

The Draft Lancefield Megafauna Interpretation Centre (LMIC) feasibility study was discussed at the Macedon Ranges Shire Council, Scheduled Council Meeting 27 July 2022.

It was resolved (Resolution Reference No: 2022/65);

That Council release the Draft Lancefield Megafauna Interpretation Centre (LMIC) feasibility study, provided separately to Councillors, with financial, visitation and operating revenue projections redacted.

The document attached has been redacted in accordance with this resolution.

HIRST PROJECTS



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LANCEFIELD MEGAFauna INTERPRETATION CENTRE

FINAL REPORT
17 MAY 2020



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In Lancefield, Victoria, within a Recreation Reserve there is a special place. It has little of visual interest today – what is most fascinating is under the ground, invisible to the human eye...

1.1 INTRODUCTION

This Study has been commissioned to better understand the opportunity that exists in the Macedon Ranges to grow Victoria's cultural and tourism profile, create a game-changing destination attraction and build economic resilience in the region.

THE LANCEFIELD MEGAFaUNA INTERPRETIVE CENTRE PROJECT

Megafauna – big animals – refers to species that existed after the dinosaurs became extinct. There are some megafauna that exist today, but as recently as 10,000 years ago there were many more.

Under the earth, in Lancefield Swamp, lie the remains of some of the largest animals that have roamed the earth. Australian megafauna lived and died here, and many of their remains still lie here, preserved below the ground.

Megafauna, and their demise, have fascinated people for centuries, and when they were discovered at Lancefield in 1843, they caused a ripple of interest, particularly with paleontologists around the world who longed to see the remains. Since then, there have been many 'digs' to explore the mystery of these ancient creatures – what they were, why they died and why their remains are preserved in this particular place.

The Lancefield Megafauna Interpretive Centre Project has been established to expose this potential to engage a wider audience, to showcase the site, the stories of the megafauna, the stories of the explorations and the mysteries that are still unfolding. This is not a dead place. It is a site where exploration is active, and innovative, and which holds the potential for interpretation through the sciences and the arts, and to engage visitors of all ages and interests.

This Project is also part of an even bigger story of 'deep time'. It offers the opportunity to connect to the planet – to the evolution of living things and to their future.

OPPORTUNITY

Tourism is seen by the State Government to be one of regional Victoria's most important industries, creating jobs and helping local communities thrive.

This project is a major opportunity for the region. It is not simply about a single destination.

The concept defined in this study acknowledges the tourism ecology and the relationship between destinations such as the Lancefield Megafauna Interpretation Centre, and other nearby destinations – to create critical cultural mass as well as the wider set of elements that comprise the visitor economy - accommodation, food and wine and other leisure and education opportunities.

The Victorian State Government and Macedon Ranges Shire Strategic Plans provide the critical drivers for the Lancefield Megafauna Interpretation Centre.

MACRO ENVIRONMENT CONTEXT

There are some important shifts in the wider, national environment that are likely to impact the development of the Lancefield Megafauna Interpretation Centre.

These include:

- The escalation of climate change as an issue of global interest and concern. Attractions that have the potential to communicate the significant challenges that have been, and will be, faced will be of greater interest to investors and visitors as this interest grows. The Lancefield Megafauna Interpretation Centre will have to be designed with sustainability in mind.
- Australia's population is projected to grow significantly over the next 40 years. Victoria will experience the largest and fastest growth, increasing between 60 and 130%. Melbourne is projected to grow by approximately 1 million by 2026 and be Australia's largest city by 2066. More people living within driving distance will increase the potential for visitation.
- Employment will remain critical to success and as jobs are lost due to improvements in productivity and use of, for example, Artificial Intelligence, so the creation of new jobs will be required. Part-time employment will become more common as will micro-businesses and working from home. This trend may create opportunities for the Centre.
- Big system changes will continue to disrupt eg payment systems, the sharing economy. These shifts should be accommodated in operating a tourism business.
- The value of family and community is high. The attraction should appeal to multi-generations and offer opportunities for interaction, enjoyment and discussion.
- The protection of local difference is highly valued by residents and tourists alike. The sense of the uniqueness of place and a sense of belonging should be considered in developing the attraction.
- Forms of partnership are increasingly sought to deliver better services and share risk and reward.

These shifts within the broader environment have been taken into account in defining the concept for the Centre.

VICTORIAN VISITOR ECONOMY STRATEGY

The Victorian Government, through the Victorian Visitor Economy Strategy is focused on growing regional tourism.

Encouraging visitors to travel further away from Melbourne, to stay longer and spend more is key to prosperity and livability in these areas. The Strategy recognizes that tourism can also help preserve and promote cultural history and heritage sites, such as the Lancefield Courthouse and Lancefield Swamp site and increase pride in local residents.

The Swamp site is of national significance. Megafauna are drawcards for visitors nationally and internationally. In addition, there are education markets for whom this will be a unique asset. Both Primary and Secondary schools can be attracted to learning programmes and at tertiary levels there is already a strong interest in using the assets as part of accredited courses and research.

For these reasons, this project has the potential to be a game-changer for tourism in the region and has the potential to make a positive impact on the State and local economy.

MACEDON RANGES COUNCIL PLANS

The strategic context for the Lancefield Megafauna Interpretation Centre is essentially expressed within the Council Plan, the Macedon Ranges economic development strategy, the visitor economy strategy and its arts and culture strategy.

MACEDON RANGES COUNCIL PLAN 2017 -2027

The Lancefield Megafauna Interpretation Centre will address the Vision "In partnership with the community, protect and enhance life across the Macedon Ranges"

Three of the five Priorities provide the focus for this project:

- Promote the natural environment
- Improve the built environment

And in particular

- Enhance the social and economic environment

The themes livability, efficiency and sustainability will also be addressed as the project develops and these will influence the development of the design and the operating model.

MACEDON RANGES SHIRE ECONOMIC DEVELOPMENT STRATEGY 2009 – 2019

Whilst this Project commenced in 2020 it reflects the overall goals for the Shire and recognizes the importance of tourism to its future. Tourism will continue to play a major role and it is the rich culture and heritage that this project speaks to that can be better utilized to bring tourism benefits.

MACEDON RANGES VISITOR ECONOMY STRATEGY 2019-2028

Connected to the Council Plan this strategy responds to and supports Council's priority to 'enhance the social and economic environment' and aims to attract strategic investment in the region.

It recognizes that Macedon Ranges already has a strong identity based on its rural landscapes, natural environment and iconic landmarks.

It identifies the key target market as the 'lifestyle leader', since this segment has the propensity to stay longer in a region and spend more.

It notes that visitation is currently concentrated in Kyneton and Woodend and wishes to diversify and build visitation in other parts of the Shire and spread visitation outside peak seasons and weekends.

The Lancefield megafauna site is noted as a key opportunity for an educational experience to achieve these goals, and to explore opportunities to grow culture-based tourism experiences by working with traditional owners on this and other sites.

It is important to note that if this is the case, the Lancefield Megafauna Interpretive Centre needs to:

- Be sustainable and protect the Lancefield Swamp site's values over the long term
- Strengthen the Macedon Ranges brand and create a point of difference for the region
- Increase yield by offering a substantial visitor experience, ideally linked with other attractions to encourage visitors to stay overnight.

MACEDON RANGES ARTS AND CULTURAL STRATEGY 2018-2028

This strategy expresses concisely the critical role that arts and culture plays in the life of the community and in driving the economy.

The Lancefield Megafauna Interpretive Centre is one of the projects identified as having the potential to fulfil community ambitions, and to connect with other cultural experiences nearby. Importantly the strategy recognizes that the arts can express ideas and engage participants across disciplines, break down barriers and bring people together to explore ideas and interests.

The vision for 'a thriving arts economy, fostering local talent and offering cultural experiences that delight, engage and challenge locals and visitors' must be central to the Lancefield Megafauna Interpretive Centre concept. The goals of participation, collaboration, placemaking and partnership will also be addressed.

LANCEFIELD MEGAFAUNA ON THE MAP: A SCOPING STUDY 2018

The Study was funded by the Macedon Ranges Shire but was an initiative of the Lancefield Neighbourhood House.

This Study investigated the viability, community and stakeholder visions for the development of the Lancefield Swamp Megafauna fossil site.

The information in The Study was used to inform the Feasibility of the Lancefield Megafauna Interpretation Centre, in particular the role the site might play in the concept, the potential for damaging impacts and the protection of its scientific and cultural integrity.

The research suggests that the nationally significant megafauna remains, and the indigenous significance of the site and its surrounds give the Lancefield Megafauna Interpretation Centre the potential to be a unique cultural asset for the region, and for Victoria.

3.1 INTERNATIONAL TOURISM

PROXIMITY TO CITY

Communities within a day's drive can benefit from being near vibrant capital city with a good events calendar, hotels and restaurants. Regional cultural experiences augment the food and wine and accommodation offers for the international and interstate visitor.

