next three years. The project was conceived in order to restore native habitats, to help meet climate objectives set by the UK and to connect local people to the sea. They hold a Green Tourism silver award⁵⁸.

[Sky to Scoop](#) is the story of ice cream and chocolate at Mackie of Scotland. They also make crisps. Mackie has been generating their own wind power on their 1,600-acre dairy farm since 2005 and it is the primary source of renewable energy on the farm. They have a further 7,000 solar panels and have established an arboretum as a carbon sink. There is no visitor centre at the farm, but Mackie's ice cream parlour is in Aberdeen city centre.

Dundee Heritage Trust has announced ambitious £12m plans to [transform Discovery Point](#), an established attraction in Dundee: *"Our goal is to transform Discovery Point into a world-class centre for Antarctic heritage, **connecting the pioneering history of the RRS Discovery with contemporary global issues such as climate change, the ocean environment and current Antarctic science...**Inspired by the RRS Discovery's pioneering scientific research in the Antarctic in the early 20th century – the results of which are still used by scientists today – our new gallery will explore the increasingly urgent topics of climate change and the ocean*

⁵⁷ "Climate Beacons is a Scotland-wide collaborative project between climate change or environmental organisations and arts, heritage or cultural organisations to stimulate long-term public engagement in the lead-up to and following COP26". Source: <https://www.creativecarbonscotland.com/project/climate-beacons-for-cop26/>

⁵⁸ [Fife | Home | Ecology Centre \(theecologycentre.org\)](#)

environment. The ‘Think Global: Act Local’ gallery will bring the Discovery story up to date, showing how international research at the poles is leading the way in addressing today’s environmental challenges and how this builds on the work done by Discovery’s scientists a century ago.”⁵⁹

Scotland’s four Science Centres in Aberdeen, Dundee, Glasgow and Dynamic Earth in Edinburgh receive most of the Scottish Government’s public science engagement funding (£2.664 million from 2021 to 2022).⁶⁰ Scotland’s science centres, aim to encourage people of all ages to engage with science, with an increasing focus on climate change by presenting it in a fun, inspiring and educational way. Scotland’s science centres are visited by more than 700,000 people, both locals and tourists, every year. In 2021 to 2022, the Scottish Government provided £195,000 of funding to 11 science festivals, for a public and schools audience of 250,000. A national campaign, Aye for Ideas, is funded to inspire and engage people of all ages and backgrounds in science, technology, engineering and maths (STEM). A further £200,000 is provided to support the school curriculum. [Glasgow Science Centre](#) has an energy themed exhibition on 'Powering the Future' with a focus on *“raising awareness of the science and engineering behind a low carbon, affordable and secure energy future.”*⁶¹ The exhibition has engaged with 1.2m total visitors since opening in 2015. An outreach version of the ‘exhibition’ has also been developed for schools and communities. In respect of the Dundee Science Centre, opening hours for general visitors have been significantly reduced.

[Aberdeen Maritime Museum](#) which includes exhibitions on the fishing, ship building and the North Sea oil and gas industries in late 2022 advertised a tender to develop a new exhibition to tell the story of Aberdeen's and the North East's developing role in the transition to renewable energy.

The [V&A Dundee](#) in September 2022 announced a major temporary exhibition which is focussed on plastic. *Plastic: Remaking Our World* “will feature prototypes, new technologies,

⁵⁹ <https://www.dundeeheritagetrust.co.uk/wp-content/uploads/2021/10/WEB-Dundee-Heritage-Trust-Discovery-Point-Transformed-29062021.pdf> and <https://www.scottishconstructionnow.com/articles/12m-discovery-point-redevelopment-gains-financial-backing>

⁶⁰ [Science engagement - Science and research - gov.scot \(www.gov.scot\)](https://www.gov.scot/resources/documents/2021/04/Science-engagement-science-and-research-gov-scot.pdf)

⁶¹ <https://www.glasgowsciencecentre.org/sites/default/files/about-us/Glasgow-Science-Centre-Strategic-Plan-2020-2025.pdf> Interestingly, one of the strategic goals is: “Creating an organisation that is financially sustainable...We will take a business-like approach to everything that we do, generating insights, revenues and margins that allow us to sustainably deliver our charitable objectives.”

*and cutting-edge materials as designers grapple with a material that has changed our world”.*⁶² The exhibition will run between late October and February 2023.

It is also interesting to look at the Climate Forth project *“Climate FORTH will facilitate and demonstrate the transformative action needed to transition to a climate literate, ready and resilient place. By responding to local need and demand, it will explore and share ways for local heritage to be an asset for a sustainable green recovery with multiple benefits. Through collaboration and co-creation, pilot schemes will explore how new adaptive responses to change can safeguard, sustain and re-purpose our unique natural, cultural and built heritage assets. We will ensure that adapting to change in the Inner Forth is part of a [just transition](#) – at the core of our project is supporting our most at-risk communities, young people and those facing environmental deprivation and inequality, to increase their resilience, wellbeing and access to opportunities.”* The Inner Forth Futures project is a landscape-based approach with a partnership involving RSPB Scotland, NatureScot, Clackmannanshire Council, Stirling Council, Falkirk Council, Fife Council, Green Action Trust, Historic Environment Scotland and Sustrans. It would be beneficial to explore the opportunity for the National Centre for Climate Change to link in with the Climate Forth project.

6.4.2 Rest of the UK

From late 2021 through to early 2022 10 [science and discovery centres](#) ran a series of events with a focus on environmental science and research which attracted approximately 30,000 people. The Association for Science and Discovery Centres in partnership with the Natural Environment Research Council ran the Operation Earth Project (to mark the United Nations Climate Change Conference COP26).⁶³

In late July 2022 it was announced that [Greensphere Capital](#) will be investing in Kew to help the organisation commercialise its research into a number of different areas including climate change resistant crops along with zero carbon fertiliser. Kew generates over a 1m visits per annum. Kew and Wakehurst during 2018 to 2019 generated 2,360,681 visits.

In Brighton, located on the seafront, Rampion Offshore has developed the [Rampion Visitor Centre](#), helping to showcase the renewables sector.

During 2021, Ørsted a renewable energy company opened a [visitor centre at the East Coast Hub](#) in Grimsby. Interestingly, the website notes *“The visitor centre forms part of the visitor and training area of Ørsted’s East Coast Hub... Ørsted’s East Coast Hub is the largest*

⁶² <https://www.vam.ac.uk/dundee/>

⁶³ <https://www.ukri.org/news/uk-science-centres-raise-awareness-of-climate-change/>

*Operations and Maintenance Base in the world. Hornsea One, the largest offshore wind project in the world, is now operational and Hornsea Two is currently being built, which will claim the title from Hornsea One.”*⁶⁴ In respect of training for the wind turbine and offshore industry [CWind Training](#)⁶⁵ have opened their training centre in the Port of Grimsby. CWind Training is the first UK based and owned training provider to be accredited by the Global Wind Organisation.

Building on the success of Eden in Cornwall, the Eden Project team is developing ambitious proposals for [Eden Project North](#) (which in mid-January 2023 secured £50m from the Levelling Up Fund) and [Eden Project Dundee](#). In March 2022, it was announced that Eden Project Dundee had secured approximately £7.6m in funding to take the project forward to the next stage. They each have a strong focus on learning and addressing specific issues related to the climate emergency.

The [Life Science Centre](#) in Newcastle has developed a focus on the planet and climate change. In October 2021, the Life Science Centre introduced a seven-metre diameter ‘Earth’ which was created by artist Luke Jerram and highlights the fragile nature of our earth.

[South West Climate Change Centre](#) is a free to access interactive exhibition launched in late 2021 which is located within Heartlands in Cornwall (a heritage-based visitor attraction). The focus is on flooding linked to climate change.⁶⁶

The [Climate Museum UK](#), is a ‘virtual museum’ which also runs in person activities. It is *“an experimental museum that curates and gathers responses to the Earth crisis. A collective of creatives from across the UK, organises activations to help people play, create, and talk about the crisis. The museum opens imaginations to possible futures, and builds skills to engage others with these issues.”*⁶⁷

In terms of ongoing investment - the [Science Museum](#) is planning on opening their Energy Revolution: The Adani Green Energy Gallery in 2023. The new interactive gallery *“will explore the latest climate science and the energy revolution needed to cut global*

⁶⁴ <https://orsted.co.uk/media/newsroom/news/2021/09/orsted-launches-new-visitor-centre-at-east-coast-hub-in-grimsby>

⁶⁵ <https://cwind.global/training/>

⁶⁶ <https://www.befloodready.uk/swccc>

⁶⁷ <https://climatemuseumuk.org/>

dependence on fossil fuels and achieve the Paris targets to limit global warming to around 1.5 degrees Celsius above pre-industrial levels.”⁶⁸

6.4.3 International

In October 2022 a ‘pop-up’ Climate Museum opened in New York. *“The Climate Museum is partnering with artist David Opdyke to present a major new work of art at its forthcoming pop-up in Soho. Opdyke’s Someday, all this mural uses 400 hand-modified vintage postcards to offer a bracing commentary on the impact of the climate crisis on the American landscape. The Climate Museum is bringing Someday to the public along with a climate action incubator and a series of Interdisciplinary programming launching in October and running through the end of the year.... This pop-up will include a climate action incubator, where visitors of all ages can engage with the artwork by participating in guided opportunities for reflection, dialogue, and action. It will also feature a kids’ corner with climate art and science materials.*

The Museum will present a robust slate of special programs exploring the intersection of climate change and the arts, justice, science, human migration, philosophy, activism, comedy, and more with prominent journalists, activists, and thought leaders. Highlights include: artist talks; a presentation by philosopher Olúfẹmi O. Táíwò; a kids climate science series with NASA - Goddard Institute for Space Studies; a climate justice Q&A with Chisholm Legacy Project founder Jacqui Patterson; a discussion on climate migration with journalists Vann Newkirk, Somini Sengupta, and Sarah Stillman; the NYC book launch of [The Petroleum Papers](#); a virtual visit to the [JOIDES Resolution](#) climate expedition ship with scientist Dr. Gisela Winckler, the return of “[An Inconvenient Talk Show](#),” youth climate arts workshops; and more.”⁶⁹

In Greenland, the [Icefjord Centre](#) has adopted an interesting approach to telling the story about climate by focussing on ‘ice’. The centre combines ‘science’ with ‘art’ and ‘education’. Icefjord Centre is the first of six proposed centres which will be developed in Greenland.⁷⁰

The [Cool Planet Experience](#) in County Wicklow was described as the planet’s first visitor centre dedicated to climate change and was opened by Richard Branson in 2018. **We understand that the experience was located in a building adjacent to Powerscourt Gardens (a large historic estate) and the Avoca store and restaurant which generates**

⁶⁸ <https://www.sciencemuseum.org.uk/see-and-do/energy-revolution-adani-green-energy-gallery>

⁶⁹ <https://climatemuseum.org/>

⁷⁰ <https://greenlandvisitorcenter.gl/en/visitor-centers/#6-nye-besoegscentre>

some 500,000 visits per annum. It was hoped that during the first year of operation, Cool Planet will attract 45,000 visits.⁷¹ However, at the time of writing this report the website for the attraction does not appear to be live.

[Klimahaus Bremerhaven 8° Ost](#) is a museum located on a waterfront site in Bremerhaven, Germany and is housed in a signature building. The experience focuses on the environmental challenges we are facing as a society and it has an exhibition linked to the offshore wind energy sector.⁷²

6.5 National climate change centres

It is interesting to look at the National Climate Change Centre examples from individual countries which confirms the high-level of government involvement.

In [Poland – the National Centre for Climate Change - Instytut Ochrony Środowiska](#)

“We are a cross-functional, public centre focused on climate change, its impact and its after-effects. We were created in 2020 as a part of IOŚ-PIB to provide knowledge and solutions in the area of climate policies – we support administration and local governments, cooperate with universities, research institutes and research centres in Poland and abroad. Our actions are also directed to businesses and NGOs. Our projects cover a vast array of subjects, incl. adaptation to climate changes, socioeconomic effects of climate change, climate education. Climate change resilience (especially urban resilience), circular economy, just transition, green skills, zero- and low emission transport, green innovations and finance – these are only a few areas of our interest. We also organize international and domestic events dedicated to the important issues of green transformation.”⁷³

In [Sweden – the Swedish National Knowledge Centre for Climate Change Adaptation | SMHI](#)

“The Swedish National Knowledge Centre for Climate Change Adaptation provides tools and information to help society cope with a changing climate, now and in the future. We link science, policy and practice, bringing together the decision makers, businesses, research providers and organisations that make climate change adaptation happen. The Centre collects, develops and shares research, information from authorities and learning examples to facilitate sound decision making. The Swedish National Knowledge Centre for Climate

⁷¹ <https://www.irishtimes.com/business/energy-and-resources/richard-branson-cuts-ribbon-on-wicklow-climate-change-visitor-centre-1.3350851>

⁷² <https://www.klimahaus-bremerhaven.de/>

⁷³ <https://ios.edu.pl/en/centers/national-climate-change-centre/>

Change Adaptation was established in 2012 and is based at the Swedish Meteorological and Hydrological Institute, SMHI.”⁷⁴

In [Switzerland - the National Centre for Climate Services](#):

“The Swiss National Centre for Climate Services is organised in the form of a virtual centre, and brings together administrative federal bodies. It coordinates the collaborative development and provision of climate services and promotes dialogue among all actors involved. The Confederation established the NCCS in the autumn of 2015 on the recommendation of the World Meteorological Organisation’s [Global Framework for Climate Services \(GFCS\)](#). The GFCS calls for national coordination and innovation mechanisms to be set up for the development and provision of climate services. The NCCS currently comprises nine members.”⁷⁵

In [Singapore – the National Climate Change Secretariat](#): [About NCCS](#)

“The National Climate Change Secretariat (NCCS) was established to develop and implement Singapore’s domestic and international policies and strategies to tackle climate change. NCCS is part of the Strategy Group which supports the Prime Minister and his Cabinet to establish priorities and strengthen strategic alignment across Government. The inclusion of NCCS enhances strategy-making and planning on vital issues that span multiple Government ministries and agencies. NCCS’ areas of responsibility are to:

- *Facilitate efforts to mitigate carbon emissions in all sectors*
- *Help Singapore adapt to the effects of climate change*
- *Harness economic and green growth opportunities arising from climate change*
- *Encourage public awareness and action on climate change”⁷⁶*

6.6 Other

The [Building Research Establishment \(BRE\)](#) work with national and local government, commercial and not-for-profit organisations to address defining challenges in the built environment: net zero, decarbonisation, climate change, energy efficiency, resource efficiency, health and wellbeing, circular economy, renewable energy. BRE developed the building rating BREEAM - the world’s leading science-based suite of validation and certification systems for sustainable built environment. BRE is a profit-for-purpose organisation. Any surplus from BRE’s work goes to the BRE Trust, which invests in research

⁷⁴ <https://www.smhi.se/en/theme/climate-centre>

⁷⁵ <https://www.nccs.admin.ch/nccs/en/home/the-nccs/about-the-nccs/organisation.html>

⁷⁶ <https://www.nccs.gov.sg/who-we-are/about-nccs/>

projects for the public benefit, or are invested in upgrading the research facilities at the BRE Science Park⁷⁷.