However, research suggests that for regional areas international and interstate markets produce very low numbers prepared to undertake more than a day's outing from cities. There is a need to concentrate on unique experiences, specific to the area, and marketing to those that have the capacity to stay longer and spend more. The Lancefield Megafauna Interpretation Centre concept takes account of this research.

Provision of accommodation associated, or partnering with, nearby attractions and events has for a long period of time been the backbone of securing longer stays and greater regional spend. The short-term rental or Air B&B market continues to see growth.

International tourism is growing in the Daylesford and Macedon Ranges region, with some 21,000 visitors in the year ending September 2019 – up 17.7% on the previous year. However, this is a large area and not focused on Lancefield which does not have the attraction of other towns (Regional Tourism Summary, Year ending September 2019)

AUTHENTICITY

Global and national trends in tourism support the development of immersive and authentic experiences whereby the visitor is engaged in genuine Australian and local community activity. International tourists in particular prefer stories that stand out and are seeking experiences they cannot get elsewhere.

MARKETING

Attraction and accommodation development in regional areas should consider the trends in the empty nester, grey nomad, family and friend, and the emerging Gen Z markets.

Victorian tourism operators and attractions who have seen steady growth from China and India are experiencing short term declines due to the recent spate of crises, for example, Coronavirus and travel bans, and this has even impacted domestic tourism with a 'stay at home for security' mentality. Attractions are encouraged to diversify the target markets to rather than rely on a single market segment approach.

The Lancefield Megafauna Interpretation Centre can compete in terms of its authenticity and its connection with events. It has the opportunity to be more attractive to the International Market if part of a larger theme eg associated with the local Aboriginal attractions and supported by excellent food and wine and other offers.

DOMESTIC ARTS AND CULTURAL TOURISM

The recent report 'Domestic Arts Tourism: Connecting the country' from the Australia Council for the Arts notes that cultural tourism is growing. Cultural tourists stay longer and spend more. There is a willingness to travel beyond the capital cities to seek new and authentic experiences. Whilst this project is primarily focused on megafauna and the Swamp site itself. Nearby sites in the Shire also connect to the growing engagement with First Nations people.

- A cultural tourist is interested in a place – its landscape, the lifestyle of the people there, their history and heritage and how those things are represented in the places, buildings, sites, art, food and wine and all the ways that culture is expressed.
- Importantly the cultural tourist is interested in difference – and will travel to see unique places that offer a different experience that helps them engage across cultures and forms of cultural expression.
- Cultural tourists are attracted by museums, galleries, historical and heritage centres, writer's centres, makers markets, performance centres as well as events and festivals that offer a combination of arts and cultural offerings.

The report also notes that destinations within easy reach of large metropolitan centres receive larger volumes of domestic arts tourists on daytrips. Whilst the Macedon Ranges is not one of the tourism hotspots, nearby Bendigo Loddon is seen as culturally vibrant and Lancefield may be able to capture this 'passing trade'.

It is important that the whole of the cultural tourism offer is considered as part of the context for this Project. This has influenced the site selection for the Centre as well as possible partners.

REGIONAL TOURISM

Domestic tourism is growing in the region, both for daytrip visitors (more than 2.5million, up 21%) and overnight visitors (930,000, up 16% over the previous year). This is a positive sign but should be considered in the light of the tourism 'ecology' rather than as the result of a single attraction.

The regional Tourism Review paper identifies benefits that tourism brings outside the direct business of a single attractions and its flow on benefits in areas such as accommodation, food and beverage and retail.

It notes that it can also bring benefits in educating the community in terms of environmental stewardship and conservation and the development of resources that preserve and promote Aboriginal cultural histories and heritage sites.

The Lancefield Megafauna Interpretation Centre has the potential to make a positive impact in these areas as it is based on increasing the understanding of the value of the land, of the ecological systems it supports and its relationship to time and the ways that this value can express itself.

As a very significant national site, the 'megafauna' brand can also be used by local partners, in association with the Centre, to support boutique producers in the region, building the brand and creating a greater presence in the target markets. This has been addressed in the proposed concept.

"We know that regional Victoria has the best of everything, but we also know there is untapped potential." Regional Tourism Review Special Advisor Mary-Anne Thomas.

MACEDON RANGES TOURISM

In the broader Daylesford and Macedon Ranges tourism marketing area, tourism is responsible for just over 10% of the region's economy and employs over 4,000 people. 70% of the visitors are domestic day-trip visitors and 28% are domestic overnight visitors. The market trends of over 25% increase in domestic day-tripper spend are very positive signs for the area and support any attempt to augment regional product with experiences that provide an immersive experience coupled with some of the more traditional signature experiences of walking, good accommodation and good food and wine.

The Macedon Ranges Visitor Economy Strategy states that there are already 1.67 million visitors to the Shire itself – over 1 million of these are day-trippers, and a further 654,000 stay overnight. However as noted, the visitors are predominantly going to Kyneton and Woodend. The Romsey Lancefield Sub Region only attracts 13% of this visitation at present and only 15% of the expenditure in the region.

Visitor projections show that the Ranges has a potential to attract an additional 1 million visitors by 2025 (mid-point growth scenario), targeting lifestyle leader and independent international markets.

The Lancefield Megafauna Interpretation Centre project is designed to address the need for dispersal of this forecast visitation to other parts of the Shire. It must appeal to the target markets, Lifestyle Leaders (but not only this segment), strengthening the opportunity for employment within the region and delivering economic advantage through the broad range of associated businesses.

Lifestyle Leaders are educated, professional and progressive individuals who enjoy seeking out new information. This project is designed to appeal to that market and particularly combining an intriguing experience of the natural landscape, with a cultural edge.

EDUCATION AND RESEARCH

Local primary schools are keen participants in quality programs relating to prehistoric creatures and fossils.

Primary Education: There are some 20 primary schools in the Macedon Ranges Shire and in excess of 50 within an hour's drive from Lancefield. With Lancefield situated on the northern edge of Melbourne there is capacity to attract more primary schools willing to make a slightly longer journey. There is no competitor in this space outside of Melbourne Museum.

Secondary Education: The secondary school market would respond to programs that could combine an integrated package of an aboriginal Cultural programs and a visit to the Megafauna Centre. This would need to be crafted in consultation with the Victorian Education Department, schools and the Traditional Owners.

Tertiary Education: There is an opportunity to engage tertiary students in activities which relate to research whilst the digs are underway. Universities such as Deakin, Monash and Latrobe have been involved in the past. Interest has been shown by Flinders University in South Australia, to involve their palaeontology students.

Worldwide and nationally, there are a number of attractions that are driven by the existence of, and interest in megafauna or paleontology.

4.1 MEGAFAUNA DESTINATIONS

There are a number of attractions that are driven by the existence of, and interest in megafauna. Below are some selected exemplars that illustrate how the megafauna story, and paleontology, is told elsewhere. These have been selected to inform the Project, understanding that each is influenced by its own unique context that cannot be replicated in Lancefield.

Many of these museums, and others nationally and across the globe, have the potential to be partners with the Lancefield Megafauna Interpretive Centre in cross promotion and supporting the development of content connecting species extinction, paleontology and archaeology.

MELBOURNE MUSEUM, VICTORIA

<https://museums victoria.com.au/melbournemuseum/>

Melbourne Museum, part of Museums Victoria, already has a special link to the Lancefield Swamp site and its megafauna.

It has in its collection, many thousands of specimens that have been extracted from the Lancefield site. Very few are on display: most are stored out of public sight at present and only available to researchers who request access;

The 'Wild' Exhibition is an example of combining display with digital technology that deepens understanding and adds to the experience of the visitor with collection items that cannot be touched. It presents animals that are threatened and aims to inspire the visitors to better understand their role in preventing this.

The 'Dinosaur Walk' and '600 Million Years: Victoria Evolves' exhibitions showcases Australia's Quaternary megafauna – giant marsupials, reptiles and birds.

Melbourne Museum is especially important as it has the potential to be a strategic partner for the project. Whilst it attracts over a million visitors a year it offers multiple themes

MEGAFAUNA CENTRAL, ALICE SPRINGS, NT

<https://www.magnt.net.au/alcoota>

Megafauna Central is part of the Museum and Art Gallery of the Northern Territory. It is based in Alice Springs. It showcases the megafauna that roamed central Australia 8 million years ago.

This is an example of a museum that is centrally located in a city, referencing a site 150 km north east of Alice Springs, the Alcoota Scientific reserve. The reserve is a 200 metre stretch of ground in which has been found the remains of 3000 animals, representing 30 species from the Miocene Epoch, when deserts were beginning to form.

Megafauna Central is a stand-alone centre, with an exhibition space supported by an augmented reality App.. The App takes visitors on a tour of Alice Springs where they 'see' a megafauna species at each of 10 other locations. Some collections and a laboratory are located within the building.

The Alcoota dig site is host to a biennial, 4-6 week dig event involving at least two universities. It is used as a training ground for students with a strong connection to Museum programmes.

Megafauna Central attracted 32,000 visitors in 2018/2019.