6.7 Key implications

- The market is complex and highly competitive. There are a range of established ‘attractors’ and visitor attractions in East Lothian and Edinburgh which are competing for the spend and time of visitors, the residential population and education markets. It will be difficult without significant subsidy support to raise market awareness for the National Centre for Climate Change to compete at scale in the marketplace, but the ‘offer’ would be unique in the marketplace.
- Locally, there is the provision of community facilities and clearly it will be important not to duplicate the offer (or displace users from one centre to another).
- Dynamic Earth could be seen as the nearest direct competitor to the science / learning, education and visitor elements proposed for the National Centre for Climate Change. The new gallery ‘Discover the Deep’ opened earlier in 2022 and includes understanding threats to the survival of the oceans and wider climate change issues.
- Both Eden Project Dundee and Eden Project North will ‘dominate the landscape’ in the north of England and central Scotland and draw attention away from other ‘planetary emergency’ attractions inspiring action .
- There is ongoing investment in the provision of **climate exhibitions and experiences in established ‘attractions’ which have strong existing education offers**. As time progresses, we believe that climate change will continue to become a key area of focus for a number of established science and discovery centres, including Dynamic Earth. Importantly, this also highlights the importance of ‘the attraction’ element in terms of engaging with the widest possible audience and hence as per the brief being the ‘anchor’.
- **The existence of a number of climate focussed exhibitions and centres, some managed by renewable energy companies, helps to demonstrate the relevance and interest in the marketplace.**

⁷⁷ [BRE Group - World leaders in built environment research and development](#)

- Additionally, companies operating in the renewable sector have invested and are continuing to invest in creating visitor centres with a focus on renewable energy which deliver learning ‘experiences’. To date, these tend to be small-scale operations and lack a ‘national’ focus.
- The market is moving quickly and there is a danger of being ‘stranded’ without the capacity to reinvest or being unable to compete effectively.
- The roles and responsibilities for climate change mitigation and adaptation in Scotland are mostly divided across different government levels – from local authorities, regional authorities to national government. It should be noted that most national centres are core funded by government.

7.0 Case examples – comparators and evidence

7.1 Major comparable attractions – success stories

As part of the case example analysis, we have reviewed four successful UK based visitor attractions, each of which has a mixed revenue model. These include Eden Project Cornwall with a national and international draw, the Centre for Alternative Technology, CONKERS and Dynamic Earth with regional appeal. All were developed on brownfield sites. Landscape-based attractions with outdoor features and a strong mission tend to have larger grounds. Given land demands they were often located in rural areas. The low carbon travel imperative make location even more critical, and, for example, the two proposed new Eden Projects in Morecambe and Dundee are much closer to main cities and transport hubs. For ease of reference the case examples are set out as **Appendix Nine** (this also includes reference to examples which struggled in the marketplace).

Below we set out the key lessons from the case examples for the development of the 360 Climate Change Centre.

Development considerations

- Brownfield sites can be **readily repurposed for alternative uses**, but land reclamation costs (and undiscovered ground conditions) can be significant and 360 Climate Change Centre also faces the challenge of a maritime environment and rising sea levels.
- The development process from the initial ‘germ of an idea’ through to conception, planning, development and opening **takes a number of years**, which requires significant investment in time, commitment, resources and finance.
- There needs to be an **alignment** between strategic policies, the economy and the project itself. The concept for the National Centre for Climate has been developed based on this approach.
- The **phased approach** adopted by CONKERS, which was developed over two stages, firstly as the Heart of the National Forest Visitor Centre and latterly as CONKERS helped to **demonstrate project viability and market demand**. However, managing two centres has resource implications.
- Eden Project in particular benefits from a project champion (Tim Smit) – whose leadership could inspire people and build confidence in funders. Additionally, Tim Smit’s experience of restoring and opening the Lost Gardens of Heligan to the

public was of significant benefit (and helped to **demonstrate expertise and a track record of deliverability**).

- During the initial stage, it is **critical to ensure that the ‘board’ consists of the right people** who can help to open doors, make introductions and build confidence in the project.
- Often a **signature design** of the visitor building(s), for example, the biodomes at the Eden Project, creates a strong point of interest both in the minds of visitors but also from a PR / marketing perspective. However, signature features tend to add to the overall capital cost of the development and are likely to lead to a higher level of ongoing maintenance.
- The **funding landscape was very different** in the late 1990s and early 2000s (funding was available for large-scale capital projects). It is interesting to note the development of Eden Project North and Eden Project Dundee (which are based upon the 20+ year track record of Eden Project Cornwall). There is a need to keep a watching brief on any new funding streams which emerge.

Operational considerations

- There is an opportunity to generate positive PR and income (cashflow) in **the pre-opening period**. During the construction period of the Eden Project, people could visit prior to opening in March 2001 (during 2000, the Eden Project generated 498,000 visits including ‘hard hat’ tours).
- Strong **links to the community are essential** – CONKERS has developed a successful membership scheme, which initially was discounted to residents living within a certain distance of CONKERS.
- **Ongoing financial support** (fund raising) is required to deliver some future physical interventions (i.e. reinvestment in the experience cannot just be funded via any profit generated). **Once open to the public, a future fundraising plan must be in place** to raise funds for capital and revenue support. However, this takes time, specialist skills and is resource intensive (for example, CAT’s annual report referred to 4 fundraisers). Dynamic Earth is heavily reliant on ongoing funding from the Scottish Government as one of Scotland’s four science centres.

- The **external area or large outdoor spaces** at all three attractions are critical to the success of the visitor experience and in the case of CONKERS and the Eden Project allow the attractions to accommodate a large throughput of visitors on peak days.
- The **large indoor space** available ensures that on wet weather days, CONKERS and the Eden Project can still accommodate a high volume of visitors.
- In terms of generating revenue, **it is important to look beyond the traditional visitor market**. For example, both Eden Project and CONKERS have developed successful music event programmes (albeit on different scales). A programme of events out of the core season is critical to generating revenue during the shoulder period. Additionally, each attraction has developed successful **education programmes**, two of which include postgraduate qualifications.
- Visitor numbers **fluctuate and margins are 'tight'** which means a small reduction in visitor numbers can have a significant impact on the bottom line. Without **ongoing funding**, some attractions and science centres in the wider marketplace would enter periods of financial difficulty.
- Attractions have **high fixed costs** which don't change if there is a decline visitor numbers (making it difficult to respond to fluctuations in visitor numbers).
- **Onsite visitor accommodation** has been introduced at both the Eden Project (developed in partnership with the YHA) and CAT, which has wider economic benefits for the local economy.
- CONKERS benefits from **being part of a group of attractions and tourism businesses** managed by one company e.g. buying power, operating efficiencies etc

Market considerations

- The **residential marketplace within the one hour drivetime** of CONKERS is critical in driving visitor numbers, whereas the Eden Project has a well-established tourism market in Cornwall. CAT has neither and it has had to diversify the business model to include a strong educational offer
- There is an ongoing requirement for regular reinvestment to **meet the expectations of customers, maintain market position and generate repeat visits**.

- **Remaining relevant is of critical importance** to CAT and Eden Project Cornwall, who have both developed a positioning and messaging linked to the environmental challenges faced by our society.
- Being in an established tourist destination has further benefits in that the new attraction adds to the **critical mass of existing facilities** to an area with an existing throughput (the market is tried and tested – helping to de-risk the project to funders).

Other considerations

- It takes a **number of years before real change is seen** in the local landscape (in terms of generating changing perceptions of an area, attracting inward investment) etc.

7.2 Arts and culture opportunities

Creative Industries are one of the opportunities identified in Scotland's National Strategy for Economic Transformation. Post COVID, people are now starting to return to arts and cultural venues in increasing numbers. They are one of the world's fastest growing and innovative sectors, with ever-increasing demand for quality content and niche products. Creative industries are part of the East Lothian community and contribute to both to the economy and cultural life of the region.

Arts and creativity can play a key role as we transition to a more sustainable society. Creative Carbon Scotland⁷⁸ is a SCIO that works across the arts providing training and support mechanisms to help cultural organisations reduce carbon emissions.

It is estimated that the Creative Industries Supply Chain in Scotland comprise over 15,000 businesses employing more than 70,000 people, in addition to a large number of freelancers as well as students studying creative courses. Together they make an important contribution to our national wealth and international reputation.

The Creative Industries Strategy for the Highlands and Islands 2014 -19⁷⁹ makes the following point:

⁷⁸ [What we do | Creative Carbon Scotland](#)

⁷⁹ www.hie.co.uk Creative Industries Strategy 2014-2019 – Andrew Senior Associates

“The need to maximise returns on investment and to obtain value for money were clear and appropriate objectives but, in the context of a creative industries strategy, the need to move quickly, the need to innovate and the need to take risks by creating new approaches was also understood.”

This is illustrated by the recent commission (July 2022) by English Heritage at Hadrian’s Wall⁸⁰ where artist [Morag Myerscough](#) has unveiled a colourful reinterpretation of the original gatehouse at Housesteads Roman Fort to a mixed reception.

A further point from the H&I Creative Industry Strategy recognises the long lead-in time for projects *“some of these interventions represent a slow burn; building the international profile and reputation of the Highlands and Islands as a leading creative economy and will not happen overnight and this needs to be reflected in the evaluation measures and approach.”*

Although Creative Industries are mentioned as a key and emerging sector in the ELC Economic Development Strategy, there is a lack of robust evidence and research to describe in detail the creative economy in East Lothian.

The area of impact for a public art installation at the Cockenzie site could relate to the immediate local communities or to the wider East Lothian area dependent on scale and size. Successful cities around the world have invested in public art, but rarely has it been possible to identify clearly defined direct economic return.

Indeed, some countries, like Germany, tend not to require economic justifications for public art installations. Cities are composed of a mosaic of services, activities and functions and art and culture are part of the mix. This is not to pitch services and facilities against each other, that one is better or more important than another, but rather to acknowledge that each can play a pivotal role in contributing to a vibrant place.

Anthony Gormley’s Angel of the North was erected in 1998 to vociferous objections. Made from cor-ten steel it is situated beside the A1 in Gateshead in the North East of England. Beneath the ground, 700 tonnes of concrete and 32 tonnes of reinforcing steel were used in the foundations extending down 20 metres (65 feet) anchoring it to the solid rock beneath.

⁸⁰ <https://www.dezeen.com/2022/07/28/morag-myerscough-roman-gateway-hadrians-wall-english-heritage/>

It was conceived as a landmark sculpture to mark the approach into Gateshead and the site of the former Teams Colliery, by Gateshead Council. Within Gateshead there are more than 50 major public artworks by leading artists. The total cost of the Angel was £800,000 (£584,000 from the Arts Council is Lottery Fund, £150,000 from the European Regional Development Fund, £45,000 from Northern Arts, plus private sponsorship).

It is now iconic, in the true sense of the word, and a Durham University study found that 72% of local residents say that the Angel of the North makes them feel good whenever they see it and it makes 64% of them proud of Gateshead.

A Mori Study for One North East found that almost as many Northeast residents mentioned the Angel of the North (5%) as 'Geordie' and Newcastle United (6% each) when asked about the first thing they thought of when thinking about the North East. It attracts around 400,000 visitors per annum. Delivering the project gave Gateshead Council the credibility to secure further funding to the value of £140 million for further investment in art and culture projects.

Andy Scott's Kelpies at the Helix near Falkirk,⁸¹ costing £5million as part of the overall £45 million cost of the Helix Park have been described as transformational and with an impact extending beyond the local area. Together the Kelpies with the nearby Falkirk Wheel (boatlift), another iconic attractor, has helped to create a critical mass of 'facilities' and the Kelpies have helped to increase visitor numbers at the Falkirk Wheel. The sculptures opened to the public in April 2014, and by September that year 680,000 people had already visited them. During their first full year, visits reached just over 950,000, but they declined to 604,000 in 2016/2017 and during 2019 were approximately 584,000. They have won awards, and smaller versions have been on an international tour. The Kelpies are often used a background for television shows and are lit at night, which is important part of the 'experience.'

The Kelpies are set within a wider attractive parkland (a destination park) and the overall site is approximately 350 hectares, a different scale to the available area within the former Cockenzie Power Station site (although the core area incorporating the car park, visitor centre and Kelpies is approximately 17 hectares). The large site ensures that high visitor numbers can be readily accommodated although there have been some issues related to car parking. Importantly, the parkland benefits from 30km of trails/routes linking directly into 17 communities.

⁸¹ We have spoken with an Officer at Falkirk Council

The site also is visible from the M9 which has a significant number of vehicle movements, in 2021 estimated to be 13.7 million.⁸² We understand that the overall operation requires an ongoing subsidy. In 2022, Falkirk Council resumed control of site from the Trust, including employment of site staff.

As highly visible transformational and landmark pieces of sculpture, both the Kelpies and Angel of the North have had positive impacts. They have been successful in raising the profile of specific areas, changing perceptions and delivering regenerative change alongside attracting significant visitor numbers. As iconic sculptures they also present significant promotional and marketing opportunities. The National Centre for Climate Change alongside the proposed icon artwork will have additional purpose based on raising awareness and addressing the climate emergency.

It is also worth referencing that the Jupiter Artland experience located in West Lothian has recently announced major development plans for the 120-acre sculpture park including a new café, visitor centre and shop.

It is also important to be aware of the proposals in Fife to develop the [Citizen Spire](#) – a major sculpture, just under 50 metres in height and referred to as a ‘national monument.’

In late 2021, the 23 metre [Hope Sculpture](#) designed by artist Steuart Padwick was introduced to Cuningar Loop, a woodland park (part of a former industrial site). There are two other linked sculptures within Glasgow.

It is interesting to look at the proposal for the [Star of Caledonia](#), a landmark piece of artwork which is it is proposed to be located near the M74 at Gretna Green. It is forecast to attract up to 100,000 visitors per annum and cost estimates vary but could reach £7m. It is hoped that funding can be secured in part from Community Windpower and the Borderlands Growth Deal. The site will benefit from significant levels of passing traffic and also access to the Lake District National Park.

Interestingly, there are proposals to use landmark public artwork (supported by small works of art) in West Cumbria to raise the profile of the ‘hidden coastline’. The project has been commissioned by Copeland Borough Council and four artists including Rachel Whiteread, Piet Oudolf, Olafur Eliasson and Roger Hiorn are pitching for the project. The proposals were on display during September, October and November (2022).

⁸² Department for Transport – junction near to Helix Park

Smaller scale public realm projects undertaken by the public sector that aim to modestly improve the well-being of existing residents and visitors are likely to have fewer undesirable or unintended consequences than large scale radical transformations, but their economic impacts will generally be proportionately modest.

7.3 UHI academic model

There are potential positives and strengths about partnership with educational institutions such as funding, opportunities to work with different people in the green economy, shared space and possible branding or accreditation. However, further and higher education sectors are facing the effects of public spending reductions leading to consolidation and more efficient use of their existing assets.

During 2019, there were approximately 3,100 members of staff (1,990 in 2011) and a student population of 38,000 on both further and higher education programmes - 89% of students are from the Highlands and Islands. Across the Highlands and Islands, Moray and Perthshire, UHI is estimated to contribute: £560 million GVA and support 6,230 jobs.

A broad range of subjects studied (12% science, technology and the environment; 4% department of nursing and midwifery; 22% business, management and leisure; 13% creative and cultural industries; 18% humanities, education and Gaelic; 21% applied life sciences; and 10% engineering and the built environment). Interestingly, Environment Science and Energy is the most established discipline within the University: *“The university is uniquely placed to make an important contribution to global research into new energy sources. Located in an environment that boasts internationally important landscapes and seascapes, the Highlands and Islands, Moray and Perthshire can be considered the primary European geography for renewable energy developments. The University has world-class facilities at the Engineering, Technology and Energy Centre (ETEC) in Thurso, with multidisciplinary teams focusing on energy research.”* UHI also delivers outreach STEM work within schools alongside internationally important research.⁸³

We were asked to consider the University of the Highlands and Island (UHI) model with its 13 academic partners in the context of partnership approaches the National Climate Change Centre might adopt.

There have been individual successes within the UHI partnership. Partners such as the Scottish Association for Marine Science (SAMS), a research establishment founded in 1884

⁸³ Economic Impact Assessment of the University of Highland and Islands. A report to the University of the Highlands and Islands September 2020

have access to UHI degree awarding powers and research funding connections. SAMS is a membership charity (300 members) overseen by a voluntary board and a Company Limited by Guarantee with two wholly owned subsidiary companies.

SAMS annual budget is 80% publicly funded c £10-11M with 60% of income from UK and EU research grants, 20% from higher education activities (Scottish Funding Council through UHI), and 20% from commercial contracts. Currently SAMS employs around 155 staff and there are 20 honorary research fellows, 160 full-time taught undergraduate and Master students and 40 full-time research students. Staff costs account for about 67% of expenditure and SAMS has on going responsibilities like pension liabilities through the Universities Superannuation Scheme. Capital expenditure on assets such as buildings is mainly through public funds.

Other UHI partner colleges such as Perth College UHI have closed external college centres in locations like Pitlochry, placing a focus on campus-based activities. West Highland College UHI does have an out-station in Broadford in Skye reflecting their dispersed geography. In part, UHI was founded to reflect a digital world and many students study online thereby reducing the need for buildings and estate and creating a smaller carbon footprint. UHI academic partners have experienced financial challenges and three smaller colleges Lews Castle, West Highland and North Highland merged into a single unit in November 2022 to achieve savings and economies of scale.

Highlands and Islands Enterprise commenting on the merger said: *“This merger should be considered in the context of the wider governance issues that UHI has struggled with since its inception.*

A successful merger could provide healthy challenge and solution to the future governance of the UHI, changing the dynamic of a large partnership which has struggled to behave as ‘ONE-UHI’ over the last two decades.”

It is our interpretation that beyond a simple ad hoc approach to sub-letting space at an off-campus site like the centre, an educational institution would require more evidence of value.

The National Centre for Climate Change is predicated on the basis of partnership working. A condition for a formal partnership arrangement with an educational institution, would probably require a centre with a track record of research and scholarship. It may further require ceding some control of site assets in return for a long-term involvement and academic outcomes.

In a formal partnership, space dedicated to educational activities may not be available during times of peak visitor demand.

Other centres such as Dynamic Earth and the Centre for Alternative Technology juggle space for school visits, under/post graduate training and event hosting with the paying public on site at the same time. Partner needs may also change as in the example of Falkirk Council recently taking back site control and management from the Helix Trust.

It should be noted that within the 360 Steering Group there is experience and information on the creation of the UHI network of learning centres - as well as centres for excellence across the Highlands and international partnerships in Scandinavia and Iceland, alongside the University of Alaska.

8.0 Delivery

8.1 Governance

To date the project has been led by the 360 Steering Group working alongside advisors from the East Lothian Council. The 360 Centre Ltd (SC715241) was incorporated on the 17th November 2021. The Articles of Association show the company is limited by shares and directors take decisions collectively. There is no maximum number of directors. There are currently three directors.

A key task prior to any formal engagement with the site will be to set up a new organisation to take responsibility for project management. The 360 Steering Group and the East Lothian Council should work together and decide this new organisation's legal structure and the system of governance.

The wider 360 Steering Group has a range of skills and expertise together with involvement in community networks. However, any project on this site will present considerable challenges now and into the longer term. Persistence and resilience will be required.

Key members of the 360 Steering Group together with other community representatives and specialists (accountants, etc) would normally go on to form the board of any new organisation that might succeed 360 Centre Ltd.

This board would be responsible for:

- Strategic direction
- Policies and overall management
- Ensuring that the organisation meets its statutory obligations – particularly health and safety
- Finance – capital and management accounts
- Recruitment and line management of senior staff

The choice for the legal structure moving forward needs to be thought out carefully to ensure that the 360 Group is legally able to achieve all that it wishes. The information detailed below provides an overview of the range of governance structures that could be adopted. **Seeking independent professional legal and financial advice is recommended.** Depending on the option taken forward, a critical consideration will be to limit the liability of the directors (and / or trustees) and to ensure that access to external funding opportunities are maximised, whilst the 360 Steering Group are able to maintain some 'control' over the future direction of the project.

Central to the delivery of the 360 Project will be the requirement to secure ownership of an area of the former Cockenzie Power Station site, which is owned by East Lothian Council. A discussion between the 360 Centre Steering Group and East Lothian Council is required to explore the principles of securing future ownership (whether via a freehold disposable or long lease hold arrangement).

8.1.1 Option 1 A company limited by guarantee governed by its Memorandum and Articles of Association. It is registered as a charity with the Office of the Scottish Charity Regulator

Companies limited by guarantee are nonprofit making while companies limited by shares are profit making. Companies limited by guarantee have members, and not shareholders. Companies limited by guarantee generally have self-imposed restrictions in their constitution to assure members and funders that their support and contributions are applied according to clearly stated purposes. This helps companies limited by guarantee to raise funds more easily than companies limited by shares as they can show how they propose to use finance and support. It is possible for profits to be distributed to members but, under the Companies Act 2006, no entity other than a member may share in the profits of a company limited by guarantee.

Members of guaranteed companies pledge to contribute a predetermined nominal sum (e.g. £1) at the time of formation, thereby minimising personal liability in the event of future problems as liability is restricted to the nominal sum paid.

The structure lends itself towards situations where grant-funding is envisaged and where several bodies seek to come together for a nonprofit 'community' or a 'social' purpose, where something other than a simple return on investment is sought.

Governance is by a Board of Trustees drawn from the members. New Trustees are recruited to the Board of the parent company either by election or co-option. Once formed, the company could apply for charitable status which places additional requirements on the constitution but also offers advantages in terms of tax payments.

Trustees are not remunerated for their time and although the guaranteed company registration provide some protection Trustees may wish to purchase insurance for the Trustees and officers as permitted under section 233 of the Companies Act 2006, as additional protection against liability arising for wrongful acts in relation to actions by the company.

New Trustees should receive an induction from management to brief them on their legal duties and responsibilities as required in charity and company law and within the Articles of Association, along with a summary of the future plans and objectives for the organisation. They may also meet with the Executive management team and other employees as appropriate. It will be important to ensure that the board is composed of the ‘right’ Trustees who can help to move the project forward.

The Board of Trustees administer the Charitable company through regular Board Meetings and through various sub committees designated by the Board.

The Chief Officer, appointed by the Trustees, should manage the day-to-day operations of the parent charity and any subsidiary trading company(s) which should have its own board(s). The Chief Officer normally attends Board meetings and may provide secretariat to the Board and may also be appointed as an Executive Trustee. Other people in the senior management team may attend and report performance to the Trustees at Board meetings and at other times as required.

The main benefit of registering a company limited by guarantee as a charity is usually perceived as that they can be exempt from corporation tax. However, this must be weighed up against the time taken to administer the charity. There is further information, advice and guidance on becoming a charity on the Scottish Charity Regulator (OSCR) website.⁸⁴ Becoming a company also requires registering at companies’ house.⁸⁵

8.1.2 Option 2 Scottish Charitable Incorporated Organisation

We understand there is an ambition to become a SCIO. The Scottish Charitable Incorporated Organisation (SCIO) is a legal structure where the organisation can enter contracts, employ staff, incur debts, own property, sue and be sued. It also provides a high degree of protection against liability. Another advantage is that the organisation only reports to one regulatory body, the OSCR. A disadvantage of this structure is that a SCIO can only exist if its charitable status exists. If the organisation loses or decides to drop its charitable status, the organisation legally ceases to exist. The OSCR website provides further information on this.

8.1.3 Option 3 Community Interest Company

The Community Interest Company (CIC) model is designed to provide an effective legal form for enterprises which aim to provide benefit to the community or to trade with a “social

⁸⁴ [OSCR | Home](#)

⁸⁵ [Companies House - GOV.UK \(www.gov.uk\)](#)

purpose,” rather than to make a profit. More information on setting up a social enterprise can be found on the gov.uk website.⁸⁶

8.1.4 Option 4 Community Benefit Society

A community benefit society serves the broader interests of a community. Members hold shares and are run democratically purely for the benefit of the community. This includes any profit that is made.⁸⁷

8.1.5 Subsidiary Trading Companies

If 360 is going to incur VAT costs, it may be possible to improve the VAT recovery by transferring certain activities (i.e. the ‘business taxable activities’) to a new trading subsidiary and registering the new trading subsidiary for VAT as soon as possible.

The reasoning is that some activities which are exempt and non-business when made by 360, as a charity are likely to be taxable if carried out by a trading subsidiary. Some VAT exemptions depend on the status of the organisation (i.e. charity, or by an eligible body) delivering the service. It may be advisable for the income to be standard rated for VAT so that input tax (VAT) can be recovered. The downside is that VAT is charged by the trading subsidiary to its customers. In the case of property or buildings, it is assumed there will be a taxable lease on leases from 360 to any new trading subsidiary.

A trading subsidiary is a second layer to the company used to manage specific developments (e.g. income generating activities). This is useful from an administrative point of view and to manage risk. They can be used to avoid jeopardising charitable status as they are wholly owned by the parent charity which is the only shareholder. In this way, any surplus generated by the trading company goes directly back to the parent charity. Ideally, they would operate with a board of directors who are not also on the parent charity board. The company structure and legal position should periodically be reviewed as the company develops and its circumstances change to ensure that its structure remains appropriate to its activities and ambitions.

We also set out a range of other governance ‘considerations’ as **Appendix Ten**.

8.1.6 Standalone private company (specialist operating company)

A private sector operator would be able to draw on its commercial expertise and possible network strength of managing multiple sites. It would also be focussed on the customer

⁸⁶ [Setting up a social enterprise - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

⁸⁷ [Your Community Shares Journey \(communitysharesscotland.org.uk\)](http://communitysharesscotland.org.uk)

and respond to customer / market needs in a timely manner. However, given the commercial focus, softer outcomes or strategic priorities of the 360 Centre Steering Group may not be a key priority of a private sector operator.

Without a management fee and guaranteed subsidy, in our view the project is unlikely to attract a standalone private company to take on responsibility for the project during the operational phase given the level of revenue subsidy required.