EROMANGA NATURAL HISTORY MUSEUM, QLD

<http://www.enhm.com.au>

The Eromanga Natural History Museum is an educational and tourism attraction committed to discovering, conserving and showcasing the fossil, natural and cultural heritage of the upper Murray/Darling and Lake Eyre/Cooper Basins. It accesses over 70 dinosaur and megafauna sites and sources its collection from a number of sites on privately owned properties. It has a vision to become a regional centre of excellence for arid Australian paleontology.

It is owned and operated by the Outback Gondwana Foundation Ltd, a registered Australian charity.

It is an example of an attraction that uses with site tours, to see recovered fossils and learn how to prepare the fossilized megafauna bones. Several digs are marketed as opportunities to join a dig and stay in nearby accommodation.

It has been operating for five years and has a current annual visitation of 5,500 with a 25% growth year on year.

THE AGE OF FISHES MUSEUM, CANOWINDRA, NSW

<http://www.ageoffishes.org.au>

The Age of Fishes Museum is associated with fossil fish slabs removed from a paleontological site in central west NSW, some 10km outside Canowindra, population 2,200. The fossil site was first discovered in 1955, and further exploration occurred in 1993. All the specimens recovered in 1993 were retained at the museum. The site is listed as part of Australia's National Heritage for its international scientific importance.

Whilst this does not relate to megafauna, it is an example of an active museum associated with a paleontological site that is not an active dig site. There is interest, and momentum, to reopen the site at some point, as more specimens remain buried there.

The Museum comprises exhibitions of fish fossils recovered from the site, occasional travelling exhibitions, children's 'dig pits, a gift shop, a regional Visitor Information Centre, a timeline walk and picnic facilities. It attracted 10,500 in the last year and is visited by the same schools (some 37) on an annual basis.

BUHAIS GEOLOGY PARK, SHARJAH, UAE

<https://www.hopkins.co.uk/projects/1/237/>

The Buhais Geology Park Interpretive Centre was completed in January this year. It is 50kms south of the city of Sharjah in a region of prehistoric and geological significance. In particular the site features marine fossils from over 65millions years ago and these have inspired the architecture of the site.

This is an example of a museum that is built on a paleontological site and it includes exhibition galleries, an immersive theatre, a café offering panoramic views of the site, and a gift shop. The series of pods were constructed as prefabricated concrete structures that only lightly touch the ground. Linking the pods and looping around the site is an outdoor trail, accessed from the main exhibition centre, encouraging people to explore the site. This walkway incorporates a viewing platform, a shaded classroom and raised walkways to provide a high-quality education experience.

Lancefield Swamp is a key strategic asset for Victoria and Australia. There is more to it than meets the eye.

5.1 LOCATION

The Lancefield Swamp is the focus of this project. The Lancefield Swamp is a megafauna fossil site, situated less than a kilometer south of the township of Lancefield - inauspiciously sandwiched between a trotting track and sports fields in the Lancefield Park Recreation Reserve. Its nondescript appearance does not reflect its scientific importance.

It has been recognized as a unique asset for several decades, and has prompted not only scientific interest, but the advent of a successful event - Extinct - Lancefield Megafauna Festival, founded in 2015.

A PALEONTOLOGICAL SITE

John Patrick Mayne uncovered fossils in 1843, in what was known as the Lancefield Swamp, when he was excavating a well. The fossils were only a few feet below the surface. He delivered them to the Mechanics Institute Museum in Melbourne, who forwarded some to Sir Richard Owen, in London, the foremost comparative anatomist of the day. Within a few months the Lancefield Swamp site was known for the fossil remains of Australian megafauna. The site today is still the subject of intense scientific interest.

To the present time there have been excavations at three sites – the Classic, Mayne and South sites at the Swamp. The distance between the most distant sites is approximately 150meters.

The extent of the whole site is unknown. Work to determine this is currently underway led by Prof Michael Asten of Monash University, with Dr Sanja Van Huet of Deakin. There is a soft green smectite clay layer just below the fossil bed. Asten has conducted some trial lines of a passive seismic method of investigating this as a proof of concept.

He is also working with a WA company developing a new instrument to use in these investigations, which uses electromagnetic sounding. This uses a much lower frequency than radar and takes measurements at multiple frequencies. He sees this as the best possibility of getting a result on this site.

As one scientist put it:

“we have never run out of fossils; we have only run out of time”

There appears to be a general consensus that only 20 percent of the site has been excavated at this stage. It is regarded as the best megafauna site in Victoria and one of the top 5 in Australia.

THE DIGS

Following Mayne's discoveries in 1843 there was little coordinated effort to investigate the site further. The high-water table at Lancefield was a deterrent. It was only in from the mid-nineteen seventies that interest was rekindled, and systematic excavations were conducted at what is known as the Classic Site. Later work focused on the South Site in 1983-4, and 1991. The Mayne site was also investigated in 1991-1994 and 2001. Recent investigations of these sites were conducted 2004-2017.

From discussions with Dr Joe Dortch and from the recent publications by Dortch et al in Quaternary Science Reviews (2016), it would appear that the fossils on the site are between 40-80,000 years old. Most of the fossils are between 45-60,000 years old. Many of the fossils are from adult giant kangaroo megafauna and there is strong evidence that they died due to drought with predation by large carnivores such as Thylacaleo.

Two stone artefacts were discovered in the bone bed, indicating human presence at the time of the bone accumulation. This is under investigation as there was no evidence for a human role in the bone bed formation. The bone beds contain pollen from aquatic plants indicating water or marshy conditions.

The site has, to date, yielded thousands of fossils. Fossils from some thirty-five taxa or species of animals (reptiles, birds and mammals) have been discovered including from megafauna such as the giant ground dwelling bird *Geryornis*, the massive kangaroo *Macropus titan* and the huge *Diprotodon australis*. A complete list of the animals discovered at the site, was compiled for this report by staff at Museums Victoria. It is attached at Appendix C.

COLLECTIONS

Thousands of fossils have been extracted over the years. The bulk of them are housed in the State Collection at Melbourne Museum managed by the skilled staff of Museum Victoria. Currently there are around 4,500 lots of material in the collection store. A 'lot' is a term used as a way of managing a large collection. It could be just one fossil from an animal, or it could represent a tray of teeth. There are literally thousands of specimens available for research or display.

The Lancefield Historical Society has some material displayed in two showcases. One showcase contains the composite skeleton of *Macropus titan* fossils from a number of animals.

Some early fossils were acquired by the Mechanics Institute in Melbourne. The whereabouts of these fossils is currently unknown. Fossils were also sent, from the Mechanics Institute, to Sir Richard Owen and they may still be in the collection of the Royal College of Surgeons, London. Some collections have also been deposited with the Natural History Museum in London.

The Brigham Young University in Salt Lake City, Utah has material from this site. Recent correspondence with the university indicates that this material may no longer be of interest to their staff. If retrieved this collection could be a reference collection for the Lancefield Megafauna Interpretation Centre into the future.

Sediments and pollens taken from the site are with a number of researchers.

THE FUTURE

The Lancefield Swamp site is a very important resource for science and communication of the past in this location, as well as telling of likely futures; stories of climate change, extinction and survival. There is scientific interest in the Lancefield site, and it shows no sign of diminishing. It is an important site for paleontology and for reconstructing the environment of those times. The site represents a period when the climate was undergoing changes and it sits within an interesting cultural landscape, with humans sharing the land with megafauna.

There is potential for many future excavations as the site is easily accessible and the fossils are close to the surface. There have been no excavations to look at micro fauna, as an example. Further work on paleoenvironments and paleopathology are cited as future opportunities.

Past work on the site has been driven by opportunism and the ability to secure research grants, mainly through universities. Museum Victoria has played an important role in managing the bulk of the specimens and providing access to them.

An emerging theme in the discussions with both paleontologists and archaeologists is the need to bring together all the information coming out of the site and to take a more coordinated and strategic approach to future work on the site. There is enthusiasm from the scientific community to assist with this.

To ensure that future research can continue it is important that the site is protected from any actions that could be detrimental to access or impact the fossil bed.

REDISCOVERY!

One unintended consequence of our investigations for this report is the rediscovery of important cultural artefacts.

In 1974 R Gillespie and his colleagues were excavating the Classic Site. They discovered, in the bone bed, a stone artefact in the form of a blade. A stone flake was also recovered. This provided evidence of an Aboriginal cultural connection to the Lancefield Swamp at the time of the megafauna whose skeletal remains were buried there.

In the years following their discovery the artefacts have not been sighted and their exact whereabouts was unknown. As part of the research for this project, we interviewed Dr Joe Dortch from WA who believed that they were with Museums Victoria. The timing of the 1974 discovery was before electronic records were kept. Knowing that museums classify by type we opened up a dialogue between two collection managers, Vertebrate Paleontology and Australian Indigenous Archaeology, and together they rediscovered the stone artefacts in the Aboriginal cultures collection.

This is an important step in bringing the Lancefield Swamp specimens and artefacts together.

Imagine the past. Reimagine the future...