8.1.7 Partnership working

There is a very clear desire from the 360 Steering Group for the project to be a **partnership** involving East Lothian Council, renewable energy companies and others. At this feasibility stage, it is difficult to have a meaningful conversation or gain any commitment from potential partners, which is not unexpected. This document will help to enable formal discussions with potential partners to take place.

In terms of future options, there is an opportunity for “partners” to be given a seat on the Board. It can be difficult to attract the ‘right’ Board Members with the mix of skills, experience and time needed to take on a complex development project and operation.

8.2 Visitor scenarios

8.2.1 Internal and external factors impacting on visitor throughput (and the trading performance)

In considering the development of the 360 Centre and its component elements, it is important to recognise that the future development proposals and corresponding visitor throughput (and trading performance) are influenced by a range of external and internal factors, including the following:

External factors	
Economic	<ul style="list-style-type: none"> Economic ‘unknowns’ around Covid-19 and post Brexit impacts are presenting ongoing challenges to the hospitality and tourism sectors. Exiting the EU and COVID recovery plans have had and are continuing to have an impact on the availability of some funding. Alongside capital funding, it will be critical to

	<p>secure funding to refresh, develop and maintain the experience to a high standard.⁸⁸</p> <ul style="list-style-type: none"> • The budget of the Scottish Government is facing a number of challenges in terms of ‘balancing the books’ which may impact on available funding. • Local authorities face challenging budgetary constraints and this is of concern particularly, given the need for a revenue subsidy. • Cost of living crisis is placing increasing pressure and squeezing the available disposal income which is spent on leisure activities, a discretionary area of spend. However, it is recognised that the external space and signature public art remain ‘free to access.’ • There remains significant economic uncertainty across the UK.
<p>Available market size and profile (demand)</p>	<ul style="list-style-type: none"> • Throughput to the visitor element of the National Centre for Climate Change will be primarily driven by people living within the 60-minute drivetime catchment. Within the immediate catchment there are some socio-economic challenges. • This is alongside the established tourism market place, which is significant within Edinburgh and is an important part of East Lothian’s economy too (but the tourism sector is facing a number of challenges). We have assumed the tourism market will recover. • There is strong evidence of seasonality in East Lothian with visitor numbers to attractions and beaches falling from summer peaks to winter lows.

⁸⁸ There will be a requirement for ongoing investment to refresh and develop the ‘offer’ at the 360 Centre to (a) maintain market position (b) increase visitation levels.

<p>Competitive position (supply side)</p>	<ul style="list-style-type: none"> • There are a range of other recreation / leisure activities and places of interest within the sub-region including free admission places to visit such as beaches, parks and the natural landscape. There are also a wide range of heritage assets and flagship attractions such as Edinburgh Castle and Dynamic Earth. This is alongside more activity-based experiences such as the Foxlake Adventure and the world-class 'golfing' product on offer. • There is investment in the cultural sector in the South of Scotland with the proposed new £7m landmark Star of Caledonia sculpture near Gretna and the existing Kelpies structures in Falkirk. • There is also committed and proposed investment in the leisure / tourism sector, for example, the new Wave Garden experience in Ratho, the Forth Bridge Experience, the 'Ready for Take-off' at the National Museum of Flight and the nearby Granton Waterfront development. All of which are high profile multi million-pound projects. <p>Additionally, the development of Eden Project North in Morecambe Bay and Eden Project Dundee (and the more local developments) are direct competitors and could overshadow the '360 Centre' and make it more challenging for a new market entrant.</p> <ul style="list-style-type: none"> • In Scotland and the UK established educational establishments and other organisations are already providing training and education programmes directly linked to the climate emergency / renewable energy sector. • The leisure, visitor attractions, tourism and education / training markets are highly competitive, dynamic and fast changing. The market is being crowded and for the near future at least the economy is increasingly uncertain.

Internal factors	
Location and site	<ul style="list-style-type: none"> • The site is readily accessible both by road and public transport (rail and buses). The A1 is within a short drivetime and benefits from attractive coastal views. • However, as set out in Section Two, the site faces a number of significant challenges from a development perspective particularly in terms of the physical presence of the Inch Cape and Sea Green buildings which will dominate the landscape, in addition to the existing substation building. The concrete hardstanding also present significant challenges in terms of creating an attractive ‘more natural’ external landscape. This is coupled with issues of rising sea-levels and flooding on part of the site.
Product	<ul style="list-style-type: none"> • The proposed Climate Change product – including a ‘visitor centre’, attractive public realm / greenspace / community space and nationally important art installation will act as a draw in its own right. Alongside education provision and, potentially, training provision. • Any training provision will be driven by market interest (in terms of attracting a provider to the site) and is likely to represent a latter phase of development. The education offer should fit with national curriculum priorities. • Display and performance space could be used to host temporary and seasonal exhibitions . events to attract repeat visits and parallel interests. For example the V&A in Dundee is hosting a Plastics Exhibition where the wide-ranging impact of plastics on our natural world is explored.
Price / perceived value for money	<ul style="list-style-type: none"> • To generate revenue there will be a need to introduce an admission charge to the centre. However, the wider ‘park landscape’ (with artwork) will be free to enter, helping to

	<p>create a value for money day trip out and a local community resource.</p> <ul style="list-style-type: none"> • Future tariff structures will need to ensure that the paid for elements are an accessible resource for both residents and visitors alike. This may involve schemes like season tickets, memberships and friends groups.
<p>Customer service</p>	<ul style="list-style-type: none"> • Staff (and increasingly volunteers) represent an important element of creating a positive and memorable visitor experience. Alongside staff, volunteers will play an important role in terms of delivery of the offer. <p>It will be important to invest in ongoing training and staff expertise to ensure a consistent and high-quality level of customer service is delivered across the 360 National Climate Change Centre.</p>
<p>Staff skills and expertise</p>	<ul style="list-style-type: none"> • The proposed concept is multi-faceted and complex to operate. Climate Change involves science and technology, and visitors will arrive with a wide range of prior knowledge, beliefs and attitudes. <p>Recruiting staff and Board Members with the right skills, expertise, experience and ambitions will be critical.</p>
<p>Marketing and promotional activities, including social media</p>	<ul style="list-style-type: none"> • There will be a requirement for significant pre-opening marketing spend to generate awareness of the project. This will need to target the core market segments and will be an ongoing requirement. The Seabird Centre in North Berwick had a two year 'run in' prior to its opening. <p>It is important to recognise that the 'residential marketplace' is easier to target than the transitory tourism market place.</p> <ul style="list-style-type: none"> • The 'product' is multi-faceted and it will be challenging to market

8.1.2 Visitor attraction life cycle

The Life Cycle principle in visitor attractions is similar to Butler's (1980) tourist resort life cycle theory of growth to maturity followed by a decline. Which, without reinvestment in the product to attract new visitors or exploiting some external fashion or trend, places the resort at risk from spiralling downwards. This has been evident in many seaside resorts around the UK coast.

High visitor numbers to newly opened attractions may only be temporary as the novelty wears off. Established attractions which reinvest in refurbishment may see a resurgence in visitor numbers followed by yet a further decline unless marketing and promotional activity remain at an appropriate level.

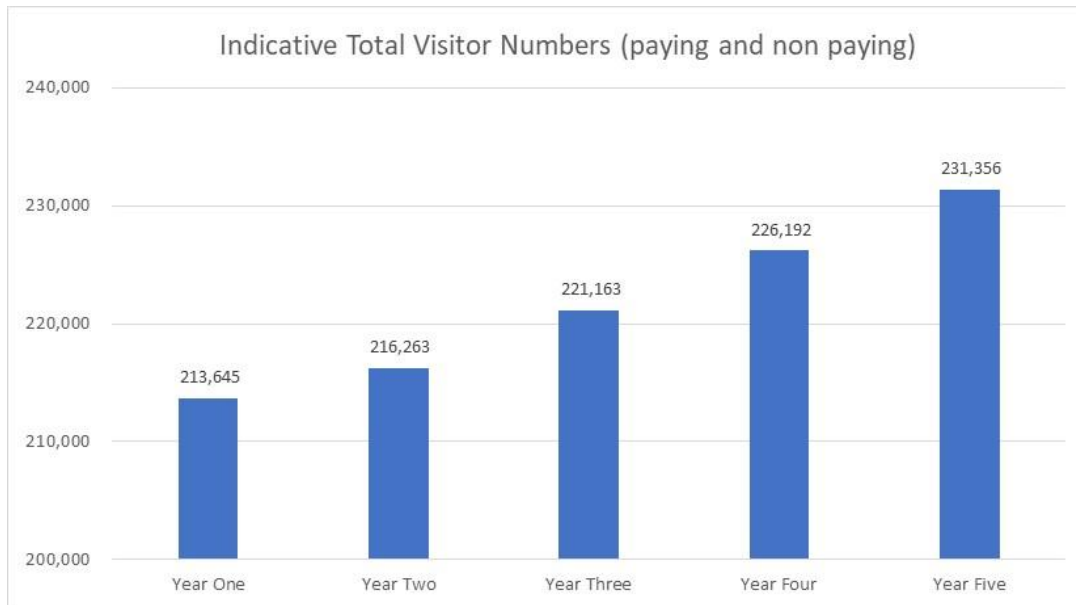
The most effective strategy is one of constant improvement and reinvestment to retain and enhance market share and to diversify. Timing is critical. The Eden Project and Dynamic Earth are two attractions that received public sector financial assistance (prior to organising reinvestment) to stay operational when the economy faltered, and visitor numbers dropped. The Eden Project responded by creating the Eden Session Concerts (attracting high profile performers and a whole new audience), building accommodation and adventure activities like zip wire on site to boost visitor spend and investing in geothermal power to reduce site overheads.

Investment in new facilities or features is essential for those (most) Scottish attractions reliant on repeat visits for their critical core income.

8.1.3 Visitor scenario

We set out a **base-case visitor scenario**, showing combined paid and free admissions for a five-year period, which is flexed in the sensitivity analysis below.

In Year One, with the appropriate marketing support, under this scenario the potential to generate 214,000 paid for and free admission-based visits is forecast.



As a comparator, visitor numbers to the established Dynamic Earth were in the order of 250,000 during 2019 (including approximately 70,000 education admissions). This represents an equivalent penetration rate of 6.45% the residential population living within the 120-minute drivetime contour of Dynamic Earth (3.873 million residents⁸⁹). Whereas, for this project the equivalent penetration rate is 5.6% based on the population within the 120-minute minute drive time of Cockenzie.

A detailed breakdown is provided in the table below:

Paying visitors								
Market	Number	Penetration rate %	Frequency to visit	Year One	Year Two	Year Three	Year Four	Year Five
Residential market								
0 to 30 minutes	263,270	4.50	1.25	14,809	14,365	14,652	14,945	15,244
31 to 60 minutes	758,075	2.00	1.0	15,162	14,707	15,001	15,301	15,607
61 to 120	2,794,610	0.50	1.0	13,973	13,554	13,825	14,101	14,383
Tourism markets (overnight staying 2019)								
East Lothian*	422,370	3.00	1.0	12,671	12,798	12,926	13,055	13,186
Edinburgh**	4,903,000	1.00	1.0	49,030	49,520	50,016	50,516	51,021
Others								
Education			NA	4,000	4,200	4,410	4,631	4,862
Non paying (to sculpture and external space)				104,000	107,120	110,334	113,644	117,053
Indicative total visitors				213,645	216,263	221,163	226,192	231,356

*Source: STEAM Final Trend Report for 2009 to 2022, East Lothian Council, Issued June 2021 (assume tourism recovers)

** Insight Department: Edinburgh and Lothians Fact Sheet, 2019. Visit Scotland. Published 2020 (assumes tourism recovers)

⁸⁹ Source: Geoplan on-line mapping information www.geoplan.com

Different penetration rates have been applied to specific market segments for visits to the [paid for element](#) (the visitor centre) of the National Climate Change Centre.

This is based on the concept as developed by the 360 Steering Group (as set out in Section Three). As per the brief the visitor centre element is assumed to be the core revenue earner for the site. Please note, to avoid double counting, reference has not been extended to the day visitor market as there is a significant overlap with the residential market place.

- For the [residential marketplace](#), penetration rates vary between 4.50 and 0.50. For residents living within the immediate 30-minute drivetime we have shown a frequency of visits as 1.25 (i.e. 25% visit twice during a 12-month period). During Year Two we have shown a 3% 'dip' in paid for admissions generated from the residential marketplace as the 'wow' factor associated with the opening year drops off. Thereafter, we have shown 2% annual growth.
- In respect of 'paid admissions,' the visitor model is driven by visits generated from the [tourism marketplace](#) (tourists staying overnight), particularly from tourists staying in Edinburgh. This is likely to be existing tourists with some allowance for new additional tourists. From Year One, we have shown year on year growth and we do not expect a 'drop off' in visits during Year Two as the tourism market is to some degree 'regenerated' each year. **There is an assumption that tourism figures and the economy will recover.**
- Paid for [education visits](#) are based on an achievable throughput of 4,000. The majority of these visits are likely to be driven by schools located within the 60-minute drivetime contour of the centre, particularly as transportation costs are readily increasing. Alongside formal education visits, there is also an opportunity for the onsite team to deliver outreach work in local schools and colleges.
- No admission charge is proposed in terms of the external 'free to access' space dedicated to the [nationally important sculpture and attractive public realm](#). Visitation patterns to this external space will be heavily dependent upon the weather. It is recognised that usage could be considerably higher for this 'space' and this is explored in the sensitivity analysis below. However, as there is no admission fee, the overall 'financial' impact on the 'bottom line' in terms of the financial model is limited. However, 'free to access' spaces still have repair and maintenance costs although this element maybe able to attract grant and sponsorship support more readily than chargeable space. In our scenario, we have

shown a visitor throughput of 104,000 in Year One. This equates to an average of 2,000 people per week, although peak visits could be expected during the Easter holidays, Victoria weekend, the school summer and autumn holidays periods, Bank holidays and during the Edinburgh Festival and Fringe.

The iconic sculpture proposed for the site will help to attract people. The proposed landmark sculpture the Star of Caledonia near Gretna is forecast to generate approximately 100,000 visits per annum⁹⁰. Interestingly, the Star of Caledonia, the Kelpies and the Angel of the North are located beside major arterial roads (M6, M9 and A1).

8.3 Financial projections

“The 360 Centre’s commercial viability will depend on its ability to attract visitors. For this reason, the visitor centre must be the anchor which the institution is built around and should be at the heart of the business plan and the centre’s design.”⁹¹

8.3.1 Key assumptions in respect of the financial scenario (base scenario)

1. Figures are net of VAT
2. Inflation has been taken into account in terms of income and expenditure. However, some cost items, e.g. energy, could increase more than the inflation allowance. We believe our approach is prudent
3. Post opening marketing will continue based on the budget estimates set out below (and there will be a programme of pre-opening marketing activities, some of which could potentially be capitalised)
4. Volunteers play a role in delivering services (please see below)
5. No allowance has been made for start-up cashflow e.g. paying for staff, training, marketing, supplies, services and paying cash into a new trading company during the pre-opening period
6. At this stage, it is unknown whether the freehold of the site will be acquired or a long-lease secured for the site. In the financial model, we have not shown a rental payment being made between the 360 Organisation for the site to East Lothian Council. If a commercial rent is sought, this will add considerably to the annual cost base. Discussions need to be held between the Steering Group and East Lothian Council following the submission of the feasibility study

⁹⁰ <https://www.thestarofcaledonia.org/>

⁹¹ The 360 Centre: Project Outline Document

7. It is assumed that exhibits in the temporary gallery will be refreshed via funding raised
8. A contingency has been shown within the model although construction and supply chain costs and availability coupled with inflation make for a very uncertain future.
9. An allowance has been made for exceptional items within Year One
10. There are no loans to repay and funding is secured to take forward the project
11. Year Three represents a stabilised year of operation
12. Excludes any costs associated with pumping and maintenance linked to the sea defences / potential flooding
13. No sinking fund has been allocated. There will be a need to create a fund to refresh the offer in Years Three and Five (and thereafter on a regular basis)

8.3.2 Opening periods

The **National Centre for Climate Change (and external area with landmark sculptures)** would be normally open:

- On a year-round basis – excluding Christmas Day, Boxing Day and New Year's Day
- From 10am through to 5pm during Easter to the end of September. There may be opportunities to extend opening hours of the external space during the peak summer period
- From 10am to 4pm from October through to the end of March

During possible future COVID type emergencies and periods of stormy weather, especially for parts of the facility close to the sea all, or sections of, the site may close.

8.3.3 Trading profile

We set out below a five-year trading profile with associated commentary.

Income	Yr 1	Yr2	Yr3	Yr4	Yr5
Admissions	758,739	776,314	810,847	846,936	884,653
Catering (paid admission)	231,538	234,601	242,658	250,997	259,629
Catering (non paying)	52,433	119,733	125,792	132,157	138,844
Retail	170,704	172,962	178,902	185,051	191,415
Education visits	19,833	21,242	22,750	24,365	26,095
Events (net)	20,000	20,400	20,808	21,224	21,649
Event catering	25,000	25,500	26,010	26,530	27,061
Meeting space (hires)	5,850	7,293	8,791	9,657	10,554
Catering (meeting space)	11,603	14,464	17,436	19,153	20,932
Functions (hires)	15,000	19,125	26,010	33,163	40,591
Catering (functions)	37,425	47,717	64,895	82,741	101,275
Donations	5,200	5,304	5,410	5,518	5,629
Total potential income	1,353,325	1,464,655	1,550,309	1,637,492	1,728,325
Staff costs					
Director	60,000	62,400	64,896	67,492	70,192
Head of Operations	45,000	46,800	48,672	50,619	52,644
Education and Community Engagement Officer	28,000	29,120	30,285	31,496	32,756
Chef / Catering Manager	35,000	36,400	37,856	39,370	40,945
Marketing officer	35,000	36,400	37,856	39,370	40,945
Events officer	32,000	33,280	34,611	35,996	37,435
Fundraiser	35,000	36,400	37,856	39,370	40,945
Head of visitor experience	37,000	38,480	40,019	41,620	43,285
Technician	30,000	31,200	32,448	33,746	35,096
Sessional 'climate explainers' (holiday periods)	20,405	21,221	22,070	22,953	23,871
Sessional education staff	4,083	4,459	4,869	5,317	5,806
Catering staff	125,299	154,705	166,877	179,052	191,709
Front of house and retail	63,307	65,839	68,473	71,212	74,060
Gallery explainers	55,394	57,610	59,914	62,310	64,803
Volunteer Co-ordinator (P/T)	20,000	20,800	21,632	22,497	23,397
Grounds Ranger + volunteers	22,000	22,880	23,795	24,747	25,737
Maintenance	27,500	28,600	29,744	30,934	32,171
Book-keeper	27,000	28,080	29,203	30,371	31,586
Admin	22,000	22,880	23,795	24,747	25,737
Casual staff	15,000	15,600	16,224	16,873	17,548
Cleaning	44,254	46,024	47,865	49,780	51,771
Total salary and wage costs (including 20% oncosts)	939,891	1,007,014	1,054,753	1,103,848	1,154,927
%	69.45%	68.75%	68.04%	67.41%	66.82%

Cost of sales					
Catering	143,199	176,806	190,716	204,631	219,096
Retail	85,352	86,481	89,451	92,525	95,707
Total cost of sales	228,551	263,287	280,167	297,157	314,804
Gross profit					
	184,883	194,353	215,389	236,488	258,595
Operational costs					
Landscape (assumes partial use of volunteers) - excludes any sea defense works	5,000	10,000	10,400	10,816	11,249
Building maintenance (est)	10,000	25,000	40,000	55,000	70,000
Maintenace of the sculpture / artwork (unknown)	-	-	-	-	-
Accountancy, HR and legals	25,000	26,000	27,040	28,122	29,246
CCTV maintenance	1,500	1,560	1,622	1,687	1,755
Grounds	10,000	15,000	15,600	16,224	16,873
Energy costs (excludes costs to run any potential pumps)	126,000	138,600	145,530	152,807	160,447
Water (est)	15,000	15,600	16,224	16,873	17,548
Rates (assumes 100% relief)	-	-	-	-	-
Room hire	2,085	2,642	3,480	4,282	5,114
Exhibit maintenance (unknown)	-	-	-	-	-
Insurance (public / employers' liability only excl. premises, FF&E and exhibits etc)	17,286	17,978	18,484	19,002	19,541
Miscellaneous premises expenditure	10,000	10,400	10,816	11,249	11,699
Governance costs related to 360 Steering Group TBC	20,000	20,800	21,632	22,497	23,397
	241,871	283,580	310,828	338,558	366,869
Supplies and services					
Marketing - budget	75,000	78,000	81,120	84,365	87,739
Website costs (new build Year Five)	5,000	5,200	5,408	5,624	30,000
Education materials @ £.50 per child	2,000	2,100	2,205	2,315	2,431
Cleaning materials and consumables	13,000	13,520	14,061	14,623	15,208
IT/tills	15,000	15,600	16,224	16,873	17,548
Phone and internet	2,500	2,600	2,704	2,812	2,925
General refuse collection/waste	3,500	3,640	3,786	3,937	4,095
Postage/printing/stationery	2,000	2,080	2,163	2,250	2,340
Recruitment costs	5,000	5,200	5,408	5,624	5,849
Travelling and subsistence	5,000	5,200	5,408	5,624	5,849
Training	3,500	3,640	3,786	3,937	4,095
Volunteer costs	5,000	5,200	5,408	5,624	5,849
Stock taking	2,000	2,080	2,163	2,250	2,340
Bank charges and online payment charges	33,833	36,616	38,758	40,937	43,208
Hire of equipment	5,000	5,200	5,408	5,624	5,849
Contracts with third parties	15,000	15,600	16,224	16,873	17,548
Other payments	5,000	5,200	5,408	5,624	5,849
Exceptional items in Year One	40,000				
	237,333	206,676	215,641	224,918	258,722
Contingency @ 5%	70,955	74,864	79,061	83,366	89,026
Total costs	1,718,601	1,835,422	1,940,451	2,047,847	2,184,348
Net position (EBITDA)	- 365,276	- 370,767	- 390,142	- 410,354	- 456,022

No sinking fund allocated to refresh the offer

Overall, the financial model is showing the need for an annual revenue subsidy to support the National Centre for Climate Change. There will be increasing pressure just to maintain margins over the coming years as the market becomes more competitive and costs and inflation reduce visitor disposable income. It is important to note that Dynamic Earth relies upon securing external grant funding on an annual basis to remain viable. This is generally ‘restricted funding’ to deliver its national science centre role. For example, during 2021/2022 funding direct from the Scottish Government was confirmed at just under £1m (£954,620).

8.3.3.1 Revenue

Income associated with [paid for admissions to the](#) National Centre for Climate Change is the key revenue driver for the project at this stage. Initial discussions with renewable energy scheme developers has revealed a reluctance to commit to regular long term funding support. Similarly, local authorities are unable to commit on going supporting funding. A key consideration has been to make the centre accessible to ensure a diverse audience as possible. A discount to encourage booking online will help to staff the operation more efficiently and this will provide valuable customer data. Governance status, constitution and space allocation will have major impacts on how VAT is charged by HMRC and reclaimed by the operator and or site owner. It is strongly recommended that specialist VAT advice is sought at an early stage.

Please see summary table below for Year One with income and average admission charges (including discounts).

Year One				
Ticket categories	Admission charge (aver)	Less discount (@10%)	Admission tariff (net of VAT)	Revenue
Adult	£11.18	£10.07	£8.39	£575,995
Child	£5.93	£5.34	£4.45	£117,424
Concession	£8.24	£7.42	£6.18	£65,320
Potential admissions income				£758,739

[Catering spend](#) is based on an average spend per paid admission of £2.19 (excluding education visits) and for free admissions £0.50 per head. The café is accessible to both visitors paying to enter the centre and other just exploring the external free admission zone.⁹²

⁹² It is assumed that the café is fully licensed.

Spend in the [retail area](#) is based on an average spend of £2.31 per head for paid for admissions. This figure was obtained from Moffat Centre Research carried out for Scottish Visitor Attractions in 2019 and 2021. We consider this could be too high as the National Climate Change Centre is unlike many other attractions and reduced the figure by 30%. However, comparable attractions such as the Eden Project in Cornwall have made a virtue out of sourcing products for retail sale that offer clear environmental provenance. Equally, display cabinets, shelving and admission desks are constructed from recycled and repurposed furniture and units. The retail space will be located behind the admissions desk to help ensure staffing efficiencies.

Onsite [education visits](#) have a limited charge associated of £4.96 for each onsite visit, which will be delivered by the Education Officer and other sessional education-based providers. This approach offers a degree of flexibility and means the centre does not face year-round costs associated with maintaining a full education team on the payroll.

The [average spend per head for paying visitors](#) to the centre is estimated at £10.59 (a similar figure for Dynamic Earth is £10.35 in 2019). For the National Centre for Climate Change if all visitors (including non-paying to the external space) are include the figure declines to £5.68.

[Events](#) are shown at a net position of £20,000 in Year One. This assumes that a third-party events company would run 10 medium scale events during the year (reducing the risk to the project). The event company would be responsible for marketing, ticket sales and pay the centre a guaranteed 'fee' per event hosted, plus associated spend in catering. Evening times will be more available and care is required to manage capacity and shared use when events and public access are running simultaneously. The Eden Project built an external stage and created the 'Eden Sessions' – a programme of mainly music based events by well-known artists – to attract different audiences in the evenings and in the shoulder months.

There will be an opportunity to [hire out a gallery space for social functions and corporate use](#) and this has been shown at 12 hires in Year One increasing to 30 hires in Year Five. With room hire charges of £1,250 per hire in Year One. Alongside this there will be an opportunity to generate revenue via catering and bar take which is shown at £20.79 per head in Year One. There may be opportunities for additional 'ad hoc' events such as community gatherings. As per the events careful consideration will need to be given to programming of such uses.

There will also be opportunities for **room hire** (for meetings) 9 hours per week in Year One (@ £12.50 per hour) increasing to 15 hours per week in Year Five with associated catering spend at £4.96 per head in Year One. The focus is on creating an affordable space.

Attracting events and hires will need skilled marketing effort

We have shown limited income generated via online or in person **donations**.