6.1 THE CONCEPT

Informed by the context, the strategic assets, the existing and likely future market for a major destination attraction for Lancefield based on the history and mystery of megafauna and extinction, the following concept has been developed.

TRAVELLING IN TIME

This will be a unique Victorian regional tourism and education offer, in the Macedon Ranges, to showcase and share the most significant megafauna site in the State.

Time travel: This concept will offer visitors an opportunity to start in the present, to step back in time into the world of the megafauna, some 40,000 years ago, to understand what animals were around then and to explore the reason for their extinction.

Evidence and Story: It will demonstrate how information is gathered and the excitement of unearthing unique specimens that can still be examined and interrogated to reveal their unique stories.

Discovery and Learning: It will engage researchers and educators nationally and globally in the quest to understand the planet and the forces of change.

The Future: Importantly it will also illuminate the impacts of climate change and other influences and engage visitors in today's changing world and threats to species living today.

It is proposed that the Lancefield Megafauna Interpretation Centre be centred around three connected experiences, in Lancefield:

1. **An Exhibition Experience:** telling the story of the megafauna, their discovery at the Lancefield Swamp and possible answers to their death in that place as well as the extinction of some species and the continuation of others.
2. **A Walk Experience:** providing a way for visitors to engage with deep time, the concept of 40,000 years
3. **A Site Experience:** offering a means of imaging the past, looking at the site now, using digital media and sculptural forms to enhance the imagined experience

These would be supported by

1. **A Site Excavation Programme** that is visually interesting, participatory and enhanced through knowledge sharing with experts
2. **An Education and Community Participation Programme** that introduces people to the global story of extinction, today's threatened species and ways that mass extinctions might be avoided

These experiences will use contemporary exhibition techniques, digital media and expert guided talks and tours both at the destination and online.

These experiences will be delivered through local and national partnerships bringing in the knowledge and expertise required to deliver them. The types of partnership that might be useful in delivering the experiences are identified in Section 11.

CONNECTED DESTINATIONS

It is proposed that the Lancefield Megafauna Interpretation Centre project be delivered from three key locations in Lancefield. It is critical that it be delivered through exciting and significant elements of infrastructure, reinforcing the State and national importance of the content and the location.

The Courthouse is seen as the starting point.

The Historic Courthouse: The Exhibition Experience

A visit to the Courthouse Experience alone will allow visitors to start to appreciate both the recent and deep history of Lancefield.

The Courthouse is a heritage building on State owned land. It is currently used as the home of the Romsey Lancefield and Districts Historical Society. The Society meets there and maintains a small display of artefacts as well as a collection of artifacts, books and documents, relevant to the local area.

There is an opportunity to work with the Society, complementing their work, to establish this as the primary site for the new Centre.

The Courthouse site is seen as the beginning of the time travel experience. It is a place that still has a value in Lancefield today, it can embrace its current use as a location for more recent local and family history and it can also address, as the point of difference, the ancient past – the Aboriginal past, and the geologic past.

The megafauna experience will occur in the Courthouse, largely within a unique contemporary extension, most visible along The Crescent, that will attract attention in its own right, and draw visitors in as a place that is attractive and current.

The Courthouse extension will be the place where the megafauna story is most evident, and where the idea of digging up the earth to discover the evidence of deep time and the creatures that roamed the earth can be introduced. Contemporary and immersive exhibitions will captivate visitors. They will be populated with real specimens and artefacts from the site, with the stories of the people who have made the discoveries and the means they use now to determine what's left, yet to be unearthed.

These exhibits will also relate to the creatures that exist now, and the threats of extinction that face our wildlife now and into the future.

Exhibition space will be supported by gathering space for groups and a research space for those wishing to access collection items that could be housed within the building (subject to space availability).

Programmes and activities will educate students and the public about the way our planet evolves, and what deep time really means.

Chauncey Street between the Courthouse and the Swamp: The Walk Experience

Visitors will leave the Courthouse area and start a walk along a signed path. They will be intrigued that every metre takes them 50 years back in time. They will leave recent settlement history in a few steps and move back through thousands of years as they walk towards the Swamp. Digital technology can enhance this experience, as they may 'see' megafauna emerge as they approach the site. A guided tour could be offered to enhance the experience and add both contemporary stories related to the environment or Aboriginal heritage.

The Lancefield Swamp Site: The Excavation Experience

As they reach the site they enter fully 'Deep Time'. The megafauna era. A walkway and viewing platform facilitate the visitors experience of the Swamp. Signs, sculptures and technology help tell the stories that are captured there. This infrastructure is designed to signal that this is a site of great significance, a working research site with many years of activity behind it and ahead.

A meeting area provides a space for groups to gather for talks, to draw, take photos and to otherwise appreciate the mystery that lies beneath their feet and to discuss the future of the existing wildlife.

On a regular basis the Swamp becomes an active research area – a paleontological dig, run by scientists and researchers from partner Universities in Victoria, Australia and internationally. Students and visitors get their opportunity to take part and learn how this important work is done. Storage is available for equipment, to clean specimens and to provide good facilities for the research and education activity.

The Swamp to the Town

The walk back to the Courthouse may be taken through the town and along High Street. This would encompass buildings from every era and link to businesses that can be connected to the megafauna (see below) – building a stronger identity. Again, signs, artworks, digital media can all be used to reinforce the story.

THE BRAND NAME

It may be that the term 'Lancefield Megafauna Interpretation Centre' will not be adequate to attract the markets that are targeted for this set of experiences. It is a working title for the project, but clever branding (through the name, visual identity and product and programme design) will be critical for the success of the venture.

It is proposed that the significance of the site warrants a State brand – a Victorian Centre, and that Lancefield designate the location, rather than define the brand.

CONNECTIONS TO REGIONAL BUSINESS

In order to deliver the most benefits for the region, and recognizing that megafauna, giant animals, have a kudos that is beyond museums, it is possible that the brand could be extended to local business, and other successful destinations. For example:

- Wineries: local wines could be named after megafauna species or be illustrated using an aspect of megafauna. There are at least a dozen wineries within 10 kms of Lancefield.
- Dining: a dish at a local restaurant, or the product of a bakery could be named to celebrate the megafauna.
- Accommodation: the naming of meeting rooms or other special areas of the local accommodation can use the names or visually represent megafauna finds within their hospitality offer.

This already happens during the Megafauna Festival, but ideally it would be part of a longer and more established way of differentiating the region.

It is critical that this not 'Disneyfying' the destination, or the region. It must be done in a contemporary way that supports the value and future focus of the vision.

This will require a level of stakeholder consultation at the next stage of the project, in order to determine the likely interest and commitment of local businesses.

CONNECTIONS TO ENVIRONMENT

The story of the extinction of the megafauna is a mystery. However, there are many threatened species in the region, and the world today and this issue is rising in the minds of community members as something that must be addressed on a local and global scale.

The Lancefield Megafauna Centre brand should also be associated with contemporary environmental issues, the discussion of these and planning for action. Exhibits in the Exhibition Centre, signage along the Time Walk, and spaces at the Swamp site should be designed to introduce and tackle these issues.

The Swamp site in particular can include a meeting space that is used for multiple purposes:

- To shelter visitors and provide megafauna interpretation
- To engage local groups with environmental issues
- To accommodate excavation programmes and research teams and offer space for them to meet and greet the public and describe their work.

CONNECTIONS TO ABORIGINAL HISTORY AND HERITAGE

This is Wurundjeri country. The stories of the people who lived on country in the past, and the current connections to the places designated as the Lancefield Megafauna Interpretive Centre are of interest to locals and visitors, as well as providing a sense of continuity for the Aboriginal community.

This is also a critical time to recognize this history and heritage, and possibly to provide employment for these communities as storytellers and providers of tourism experiences.

There is a bigger story, introduced in the next section.

CONNECTIONS TO FESTIVALS AND EVENTS

Increasingly festivals and events are a successful means of refreshing a brand and drawing additional visitation to a cultural destination. Extinct: The Megafauna Festival that has been used as the platform for generating interest in the Lancefield Swamp site already exhibits many of these successful characteristics.

The Destination Brand

While a destination is always available, a time-limited event provokes visitors, including new market segments, to take advantage of the opportunity to visit the destination

Festivals and events can enrich and improve the destination offering and increase its competitiveness in a complex tourism market

Festivals and events can also address the negative effects of seasonality by extending seasons and providing reasons to stay longer

Community and Place

Festivals and events allow visitors to interact with a local community and gain a deeper understanding of the essence and personality of place

Festivals and events contribute to vibrancy and livability of a place, bringing local communities together, enhancing social well-being and raising a sense of pride in place

Economy and Legacy

Festivals and events enable lasting economic benefits, working with local business, utilizing existing infrastructure, attracting new investment and establishing the reputation of a place

It is assumed that Extinct will not only continue to be a major event for the region but will grow and develop with the Lancefield Megafauna Interpretation Centre at its core.

It is also proposed that the Centre will play host to other Victorian events eg Writer's festivals, Environmental festivals and Music festivals and make regional connections that enhance understanding of the Centre's mission.