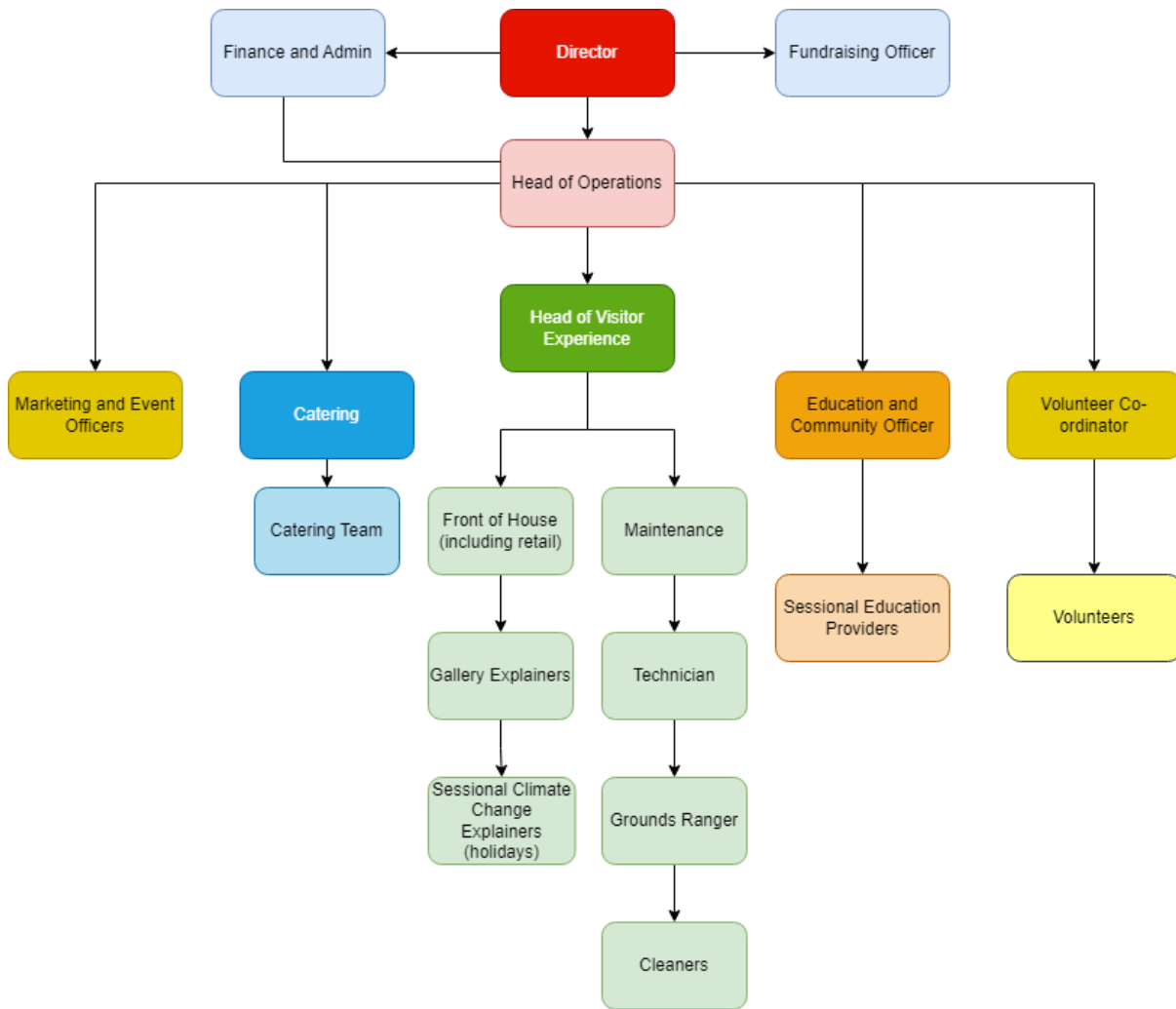
Total income for Year One is set out in the table below.

Income	Yr 1
Admissions	758,739
Catering (paid admission)	231,538
Catering (non paying)	52,433
Retail	170,704
Education visits	19,833
Events (net)	20,000
Event catering	25,000
Meeting space (hires)	5,850
Catering (meeting space)	11,603
Functions (hires)	15,000
Catering (functions)	37,425
Donations	5,200
Total potential income	1,353,325

8.3.3.2 Costs

Staffing

Staff represent the major cost base in terms of running the National Centre for Climate Change and the indicative staffing model is set out below. In terms of cost oncosts of 20% have been applied. The annual wage roll in Year One is £940,000. As a percentage of income this is 69% in Year One (the comparable figures for Dynamic Earth was approximately 70% during 2019).



We believe that the role of a part-time Volunteer Co-ordinator will be a critical role in terms of encouraging a range of people from the surrounding local communities to volunteer at the National Centre for Climate Change (across different areas of the business operation). The high student population in Edinburgh and the Lothians coupled with a growing interest in sustainability amongst younger people may present wider volunteering opportunities. It is interesting to note: *“Education also has a significant impact on all aspects of civic participation. Volunteering is the most notably impacted behaviour by education; only 4.4% of Scottish residents without educational qualifications reported volunteering in the past year, compared to over 27% of Scots with university degrees.”*⁹³

The Education Officer will be responsible for direct delivery of some of the onsite formal education provision, but they will be supported by self-employed Sessional Education

⁹³ [Civic participation inequality in Scotland | FAI \(fraserofallander.org\)](http://www.fraserofallander.org)

Providers (who can be flexed according to demand). Importantly, this will enable the Education Officer to deliver outreach work.

Cost of sales

In terms of **cost of sales** these are based on 40% for catering and 50% for retail.

Operational costs

A range of estimated **operational costs** have been identified. The most significant cost is related to the use of energy (across the sector operators are reporting significant increases in energy costs). We recognise that 'green technologies' can be introduced at the design stage are desirable and could form part of the education and demonstration role but, at least for the foreseeable future it seems that energy will remain a high-cost centre.

An allowance has been made in respect of **external service support** for accountancy, HRs and legals and governance costs related to the site operator with the appropriate management team in place.

It is assumed 100% **business rates** are achieved (at discretion of the Council)

Two cost centre estimates remain unknown and these relate to the maintenance of the landmark art sculptures and the maintenance of the exhibits within the gallery spaces.

Additionally, insurance costs are based on employers and public liabilities and exclude insurance costs related to the premise.

From Year Three there will be a need to start to refresh the galleries and external spaces on a rolling basis (cost TBC). Climate change impacts, adaption and mitigation are likely to change quite rapidly as will legislation and social responses and behaviours. A successful centre will need to remain innovative and contemporary if public interest is to be maintained. Many centres and attractions experience a dip in visitor numbers from year three as the initial novelty wears off.

Supplies and services

This category of costs includes items such as the marketing budget (which will be critical in terms of raising awareness of the National Centre for Climate Change), phone and internet, training, volunteer costs and bank charges. We have also included an allowance of £40,000 in Year One for any exceptional items which will need to be purchased. Supplies and services must adhere to strong sustainability values if the centre's credibility is to be maintained.

Contingency

An annual contingency of 5% has been allowed for in the budget. If this was removed, it would reduce overall costs by £69,000 in Year One. Given the current uncertainty in the economy, planning for higher level of contingency may be prudent.

Co-location and co-delivery

To operate as a 'national' centre, collaboration with other public and private sector partners would be strongly advantageous to the centre profile, in our opinion. Physical co-location and co-delivery could mean third party bodies such as academic institutions, training providers and relevant SMEs being on site. In theory, this could bring additional income streams and rentals, even anchor tenants, as revenue sources. We have spoken to some potential partners, but they have been very non-committal and mentioned that they have invested in their own facilities for training etc. Without further details, we have not included this in our financial scenario projections, but note it as a possibility.

8.3.3.4 Sensitivity analysis

We set out two models based upon a 20% increase and decrease in visitor numbers .

High-case (+20% visitor numbers)	Yr 1	Yr2	Yr3	Yr4	Yr5
Income	1,599,975	1,729,625	1,826,499	1,925,394	2,028,452
Costs	1,792,060	1,921,620	2,030,071	2,141,032	2,281,251
Net position	- 192,085	- 191,995	- 203,572	- 215,639	- 252,798

Low-case (-20% visitor numbers)	Yr 1	Yr2	Yr3	Yr4	Yr5
Income	1,106,676	1,199,685	1,274,119	1,349,591	1,428,198
Costs	1,645,143	1,749,223	1,850,831	1,954,661	2,087,444
Net position	- 538,467	- 549,539	- 576,712	- 605,070	- 659,246

8.4 Sources of capital funding

Securing capital funding for site acquisition and financing site-based construction is likely to be long term project. Capital will be required to support pre-development and the construction phases and, post opening, revenue income will need to be at a level to cover outgoings.

It is likely that a funding strategy will need to be prepared which will require a co-ordinated approach between the 360 Centre Steering Group and potential partners. In order to prove community support significant levels of membership of the applicant community body will be required.

8.4.1 Site acquisition

A critical issue will be related to security of site ownership as most funders will require that the project has long-term tenure.

Assuming the site or part of the site could be transferred into community ownership through for example a Community Asset transfer, funders will require a wide range of supporting documentation like site title and any burdens, business plans and evidence of consents like planning permissions and building warrants.

The key source of public funds would be the Scottish Land Fund (SLF) . The SLF can fund up to 95% of eligible project costs, although average intervention rates are lower with matching funding required.

A current independent site valuation will be required in order to apply to the SLF, ideally , the cost of a revised valuation would be shared between ELC, and the community body formed to take any project forward.

8.4.2 Predevelopment

Achieving planning consents will require additional studies and survey work. Funding for this practical development work will be required. Bodies like the National Lottery may provide funds for this type of activity.

8.4.3 Development

The funding landscape is competitive and potential options for funding include:

- Applications to a range of grant giving bodies with eligibility criteria that supports site activities and governance structures – climate change education, environment, community empowerment etc such as the National Lottery Heritage Fund, Scottish Government Nature Restoration Fund, Coastal Community Fund, Community Capacity Grants Programme etc.
- Community shares and bonds (although this would require a new community benefit society to be created)

- Funding from community benefit funds and foundations set up by various renewable energy companies
- Funding linked to social / corporate social responsibility funds held by companies, including renewable energy companies
- Given proposed development across East Lothian there may be funding opportunities linked to Section 75 agreements
- Social Investment and Impact Funding - funding options which enable the community body to borrow money from social investment institutions at more favourable terms than High Street banks. For example, Triodos Bank, Social Investment Scotland, The Ecology Building Society Loan capital may be a more challenging unless the financial model generates sufficient income to satisfy the lenders and to repay borrowings

It is important to note that Local authorities are excluded from applying to most Trusts and Charitable Foundations. This may present an opportunity for the 360 Centre Steering Group to apply to specific funds (if legal entity, current a limited company, is change to a charity). Equally some funding streams such as the Scottish Government's Regeneration Capital Grant Fund (RCGF) and Place Based Investment Fund are only accessible through local authorities.

It should be noted that the recovery from COVID-19 is ongoing and inflationary pressures are placing a significant burden on national and local economies. This may impact on future funding opportunities (both capital and revenue) particularly as national governments and local authorities need to 'balance the books.' **A close watching brief needs to be kept as new funds emerge and funding criteria can change. Demands for funding are highly competitive.**

8.5.4 Revenue income

Income must cover operational costs, including basic staffing. Monthly operating costs must be clear with revenue and cash flow sufficient to cover this. Key costs are likely to be staffing and energy. This implies a regular weekly income from site activities.

8.5 High-level indicative impacts

8.5.1 The capital development

Prior to procurement, it is difficult to assess geographical impacts of that expenditure as proportions will accrue locally, in the Edinburgh city region, in Scotland and the wider UK and internationally. The indicative capital expenditure associated with the proposed project has been used to calculate the number of temporary construction jobs generated. This has been derived on the basis that £80,000 of construction expenditure will support one-person year of employment.⁹⁴ The analysis shows that the investment, during the construction period, has the potential to support 369 gross employment person years of construction employment.

This does not take account of leakage. The overall number of positions would increase if the estimated capital expenditure increases.

During the design and construction phases it will be important to follow a sustainable procurement process and potentially introduce a scheme whereby a certain percentage of goods and services need to be acquired locally.

8.5.2 Tourism impacts

The investment in creating a National Centre for Climate Change will help to redistribute some of the tourism benefits within East Lothian.

Alongside the economic impact of the visits generated from the residential market it is important to note that key economic impact from the tourism market will arise from the degree of additionality (i.e. a percentage of tourist visits that are genuinely new or additional visitors drawn in specifically by the development of the Centre).

Displacement related to a full or half day visit to a National Climate Change Centre is complex due to the wide range of visitor categories demonstrated in the market analysis and differences within each of these categories and ways in which centre users might otherwise have spent their time. Some visitors drawn to visit the centre will also spend time and money on the same day and/or on days before or after in the local area or more widely in the Edinburgh City Region area or elsewhere in Scotland that they would not otherwise have spent – “externalities”, which can help to offset displacement in impact areas.

Existing tourist visitors, whether to the local area, the wider Edinburgh city region, or elsewhere in Scotland, would generally be expected to spend their days visiting attractions

⁹⁴ [constructionjobssupported201920.pdf \(scottishfuturetrust.org.uk\)](https://www.scottishfuturetrust.org.uk/constructionjobssupported201920.pdf)

and / or taking part in activities (charged or free); and on the days that they visit the centre there would be some market displacement relating to this time (unless all of their day's activities are uncharged).

People who would visit the centre from home, however, might not otherwise have gone out on the day – although there could be displacement from a day out on a different day (e.g. during school holidays when a family might take trips on a number of days of the week). The current pressures imposed by the cost-of-living rise is likely, for the foreseeable future, to lower the number and frequency of trips.

Externalities would apply where:

- People using the centre for half a day would spend money on other attractions, activities and/or retail products during a day in the area they would not otherwise have spent.
- People using the centre for a half day, or longer spend one or more nights in the local area or more widely in the Edinburgh City region area or Scotland that would be additional. This generates overnight stay spend impacts as well as impacts through their spending on days before or after their visit to the centre. This could benefit other commercial visitor facilities in the local area or more widely.
- A repeat visit to the local area, the Edinburgh City region or Scotland (or indeed the UK) is generated, at least in part, by visitors' positive experiences at the centre.

The modelling to calculate gross projected revenues for additional tourist visitors and day visitors (from the residential market) works on the basis of the conversion of visitor numbers and then multiplying by the average spend per trip or day and adding a further multiple for indirect supply chain and induced expenditure (multipliers).

While the Scottish Government and the International SIC Code classifications enable direct tourism activity to be compared to other sectors, they may not fully capture the contribution of visitors' expenditure to the economy. There are limitations of using visitor expenditure to reflect tourism's contribution.