‘Deep Time’ is brought to life in a real way in the Macedon Ranges.

7.1 DEEP TIME: THE BIG PICTURE

Deep Time is geologic time. Deep Time reflects the age of the earth and the changes that have happened over billions of years. It extends back through the time of the First Peoples and spans the immense arc of non-human history that shaped the world as we perceive it.

The Macedon Ranges Shire has a unique opportunity to bring the concept of Deep Time to life. Travelling through the Macedon Ranges Shire is travelling through time, and unlocking the mystery of history.

The Macedon Ranges is already considered a place of treasured natural landscapes and is the first place to be afforded the maximum protection possible under the Distinctive Areas and Landscapes provisions of the Planning and Environment Act 1987.

This living history is recognized and covers many aspects of the landscape that are celebrated by Aboriginal People but often overlooked by those less sensitive to what ‘country’ has to offer. As well as the natural environment – flora and fauna, waterways and wetlands there are stone artefacts, scarred trees, rock shelters, burial structures, shell middens, ethnographic items, mounds, hearths, quarries and grinding patches. These are all aspects of Deep Time, which can be better appreciated by the community and visitors who will then understand why their preservation is critical. The Vision set out in the Macedon Ranges Statement of Planning Policy 2018-2068 provides the platform for this activity.

https://www.planning.vic.gov.au/_data/assets/pdf_file/0026/444905/Macedon_Ranges_Statement_Planning_Policy.pdf

The Lancefield Megafauna Interpretation Centre can be a centrepiece for this broader opportunity.

GEOLOGIC TIME

There are multiple sites of significance near Lancefield:

- Mt Macedon itself is evidence of massive volcanic eruptions between 36 and 370 million years ago and of erosional forces that shaped the earth 60-130 million years ago.
- Hanging Rock is an even more distinctive and unusual rock formation, a mamelon, created by the eruption of lava through a narrow vent in the rock below about 6.25 million years ago.
- The Mt William/ stone axe quarry – Wil-im-ee Moor-ring is a site of some 40 acres where Aboriginal people quarried greenstone to make axe heads which were traded over distances of a thousand kilometres.

The concept of time travel is also evidenced through the granite outcrops that are evident in the north of the Shire, the flora and fauna of the Cobaw Range and as well as many large old indigenous trees that are very often overlooked.

In every location there are views, vistas and vantage points that provide striking and emblematic views as well as filtered and intermittent glimpses that contribute to the sense of mystery and intrigue that Deep Time offers.

FIRST PEOPLES

The Registered Aboriginal Party (RAP) for the Swamp site is the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation.

For this community “the natural world is also a cultural world; therefore, the Wurundjeri people have a special interest in preserving not just their cultural objects, but the natural landscapes of cultural importance. The acknowledgement of broader attributes of the landscape as cultural values that require protection (encompassing, among other things, a variety of landforms, ecological niches and habitats as well as continuing cultural practices and archaeological material) is essential to the identity and wellbeing of the Wurundjeri people.” (<https://www.wurundjeri.com.au/services/cultural-heritage/>)

This study focuses on the interpretation of megafauna and the project requires involvement from the RAP as Cultural Heritage Advisors, to permit excavation or construction activity on the site.

It also provides an opportunity for the Wurundjeri community to tell their story of deep time, and their contemporary stories, at any of the three locations described as part of the Deep Time concept.

In discussion with the CEO, it is understood that:

- For an initial discussion about the potential that this project holds for the Wurundjeri community the Heritage Unit staff and Wurundjeri elders must be engaged in a workshop to inform them of the project and possible concept, elicit the extent of interest and understand how the project might proceed. This would be a service that will attract a fee.
- If there is interest the project will most likely require a Cultural Values assessment. This is a process of engagement which would include a site visit, workshop and other means of ensuring that your community engages fully and in ways that are appropriate.
- Any development of stories will also involve contemporary views and is dependent on the capacity of the community. This can be worked out as the project evolves.

The study assumes that the Wurundjeri community may wish to use the Centre as a starting point for a storytelling tour. This is indicated in the financial scenario.

The Lancefield Megafauna Interpretation Centre Project is a central piece of the Deep Time story, not just for Macedon Ranges Shire, but for Victoria and Australia.

This Study proposes that the region explore this theme and consider making it a point of differentiation.

The Lancefield Megafauna Interpretation Centre will be operated as a high-quality, nationally significant, cultural destination.

8.1 LAND OWNERSHIP

The Lancefield Recreation Reserve, known as Lancefield Park, is a Crown land reserve managed by Lancefield Park Recreation Reserves Incorporated (LPRRI). LPRRI is a committee of management appointed by the Minister for Energy, Environment and Climate Change under the *Crown Land (Reserves) Act 1978* (CL(R)A) to manage, improve, maintain and control the reserve for the purposes for which it is reserved, ie public recreation.

The Lancefield Courthouse Reserve is a Crown land reserve managed by the Macedon Ranges Shire Council as a committee of management appointed by the Minister for Energy, Environment and Climate Change under the CL(R)A to manage, improve, maintain and control the reserve for the purposes for which it is reserved, ie conservation of an area of historic interest.

Currently the Courthouse is used by the Romsey & Lancefield Districts Historical Society. The process of establishing a lease is underway.

While management of the reserves has been delegated, the Minister is still regarded as the 'land-owner' under the *Planning and Environment Act 1987* meaning any requests for landowner consent would be referred to this department for consideration. Any uses of the land, or activities that take place there would need to be agreed by the land manager.

ORGANISATION GOVERNANCE AND OPERATION

The proposed Lancefield Megafauna Interpretation Centre is a cultural project that will bring economic benefit to the region. In the initial years it will require operational support in order for the benefits of the broader economic impact to be reaped.

It is proposed, for the purposes of the Feasibility Study, that the Lancefield Megafauna Interpretation Centre business will be owned and operated by the MRSC. The staff will be employed as members of the council. It is assumed that the corporate services of Council supporting for example human resource management, communications and technology will be made available to the Centre.

CENTRE GOVERNANCE

It is proposed to establish two groups to support the strategic development of the Centre. One to provide general advice and support and another specialist support to ensure that any excavations on the Swamp Site are carried out in such a fashion that the strategic asset is not diminished, and the outputs and outcomes are properly documented and cared for.

Below is a description of the membership and purpose for each of these Committees:

Lancefield Megafauna Interpretation Centre Advisory Committee

Membership

Lancefield community members representing Council, education and commercial interests, Wurundjeri, Centre Manager and Chair of the Site Evacuation Committee. To meet three times a year.

Purpose

- To provide advice and support to the Lancefield Megafauna Interpretation Centre Manager
- To act as community advocates for the Lancefield Megafauna Interpretation Centre

Lancefield Megafauna Interpretation Centre Site Excavation Committee

Membership

Up to six researchers and collection specialists who have an interest in the site. Two members of the Wurundjeri and the Centre Manager. To meet annually (via teleconference) and from time to time when research proposals are put forward

Purpose

- To advise on a research program for the site.
- To advise on any research proposals for the site
- To report on any risks to the fossils and artefacts that the site is facing
- To ensure that work on the site is conducted in fashion to optimize the outputs and safeguard the site
- To ensure that the outputs and outcomes are documented and collections appropriately managed

Museum Partnership

It is recommended that a formal Memorandum of Understanding be established with Museums Victoria which acknowledges the importance of the Lancefield Site in this part of Regional Victoria and sets out means by which some of the fossils and artefacts can be returned to Lancefield. It is recommended that Museums Victoria staff should be part of the Site Excavation Committee.

CENTRE OPERATION

In this model, it is proposed that three core professional staff be appointed to manage the Centre together with a support team of trained volunteers.

The management of the Centre could be combined with that of the Kyneton Museum to become part of a broader cultural offer and to ensure efficiencies of operation.

Partnership development will be important with universities, museums and the Indigenous community. The employment of an Aboriginal educator, through such a partnership, could also be pursued in order to provide indigenous employment and deliver authentic Aboriginal content.

The following positions and activities are the most critical and should be prioritised:

Centre Manager

This role will:

- Create and lead the strategic direction for the Centre consistent with the MRSC plans
- Manage the day to day operation of the Centre
- Prepare, monitor and report on annual and other project budgets
- Develop and implement marketing plans for the Centre and its activities
- Manage the Lancefield Megafauna Interpretation Centre brand
- Develop and maintain research partnerships with universities
- Develop and maintain partnerships with commercial entities
- Coordinate festivals and events associated with the Centre
- Ensure compliance with policies and procedures of MRSC
- Provide a secretariat for the Lancefield Megafauna Interpretation Centre Advisory Committee

Programs Officer

This role will:

- Develop programs and educational activities
- Conduct activities for school groups
- Conduct professional development sessions for teachers
- Ensure the web site is current
- Deputize for the Centre Manager when required
- Manage the Centre volunteers

Aboriginal Education Officer

This role cannot be defined at this point. This will need consultation with the Aboriginal community to best understand their focus, the needs of the market and the opportunity to engage with their broader educational priorities.

Customer Service Officer

This role will:

- Provide front of house services
- Book groups into programs
- Manage volunteers on a day today basis.
- Sell tickets and reconcile takings daily
- Sell merchandise and report on sales

Casual Staff

Provision should be made for the employment of casual staff to cover leave, for particularly busy times or when special projects are underway.

Volunteers

In running a high-quality cultural destination, the volunteer group must be well trained and committed to provide support to the professional staff as needed. This activity will require the establishment of a formal information and training programme. Volunteer Guides may conduct Private Tours, eg for corporate groups, and an Outreach Programme, for those unable to visit.

The Lancefield Megafauna Interpretation Centre design will influence visitation and ensure that the visitor experience is of a high standard.

9.1 DESIGN CONCEPT

The Lancefield Megafauna Interpretation Centre design must be such that it attracts attention in the real and digital environment. The design is an intrinsic part of the experience.

For an attraction such as this, in this location, representing an asset of importance in Victoria and Australia, the design must be noteworthy. It must also enhance the sense of place and create a point of difference.

The nature of the Swamp site, and the hidden nature of the treasures there require strong visual representation in order to stimulate interest in the stories held here.

The concept presented in the attached report is indicative only. It has been developed to inspire thinking about the possibilities of the three sites proposed and to allow a high-level estimate of possible capital costs to be made.

This should not be considered as a proposed design solution.

The Design Report is attached as Appendix A.

The Lancefield Megafauna Interpretation Centre's estimated financial outcomes and economic impacts suggest that this attraction can have a significant impact on the region.

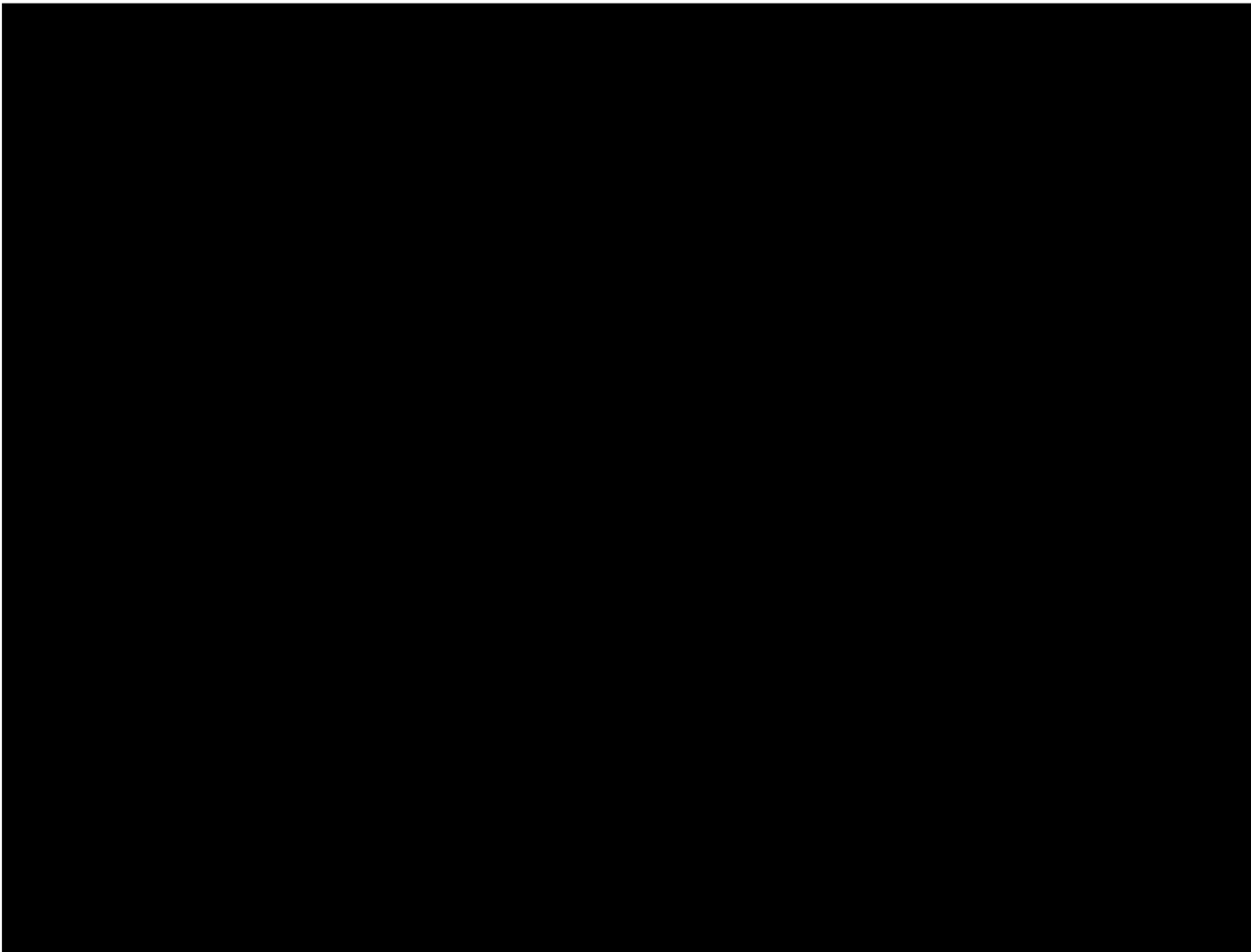
EXECUTIVE SUMMARY

The full report is attached at Appendix B.

A. VISITORS

This report provides an indicative business analysis of the proposed development of the Megafauna Interpretation Centre and an economic impact assessment of the project. Three cases are examined: Base Case; Low Case; and High Case.





² Regional income is the total net income generated from the activity and covers wages and salaries of employees and profits of businesses within the region. It includes income generated directly within the business and indirect income, which is generated in other regional businesses (wages and profits) from the multiplier impacts of employee spending on the region. In the modelling of income generated income tax and GST on spending, are both treated as leakages from the region.

This initiative may be of interest to a number of other organisations with shared interests and visions.

11.1 PROJECT FUNDING

The project funding will come from Government. Potentially it will be a combination of Local and State Government. It will be based around the specifics of the project and its ability to achieve goals and targets within the associated sectors – in this case culture, tourism and education.

Government funding will be required to facilitate this project for three stages:

Business Case

A full and robust Case is needed to understand the level of funding required to develop, build and operate the Lancefield Megafauna Interpretive Centre. This will include a full concept brief, a costed schematic design, a financial plan defining the likely operating costs and a full economic impact analysis based on the above.

Capital Investment

The decision by government to invest in a capital works project will be made on the basis of the Business Case.

Centre Operation

Centre operations will most likely need to be funded by Council. The Financial Model indicates the need, and project and programme partnerships may offset some cost.

PARTNERSHIP

Partnerships occur when two or more organisations decide to work together to achieve common goals. The ongoing operation of the business will be assisted through a meaningful and effective partnership model. It will be critical, when seeking partners to have a clear aim and purpose, to understand the capacities of the project to achieve goals and to define what is required from any partner.

Partnerships will also involve creating a relationship, formal agreements, working together and monitoring and recognizing achievements.

Three types of partnership are envisaged:

1. Programme Partnership
2. Capacity Building Partnership
3. Learning and Research Partnership

These are described below.

PROGRAMME PARTNERSHIP

A current example of a programme partnership is the Creative Activation Fund

This program is open to Victorian-based legally constituted organisations / institutions / creative businesses that have an Australian Business Number (including but not limited to, creative industries organisations, and local progress associations, local governments and tourism boards).

Creative Victoria will only accept one application per applicant in each round.

The program will prioritise projects that:

- Are led by Victorian First Peoples creative practitioners or organisations.
- Align with local priorities of the area in which they are located.
- Occur in regional Victoria.
- Reflect the culture and diversity of Victoria.
- Are developed through new creative collaborations, including interstate and international collaborations.
- Partner with practitioners or organisations from a wide range of creative disciplines across the creative industries.

Round 2 of this programme commences in August 2020, for projects that start after 1 January 2021

CAPACITY BUILDING PARTNERSHIP

These are partnerships designed to build skills, capabilities and / or resilience. This will require an analysis of the organisation (before or during operations) to define strengths and weaknesses and to assess where the capacity is needed.

Currently there is a capacity building programme within Creative Victoria that is indicative of future potential in the First People's Investment Program. This is based around building creative industry skills. This type of programme may add a creative dimension to the Lancefield Megafauna Interpretation Centre and increase engagement between science, the arts and creativity.

LEARNING AND RESEARCH PARTNERSHIP

These are partnerships specifically for knowledge generation / dissemination purposes. Many tertiary institutions have learning and research partnerships that could be very useful for long- and short-term success of this Centre. The level of interest shown by Universities and Museums during this early stage investigation suggests that this will be a strong area for exploration in the next phase.