In respect of the paid element of the National Centre for Climate Change in the analysis we have assumed that:

- 10% of visitors generated from the tourism base are additional or new visitors either staying in area and a financial value has been applied to each trip.
- An average spend level of £250 per trip has been applied to the additional visits generated by tourists staying in Edinburgh and £157 per trip for tourists staying in East Lothian (spend per trip for domestic tourists only in 2019 and for East Lothian this is based on the Lothians geographic area).⁹⁵
- 50% of visits generated from the residential market are new visitors.
- An average spend level of £26.05 per day visitor from the residential marketplace in Scotland (spend per person per day 2018) has been applied.⁹⁶

The table below shows a scenario and an estimate for the direct economic impact generated from paid visits to the National Centre for Climate Change.

For the paid element of the National Centre for Climate Change				
Market Segments	Visits	New / additional visitors	Average spend per trip (tourists) or per day visit (residential market)	Economic impact
Tourism market				
Visitors generated from Edinburgh tourism market	49,030	4,903	£250	£1,225,750
Visitors generated from the East Lothian tourism market	12,671	1,267	£157	£198,936
Residential market				
Visitor numbers	43,943	30,760	£26.05	£801,309
Total				£2,225,996

Tourism expenditure is multiplied through the impact that is driven from successive rounds of local business transactions that result from visitor spending and the impact on incomes and jobs of the spending of income earned, again as a result of spending by visitors (the multiplier effect).

⁹⁵ Insight Department: Edinburgh and Lothians Factsheet 2019, Published December 2020, Visit Scotland

⁹⁶ East Lothian Visitor Survey 2018, Report prepared by STR February 2019

In terms of the multiplier effect *“The Scottish Government publish industry multipliers as part of the annual accounts, but there is not an official multiplier for the tourism industry, given that it is a composite of other sectors e.g. hotels, catering, travel. For example: Historic Environment Scotland has worked with the Scottish Government to derive a specific tourism expenditure multiplier of 1.7 – for every £1 spent by visitors, a further 70p is generated along the Scottish supply chain”.*⁹⁷

This impact is a gross figure and net impact would be subject to the displacement plus externalities.

To support local businesses and demonstrate the centre’s environmental credentials it would be beneficial to introduce a policy which emphasises the importance of purchasing a percentage of services and supplies locally.

Wider public impacts

The development of the National Centre for Climate Change (alongside adjacent investment from companies working in the renewable energy sector) could help to deliver a range of public and private benefits. Some of these benefits can be monetised, others are more difficult to measure.

The UK Treasury Green Book, updated annually, provides guidance on benefits associated with public expenditure. Judgment supported by other sources is required on whether benefits are low, central, or high. Green Book data for 2022 provides environmental and land uplift value as, for example:⁹⁸

		Low	Central	High	Unit
Local amenity	Average additional value per property within 100m - 500m of accessible green or blue space	£1,538	£3,076	£9,471	Per property (Capital value)
Visual amenity	Average price premium for a property with a view over green or blue space		£6,164		Per property (Capital value)
Physical health benefits	Indicative health savings/benefits from every	£3.36		£14.34	per marginal physically active visit

⁹⁷ Historic Environment Scotland - The Economic Impact of Heritage Tourism

⁹⁸ [The Green Book \(2022\) - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/111111/green-book-2022.pdf)

from nature	physically active visit to green space				to greenspace
-------------	--	--	--	--	---------------

Other non-monetary benefits include:

- Developing the National Centre for Climate Change will provide opportunities for volunteering, helping to reduce social-isolation
- Enhancing the environmental quality of the brownfield site and introducing the National Centre for Climate Change will create new opportunities to engage with and shape positive behaviour change in relation to the climate emergency
- Creating a sense of pride and contributing positively to placemaking
- Supporting education and skills development (potentially including the development of a training centre as a future phase subject to market demand / investor interest)

8.6 Risk assessment and management

Under community management the 360 group as a self-financing charitable business must ensure users are safe, and the site is promoted and managed effectively in line with constitutional objectives.

Site activity should contribute to the economic, social and community development of the area, East Lothian, and the wider public interest. It is expected that the site and activities will meet high standards of inclusion, accessibility and sustainability. However, many factors such as reductions in income, changes in market conditions, project delays and undiscovered technical issues are predictable project risks.

Risks have been considered under a range of broad categories, including Economic, Market, Management and Other. There will be a significant range of start-up 'technical' risks, for example, in terms of facility design, cost, legal, procurement and development phasing which could impact on both initial cash flow and whole of life costs.

A commentary on each risk category and how to mitigate against the risk is set out below. The likelihood and impact are scored 1 to 5 with 5 being recognised as a higher likelihood or impact. The risk rating is set out as RED (significant issues which will impact on the project if not resolved), AMBER (could affect the project if not monitored and addressed) and GREEN (low risk rating but needs to be monitored on an ongoing basis).

8.6.1 Economic risks

Economic risks					
Risk	Commentary	Initial likelihood	Initial impact	Risk rating	Mitigation
Repeat of downturn in economy due to recession or COVID-19	<p>Reduction in available market with the tourism, cultural, commercial leisure sectors hit because less disposable income, less money spent on days out.</p> <p>Decline in available capital to invest to refresh the site and visitor offer leading to a 'decline' in the quality of the experience and offer.</p> <p>The renewable energy sector is experiencing growth and may be less susceptible to any downturn.</p>	5	5	5	<p>Reduction in operating budget and level of service offered.</p> <p>Need to secure additional revenue support.</p> <p>Develop reinvestment plan to identify key years where investment will need to be made to refresh the 'offer' and wider site.</p> <p>Work with East Lothian Council to develop funding plan to secure ongoing funding to reinvest in 360 Project. Likely requirement to employ fund raising officer.</p> <p>Spread the risk through partnership working.</p>

Increase in interest rates ⁹⁹	<p>Impact on disposable income leading to reduction in visits to paid attractions / days out / tourism visits (decline in revenue generation)</p> <p>Reduction in spend in secondary areas such as catering, leading to reduction in turnover of café operations and other areas (including education)</p> <p>Reduction in local authority and budgets of other organisations (partners) in real-terms placing pressure on available revenue support (and funding landscape during the development phase)</p>	5	5	5	As above – will require additional revenue support
Increase in inflation	Impacts on costs of supplies (coupled with increasing wages and business rates) placing pressure on margins, making it more difficult to generate a profit from some business centres (it can be difficult to always	5	5	5	Need to revise business model, potential closure if additional revenue support not secured

⁹⁹ Interesting to note that in late September 2021 the Bank of England Governor Andrew Bailey commented on the potential need to increase the interest rate
<https://www.bankofengland.co.uk/speech/2021/september/andrew-bailey-guest-speaker-at-the-society-of-professional-economists-annual-dinner-2021>

	pass on the full costs to customers).				
Increase in inflation	Significant increase of capital investment required to take project forward (this is alongside supply and labour issues)	5	5	5	Ensure contingency is included within the capital cost assessment at design phase
Increase in energy costs	Impacts on overall subsidy required for the 360 Project	5	5		Reduction in energy consumption – need to secure additional financial support from ‘partners’ Energy efficiency and used of solar power (etc) will be built into the design of the built facilities to reduce energy costs from the outset
Renewed period of public sector austerity	Impact on available local authority funding / competition for scarce resources on top of deep financial pressures resulting from Covid-19 and inflation. Would impact on available funds to take	4	4	4	As per above need to secure from the outset long-term commitment from ‘funders’ (partners) to provide revenue support

	<p>the project forward and also during the operational phase reduction in potential availability of public support.</p> <p>Reduction in supporting revenue funding will lead to a decline in the quality of the 360 Centre</p>				
Repeat of fuel crisis / increasing fuel costs	<p>Impact on general usage of 360 Centre as a 'destination', whilst the site is served by public transport main mode of transport is likely to remain the private motor vehicle.</p> <p>Impact on education visits as coach travel to and from school is a major cost element</p>	5	2.5	3.75	<p>Marketing material to emphasise access to public transport – helping to encourage behaviour change (addressing climate emergency)</p> <p>Risk lower as switch is made to electric vehicles over time (and cost-effective on site charging will be provided)</p>
High level of economic uncertainty	<p>Future outlook for the economy is challenging and uncertain to some degree (linked to Brexit, COVID and economy).</p> <p>Impact on revenue generation potential in the short to medium</p>	5	5	5	

	term (alongside capital and revenue funding)				
--	--	--	--	--	--

8.6.2 Market risks

Market risks					
Risk	Commentary	Initial likelihood	Initial impact	Risk rating	Mitigation
In the future, potential impact of a disease such as COVID-19	Can act as a major disruptor to public, private and charitable sector activities e.g. Temporary closure of the 360 Centre	2.5	5	3.75	Identify whether the risk is insurable to reduce the financial impact Funders or partners commit to providing ongoing support
Market competition (new market entrants)	360 Centre overshadowed by new competition or investment in competing experiences in the locality, sub-region and nationally leading to a reduction in usage	4	4	4	Increasing spend on marketing to build awareness of 360 Centre amongst new audiences.
Does not attract usage as forecast in feasibility study	Impact on income / revenue generation potential	3	5	4	There are a significant number of unknowns at the current time (2022) and it recommended that the modelling is reviewed on a regular basis and responds to changes. This will

					be particularly important during the design phase.
--	--	--	--	--	--

8.6.3 Operational risks

Management and operational risks					
Risk	Commentary	Initial likelihood	Initial impact	Risk rating	Mitigation
Not able to take project forward due to current lack of internal 'human resource'	The 360 Steering Group need support in terms of a professional Project Manager to take the 360 Centre Steering Group through the pre-development process. Without additional 'human resource' there is a danger that momentum won't be maintained and the project won't move forward.	4	5	4.5	Secure funding for Project Manager to support the 360 Centre Steering Group Type of Project Manager likely to change as project progresses
Unable to secure long-term tenure for an area of the former Cockenzie Power Station site	Project not able to progress	Unknown	5	Unknown	Enter into discussions with ELC to secure tenure
Expertise / experience of 360 Centre	Impacts on both the development and operational phases of the project	5	5	5	Recruit appropriate 'Board Members' to complement expertise of the current members (it

Steering Group					may be challenging to recruit Board Members at the early stage of the project) Recruit staff with the 'right' experience and expertise to manage the complex operation
Ongoing revenue support not secured	Project not taken forward	5	5	5	Following completion of feasibility study 360 Steering Group to engage with partners and East Lothian Council (and others) to explore potential for revenue support
Decline in support from the partners if targets not met	Impact on the project in terms of financial viability Negative PR for 360 Centre	2	5	3.5	Ensure key relationships are developed, nurtured and maintained
Training provider not secured	Reduction in revenue (rental payment).	4	4	4	Do not include space for training provision until training partner / operator is secured Feasibility study does not include

					rental payment from operator
Ongoing maintenance budgets not secured to maintain the 360 Centre	(1) Condition of landscape and buildings declines (2) Health and safety issues resulting in potential accidents (3) Detracts from the image 360 Centre (4) Decline in usage	4	4	4	As per other risks need to secure long-term commitment from partners / funders for ongoing revenue support
Higher maintenance costs than budgeted due to increasing inflation, supply chain issues, coastal location etc	Maintenance regime reduced which impacts on the offer (please see above)	4	4	4	As per other risks need to secure long-term commitment from partners / funders for ongoing revenue support Also work with specialist building surveyor and landscape architect to fully cost out future repairs and maintenance linked to the site
360 Centre not meeting health and safety compliance standards	Significant negative PR and impact on the reputation of the project Decline in usage with resultant financial impact	1	5	3	In-house expertise of East Lothian Council to advise and ensure relevant standards are met

Impact of vandalism	<p>Impacts on 'attractiveness' of 360 Centre</p> <p>Impact on reputation and increased operating costs</p>	2.0	2.0	2.0	<p>Continue and develop community engagement</p> <p>Also involve young people in the design and development of this project to ensure 'shared ownership'</p>
Local 'resistance' to development proposals	Could lead to project delays	2	2	2	Continue with ongoing engagement with all parties and stakeholders involved with the development proposals for the former power station site (alongside engagement with visitors / users).
Insufficient marketing carried out (albeit recognised East Lothian is an established 'destination' although the location of the site is	Impacts on usage and financial performance	3	4	3.5	<p>Some of pre-opening marketing budget could be capitalised.</p> <p>Allocate appropriate marketing budget (pre and post opening)</p>

not an established 'destination' within East Lothian)					
---	--	--	--	--	--

8.6.4 Other risks

Other risks					
Risk	Commentary	Initial likelihood	Initial impact	Risk rating	Mitigation
Full funding not secured	Elements of project not taken forward	5	5	5	Early engagement with funders to identify likelihood of success
Levelling Up Funding not secured	Significant increase of capital cost of the project	Unknown	5	Unknown	TBC when application outcome announced
Levelling Up Funding secured	Site made more attractive to wider commercial market	Secured Jan 2023	5	Unknown	TBC when application outcome announced
Political	Change in political direction and strategic priorities for Scottish Government and East Lothian Council	?	3	?	Awareness of policy intentions and opportunities
Climate Change (e.g. rising sea levels, flash flooding etc)	Impacts on day-to-day operation of the site with resultant financial impact	5	3	4	Utilise less vulnerable section of the site. The design of the built facilities and site has to be resilient
Undiscovered technical	Costs and budgets exceeded	4	4	4	Work with experienced

issues during development phase	Project delivery impacted on				project team, carry out robust cost analysis, surveys and technical studies
Lack of external contractor technical expertise / experience	Availability and capacity of specialist contractors to deliver project to required specification	2	3	2.5	Appoint experienced internal Project Manager to work closely 360 Centre Steering Group
Development overrun	Delay in opening, leading to negative impression of project Also reputational risk to 360 Steering Group and funders / partners Impact on capital costs	3	4	3.5	Work with experienced project team Set realistic timescales / prioritisation Allow for significant contingency
Planning permission not secured (or delayed)	Project not taken forward	Unknown	5	?	Early conversations with East Lothian Council required
Objection by neighbouring property owners and / or communities	For any planning consents required need to work sensitively with neighbouring property owners (and communities)	2	5	3.5	Early engagement with neighbouring property owners and community (360 Centre Steering Group are already engaging with local communities and renewable energy companies

9.0 Next steps

9.1 Critical next steps

Significant hands-on management will be required to take this project forward from the completion of this report to delivery. The level of time/resource commitment required from the 360 Steering Group should not be underestimated. It is recognised that the 360 Steering Group do not have the human resources available to take the project forward and there is a need to employ a Project Manager on a fixed contract. This would be dependent upon the outcome of discussions with East Lothian Council and whether it supports the project. It would also be subject to securing funding.