APPENDICES



The following Reports have been provided by Hirst Projects' collaborators on this project:

Design Report: TERROIR Architects

Business Analysis and Economic Impact Report: Michael Connell & Associates

APPENDIX A: DESIGN REPORT

A

LANCEFIELD MEGAFAUNA INTERPRETATION CENTRE

DESIGN REPORT

06.04.2020



TERROIR

ONE ATTRACTION : THREE EXPERIENCES

The Lancefield Megafauna Interpretation Centre exists as a combines set of three experiences:

An Exhibition

A Walk

An Excavation Site

All three experiences will include programmes that attract group tours as well as spaces for individual reflection.

These experiences also allow visitors to get a feel for a small town as they pass homes and places for recreation and play. It will be important that locals and residents feel a sense of pride in the Centre, not a sense of intrusion or 'disneyfication' of their place.



AN EXHIBITION

The Exhibition Experience - Courthouse Extension - Precedents

The addition of contemporary forms to heritage buildings creates new opportunities for re-use of these sites.

It is preferable to indicate, through the design, that these are additions and do not seek to replicate the original architecture.

Included here are places where important historic buildings have been re-purposed.

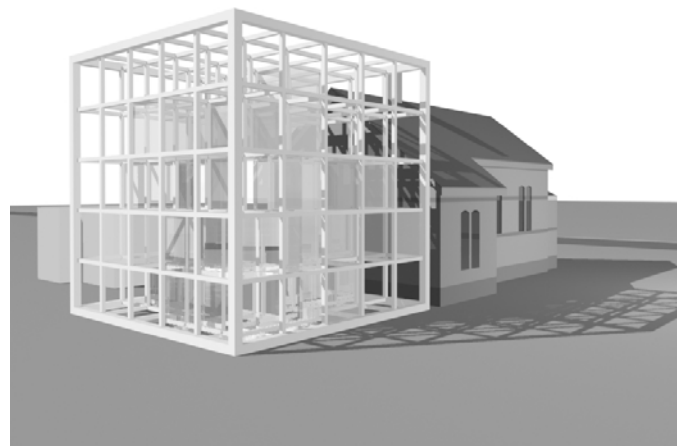
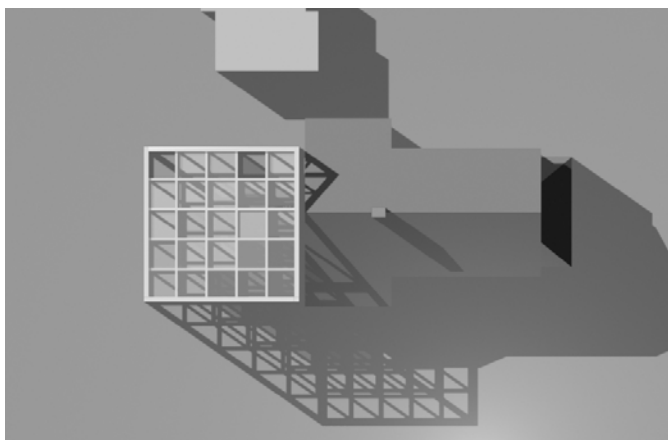
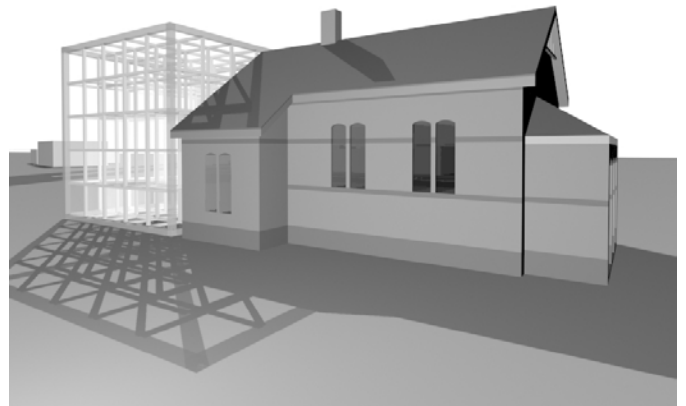
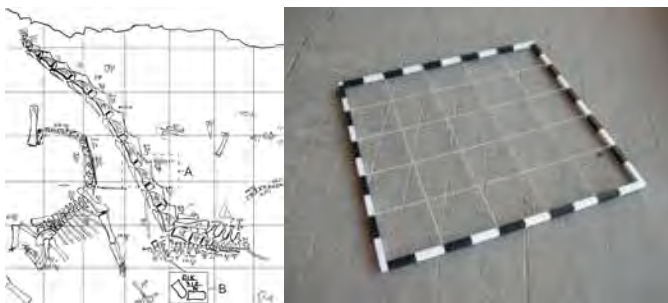


AN EXHIBITION

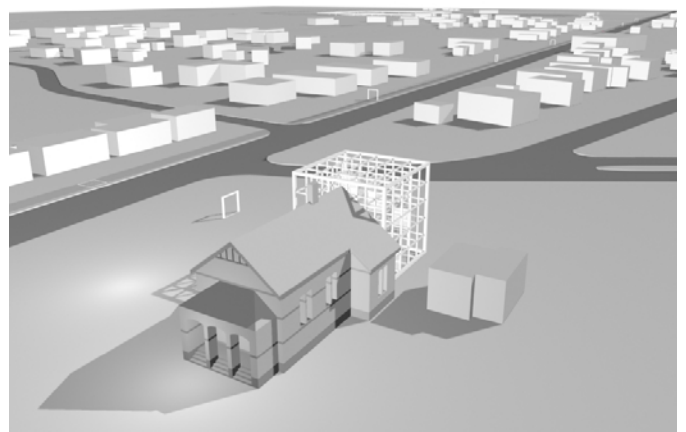
The Exhibition Experience - Courthouse Extension - Design

The new addition should be designed to respect the original structure, fit the new purpose and create an architectural element that is valued and of its time.

The design response illustrated here, explores the conceptual interpretation of the gridded reference frame used to identify and register finds in paleontological and archaeological excavation sites.



To ensure there is a strong and clear link between the individual experiences (the Exhibition Experience, the Walk Experience, and the Excavation Experience), the design should extend and incorporate a strong concept across the breadth of the collective experience.



A WALK

Chauncey Street + Reserve - The Walk Experience

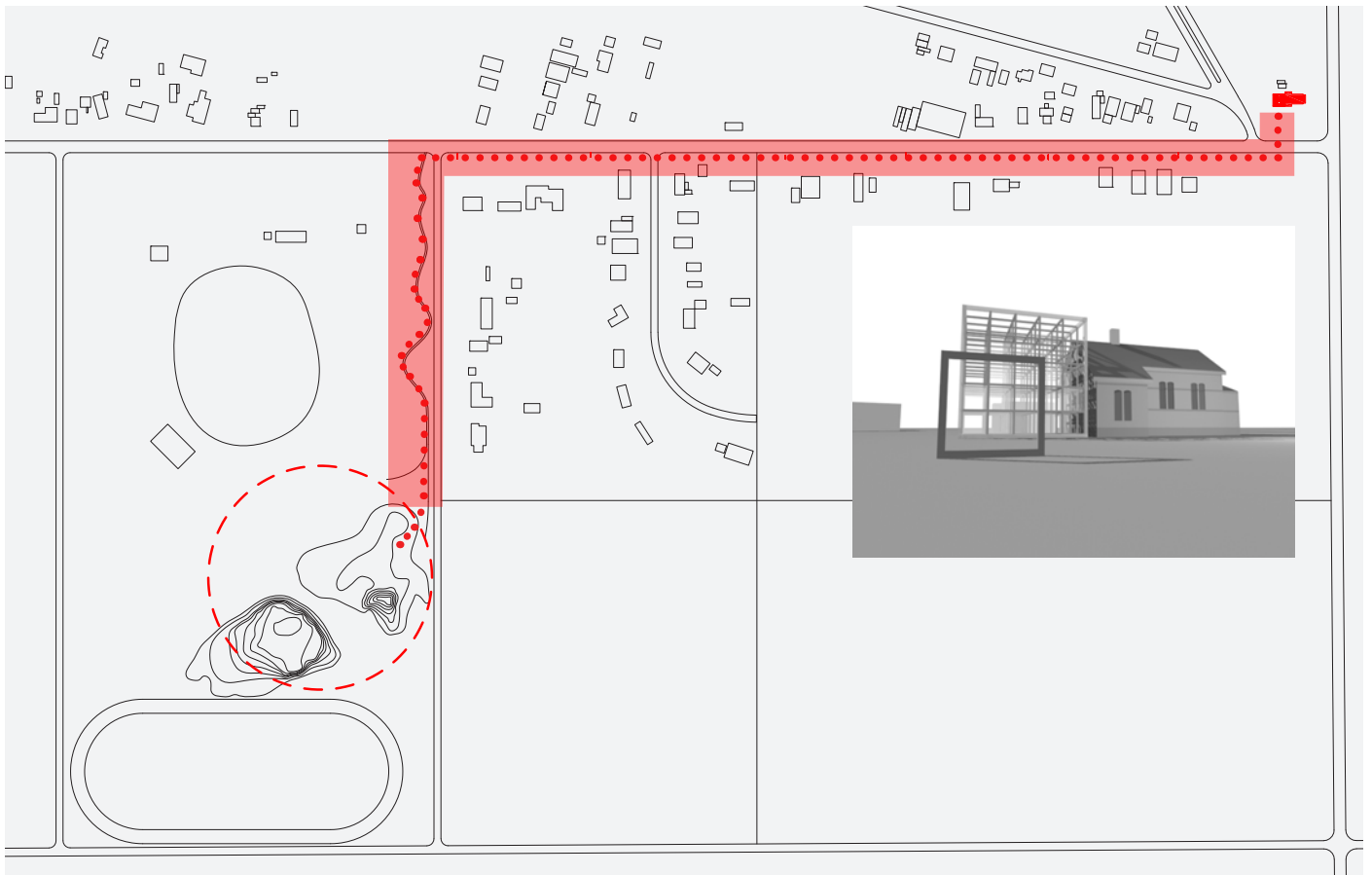
The walk ideally starts at the Courthouse, after visiting the exhibition.