The next steps include:

1. Engagement with East Lothian Council and site users who are already committed is essential to identify the options for the 360 Steering Group to acquire the site and work in partnership.
2. Putting into place an appropriate delivery vehicle for the pre-development and development work which will be used to secure development funding and the site from East Lothian Council (either on a long-lease or the freehold). This will include inviting partners to join the project.
3. Secure funding – likely to be split between pre-development and development funding (to take forward stages of work identified in the RIBA Plan of Work.)

Perhaps, the most significant hurdle to overcome will be to identify and secure a firm commitment from a ‘funder’ or ‘funders’ for revenue support to cover the ongoing gap between income and outgoings and this will require a partnership approach.

In terms of ‘acquiring’ the site, it is important to determine if ELC seeking to dispose of the site via sale of the freehold or on a long lease? What are the expectations in terms of a capital receipt or rental payments? It is important to highlight that some funders will require as a minimum that a long-lease is secured prior to funding the project.

It is worth highlighting that this will take time – it is interesting to look at the example of the Star of Caledonia (a major public art project) which has taken over 20 years to secure development funding.¹⁰⁰

Community Asset Transfer (CAT) is the transfer of responsibility for an asset from East Lothian Council to a community group or organisation.

[Part 5 of The Community Empowerment \(Scotland\) Act 2015](#) sets out the key rights and duties, and provides a framework for the Asset Transfer process. A formal Asset Transfer Request will require a business case that satisfies East Lothian Council Community Asset Transfer Policy and Guidance. There are core eligibility requirements for the applicant body making the request around its, legal status, constitution and control by the community. Asset transfer requests will be assessed primarily on:

- Delivery of services and their outcomes and links to the Council’s corporate priorities and outcomes - not by the availability of assets
- Whether any transfer is likely to reduce inequalities, improve services, meet needs and deliver benefits to the communities represented by the applicant body within a five year time scale
- The strength and capacity of the applicant body and its ability to fund and sustain the asset in the long-term, without ongoing Council commitment and the impacts of project failure
- The value of the asset to the Council and whether the cost of transfer would affect the Council’s budget to the extent that it reduced its ability to deliver its functions, even after taking account of the proposed benefits (likely to include assessment of potential commercial income forgone)
- How Best Value characteristics are evidenced
- Asset transfers will normally be priced at market value - not at a nominal sum. Values will normally be based on a joint asset valuation

As this is a site of national importance, the criteria which would need to be met to enact a CAT are pretty stringent and expert legal advice will need to be enlisted.

Conditions for a lease are less stringent but follow a similar line and, given the site’s national importance, will still be quite onerous. Project funders would want a long term lease as a condition of support, the Council may still require early break clauses.

¹⁰⁰ <https://www.thestarofcaledonia.org/>

9.2 Project delivery (design and build)

We set out below three different approaches which could be adopted to deliver the project (design and build elements) and their associated pros and cons. Project timescale will be based on most suitable option.

Option	Pros	Cons
Design and build fixed cost lump sum project	<ul style="list-style-type: none"> • Fixed price • Fixed timetable • Contractor takes most of risk • Overlap between design and construction can help to reduce overall project delivery time • Single point of contact 	<ul style="list-style-type: none"> • Higher cost • Opportunities to create a visual or spatial statement • Less flexible and design change expensive • Less able to accommodate community views • 360 Steering Group to employ an employer's agent • Design quality could be 'lower'
Hybrid with target cost	<ul style="list-style-type: none"> • Shared risk between client and contractor • Some flexibility to change 	<ul style="list-style-type: none"> • Still extensive project management input required • Tight focus on costs and cash flow
Architect led with indicative cost	<ul style="list-style-type: none"> • Improved design quality • More flexible • Likely to be lower cost • More able to include local trades and use 'off the shelf' elements • Can work if 360 Steering Group is very clear on its plans and is supported by a professional project officer • Greater certainty as design is finalised before contractor is appointed 	<ul style="list-style-type: none"> • The architect's design language • Higher uncertainty and risk to client • Much more 360 Steering Group input to project management at all levels of detail. Need for regular project meetings where decisions are required • Generally a slower process

A consideration is whether the 360 Steering Group appoints an architect and agrees to concept designs/space allocations to meet brief (RIBA Stage 2 / 3) and then moves out to tender with a contractor. The likelihood is the contractor will have its own architect / designer / estimator who may have different views. Novating the original architect to the contractor is fraught with issues.

9.3 Plan of Work

The RIBA/ RISA Plan of Work is a document that outlines all stages in the planning, design and building process, from conception to completion on site. It is the most common document used in the UK to describe the stages in construction projects. There are eight work stages defined by the numbers 0-7.

- Stage 0 Strategic Definition - sets out to Identify client's Business Case and Strategic Brief and other core project requirements. Deliver an identifiable design that is an exemplar of its type
- Stage 1 Preparation and Brief - relates to developing Project Objectives, Project Outcomes, Sustainability Aspirations, Project Budget, other parameters or constraints, together with developing the Initial Project Brief. It includes Undertaking Feasibility Studies and a review of available and required site information.
- Stage 2 Concept Design - involves the preparation of outline proposals including preliminary structural design, building services systems, outline specifications and preliminary Cost Information. It also addresses relevant Project and Procurement Strategies.
- Stage 3 Developed Design - includes coordinated and updated design proposals that address structural design, building services systems, outline specifications, Cost Information. Culminating in applications for statutory consents.
- Stage 4 Technical Design - comprises the production of detailed design packages by the design team to include all architectural, structural and building services information, specialist subcontractor design and specification. It furthermore incorporates the tendering of the project to contractors as agreed. maintenance costs of the final building so that it is economically sustainable in the future
- Stage 5 Construction - includes the mobilisation of the selected contractor together with offsite manufacturing and onsite Construction processes to Practical

Completion. Your consultant team may be engaged to provide a range of services including contract administration and the monitoring of quality, progress and cost control.

- Stage 6 Handover and Close Out - addresses Post Practical Completion services including handover of the building to the Client and the conclusion of the building contract.
- Stage 7 In Use - is a new stage which includes Post-Occupancy Evaluation and review and monitoring of Project Performance.”

Running alongside the above, there will be [pre-opening requirements](#) which will include:

- Recruitment and training of staff
- Pre-opening marketing activities
- Development and testing of operating systems / procedures
- Soft opening

Underlying the above will be an [ongoing requirement for community engagement](#).

9.4 Other considerations – design competition

There is an opportunity to hold an architectural competition managed by the 360 Steering Group or RISA or RIBA for the design of the centre and wider site.

RIBA offers three different types of competition:

- Competitive Interviews
- Open Design and Open Ideas Competitions (once the project brief and supporting information is available this is typically a 20-week programme, split over two phases)
- Invited Design and Private Invited Design Competitions (once the project brief and supporting information is available this is typically an 18-week programme, again split over two phases)

Find out more [here](#).

This has worked well on other projects such as the floating visitor centre developed by the Lancashire Wildlife Trust at Brockholes Nature Reserve.

Alongside this, an international competition for the signature public artwork should be considered. This would help to raise the profile of the project and generate public awareness and perhaps encourage a different architectural response. However, there are a number of challenges in terms of managing competitions – particularly in terms of financial and human resource requirements.

10.0 Concluding remarks

This report was commissioned to analyse the brief describing the proposal developed by the 360 Centre Steering Group. The proposal is focussed on creating a National Climate Change Centre which is a mixed used concept for a vacant brownfield site, formerly occupied by the Cockenzie Power station.

A prima facie case for the proposal exists in terms of climate change being a key area of international political and consumer interest. Headlines from COP 26 in Glasgow and the recent COP 27 in Egypt at the close of 2022, a year of climate-related disasters and broken temperature records, are clear indicators of the need to set targets and deliver positive outcomes on emission reductions and adaptations to impacts. The Open Society Foundations¹⁰¹ September 2022 Report is one of many, showing that over 50% of GB respondents rate climate change as one of the three most important challenges facing the world today.

The Scottish Government has set a legislative commitment to achieve 75% of net zero by 2030 and 100 % by 2045, earlier than the UK as a whole. Alongside the climate change objective, further regional and national strategic goals could be met by the proposal if economic and community development can be achieved, while supporting the visitor economy, placemaking, destination development, health and wellbeing and education outcomes.

The climate change context and strategic priorities are well documented. However, the brief makes it very apparent that the proposal must be considered within some specific contexts.

The proposal seeks to occupy a complex site at the former Cockenzie Power Station owned by East Lothian Council. Renewable energy consents for site use have already been issued and other economic activities are under ongoing active consideration.

The economic climate in East Lothian and across the UK is relevant to future site uses. The Office for Budget Responsibility (OBR) predicts the economy will shrink by 1.4% next year and the Chancellor has acknowledged the country is in recession and there are inflationary pressures. The economy is under huge pressure as is energy security.

¹⁰¹ Source: <https://www.opensocietyfoundations.org/publications/fault-lines-global-perspectives-on-a-world-in-crisis>

Any site development that will attract new private investment in the green economy or technology and provide employment in the short term is likely to be given careful consideration. Less investment may also tighten the supply of community benefit funding from existing schemes as developers and operators look to cut their costs. It is important to highlight that the 360 Steering Group has an clear ambition to work in partnership with renewable energy companies.

Key elements of the proposal in terms of tourism and the public sector support, including education, are coming under pressure too. The Scottish Tourism Index 2022 published on the 10th of November reported that 75% of Scots would spend less and go on fewer trips because of the rise in their cost of living and now increased taxation.

Results of first South of Scotland Destination Alliance ‘barometer survey’ reveal an “exceptionally challenging” picture for tourism and hospitality businesses in the region.

- More than a quarter (27%) of businesses say they may have to close permanently due to the current climate
- Rising energy, fuel and insurance costs are having the biggest impact on businesses, along with falling consumer confidence and below pre-Covid visitor numbers, both domestic and international
- Over 50% of the respondents feel neutral or pessimistic about their business’s performance for the next 3 – 6 months, however more than two thirds (70%+) report feeling neutral or optimistic regarding the next 12 – 24 months

Through to at least 2026, public sector spending is being squeezed, particularly after two years of downturn, and capital budgets, a primary source of project funding, will be frozen in cash terms.

Our analysis has amassed a range of quantitative and qualitative data and information pertaining to the 360 proposal. We have run several ‘scenarios and models’ based on assumptions mainly drawn from pre Covid figures as more recent figures are either unavailable or caveated through Covid influences.

From this process a range of conclusions can be drawn.

Support

Our analysis revealed that most parties and sources fully recognised and supported the need for climate change action. However, given current external uncertainties, their internal

attitude to risk and awareness of site complexities generally they were unable to offer any real commitment at this stage.

Site acquisition

Whilst the project would demonstrate best practice in terms of regenerating a former brownfield site, site purchase and subsequent facility construction remains challenging. The site is owned by East Lothian Council and securing rights over a part of the site either for an outright feuhold acquisition via Community Asset Transfer, open market purchase or through a long-lease will require robust evidence. This should demonstrate that this is a deliverable and viable proposition with manageable risk, identified funding, governance and skills alongside evidenced public interest benefits.

Impacts arising that affect the council's ability to deliver its development functions and potential costs associated with the management of additional facilities, like open access greenspace would form part of the council's assessment. Title conditions and levels of community support would need clarification.

Agreement on financial and non-financial value for unique sites like this one is not easy. It would require balancing the financial and non-financial impacts, both positive and negative, of the different options. This will be further complicated by alternative site interests, the public interest values that they can deliver and fit with council functions and policy outcomes.

Certainty in these elements is required before multiple funding applications can be taken forward for pre-development work and the construction phase.

Development readiness

An application has been made to the Levelling Up Fund to carry out site remediation works and in mid-January 2023 it was announced that East Lothian Council's application was successful. Excluding this funding capital costs for the project are likely to be at least £29 million.¹⁰²

Market perspective

From a [market perspective](#), there are a range of competing 'visitor' offers in the catchment. The landscape is changing within existing attractions in the sub-region. Dynamic Earth in Edinburgh is investing in creating climate change education programmes and there are

¹⁰² The rising cost and availability of materials, labour, fuel etc make contractors very wary of entering into any fixed price contracts.

further future planned investments in wider high-profile developments such as Granton Waterfront, Eden Project North and Eden Project Dundee, which could 'dominate the landscape' and attract the spend of visitors and community users.

A number of established organisations including universities, other education providers, commercial companies and organisations are already delivering education and training services / programmes linked to climate change. The marketplace is highly competitive on a number of different levels. Additionally, given that the concept combines different elements (with different target markets), it will not be straightforward to develop an 'identity' in the marketplace for the project, nor to market the project to key audiences.

Partnership working

Our analysis revealed that while partners fully recognised and supported the need for climate change action, given current uncertainties, they were less forthcoming on partnership arrangements. We believe that a partnership involving a number of parties will be crucial for the development and for the operational phase once the National Climate Change Centre is open to the public. These partnership arrangements will need to be further defined and the co- design proposition and benefits more fully articulated.

Finance

The financial analysis demonstrates that even with tight fiscal discipline, the project will require ongoing revenue support and, without securing this, the project cannot move forward. The model shows a need annual subsidy of £365,000 in Year One.

If acquisition funding is sought through Scottish Land Fund further evidence on viability will be required. Similarly in seeking development funding from sources like the Heritage Lottery and/or the Regeneration Capital Grant Fund, with the latter needing local authority endorsement.