Visitors then walk 'back in time' to the extinction of the megafauna at the Swamp.

Every step they take is decades. Within a few metres they are back to the days before European settlement.

The 'markers' help the visitors orient themselves both in space and time. Each structure offers a varied 'frame' of reference with information about the passing of time and what existed in the past.

The visitors will be guided back, visually and through the information provided on the markers. This may be supplemented by an audio tour or a guided tour.



AN EXCAVATION SITE:

The Swamp Site - The Excavation Experience

It is critical that the Swamp site be understood as a natural form, a place in the landscape now, and long ago.

Any structure must suggest that the site is underneath and around the visitor. It cannot be defined precisely, only excavation and examination will determine where the megafauna fossils lie.

Infrastructure on the Swamp site must sit lightly on the land:

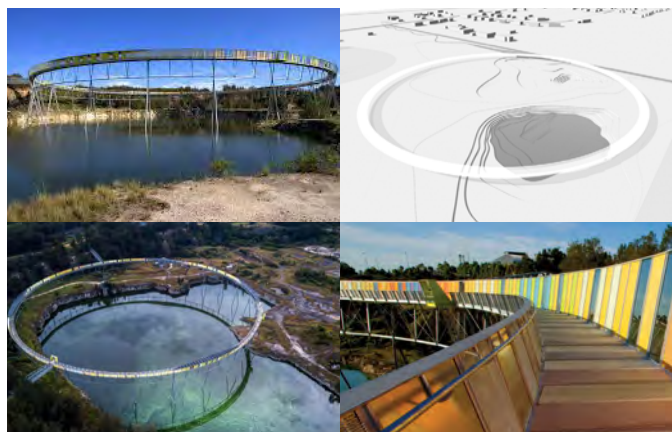
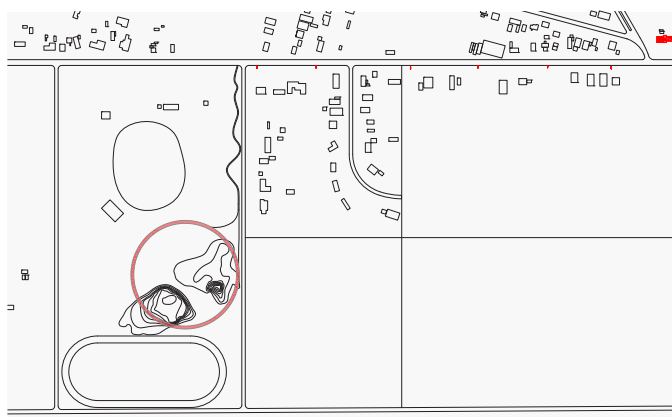
So that its meaning can be understood
So that multiple areas can be interpreted
So that future excavation sites can be identified
So that the infrastructure enhances the visitor's ability to view the site,
and any excavation activity that happens there

There are many options, allowing the visitors to walk around, imagine the past and be better informed about the threats to wildlife, then and now.

The following presents a series of conceptual design responses that explore the potential of the site's unique opportunities and constraints.

A Simple Ring

A minimal utilitarian design approach which offers up a simple but elegant object floating over the natural landscape. This approach suits a more direct and unvaried visitor experience.



An Undulating Ring

This approach explores the potential of a more organic ring walkway which might conform more closely with the natural land form of the site, allowing a stronger ground level interactive experience.

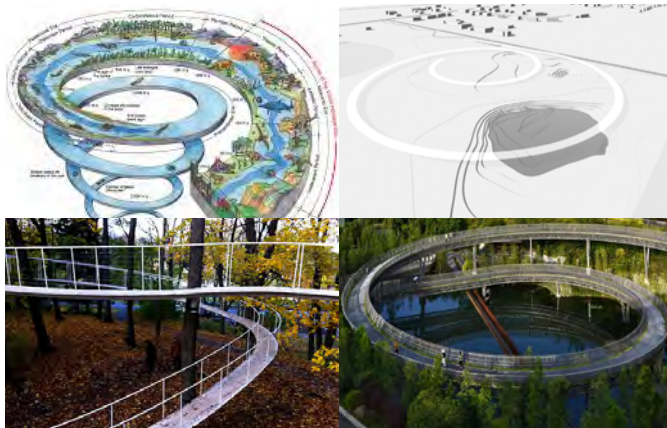
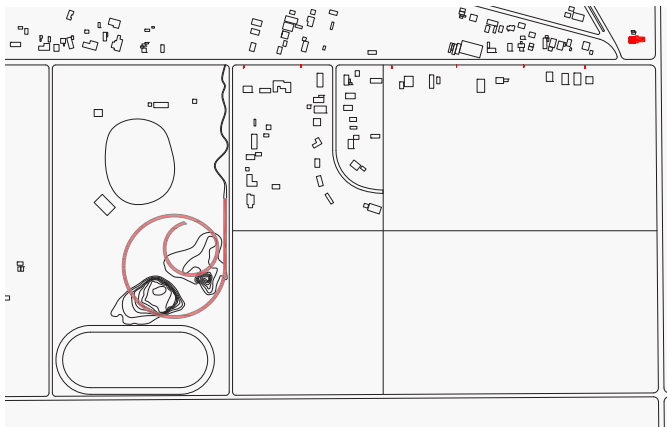


AN EXCAVATION SITE:

The Swamp Site -
The Excavation Experience - cont

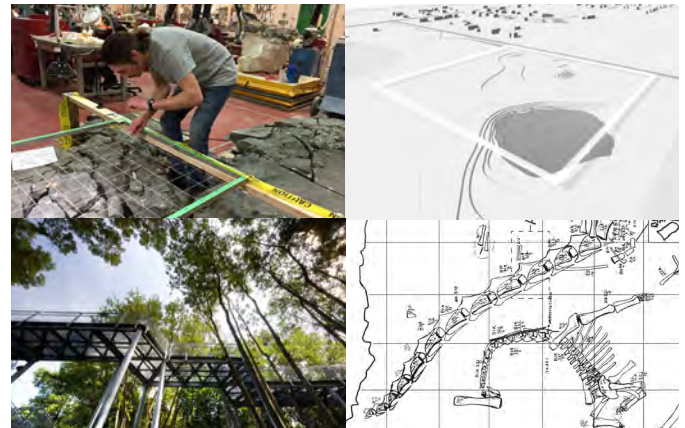
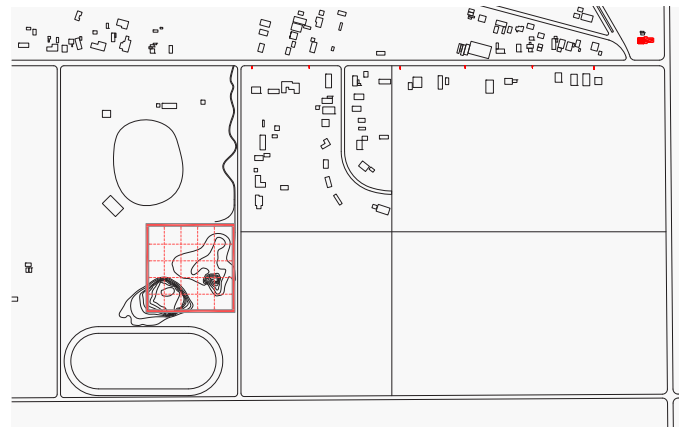
A SPIRAL

Picking up on the spiral concept of 'deep time', this response considers the opportunity of allowing the participant to travel deeper into the extent of the site for a more varied experience.



AN EXCAVATION FRAME

This response conceptually draws from the ordered structure of the grid referencing system related to historic 'dig' sites. The Squared form is set also to pick up on the strong north south east west layout of the primary township streets bounding the site.



SWAMP SITE: The Excavation Experience

Preferred Response

This structure has been selected, for the purposes of this study, as a good way of addressing the site as a contemporary attraction.

Whilst this is a Swamp, with very blurred edges, the square structure suggests that it is being studied by people today. Paleontologists and archaeologists do not dig randomly, they plan their approach, they dig in places they believe have the evidence they seek, they plot the finds.

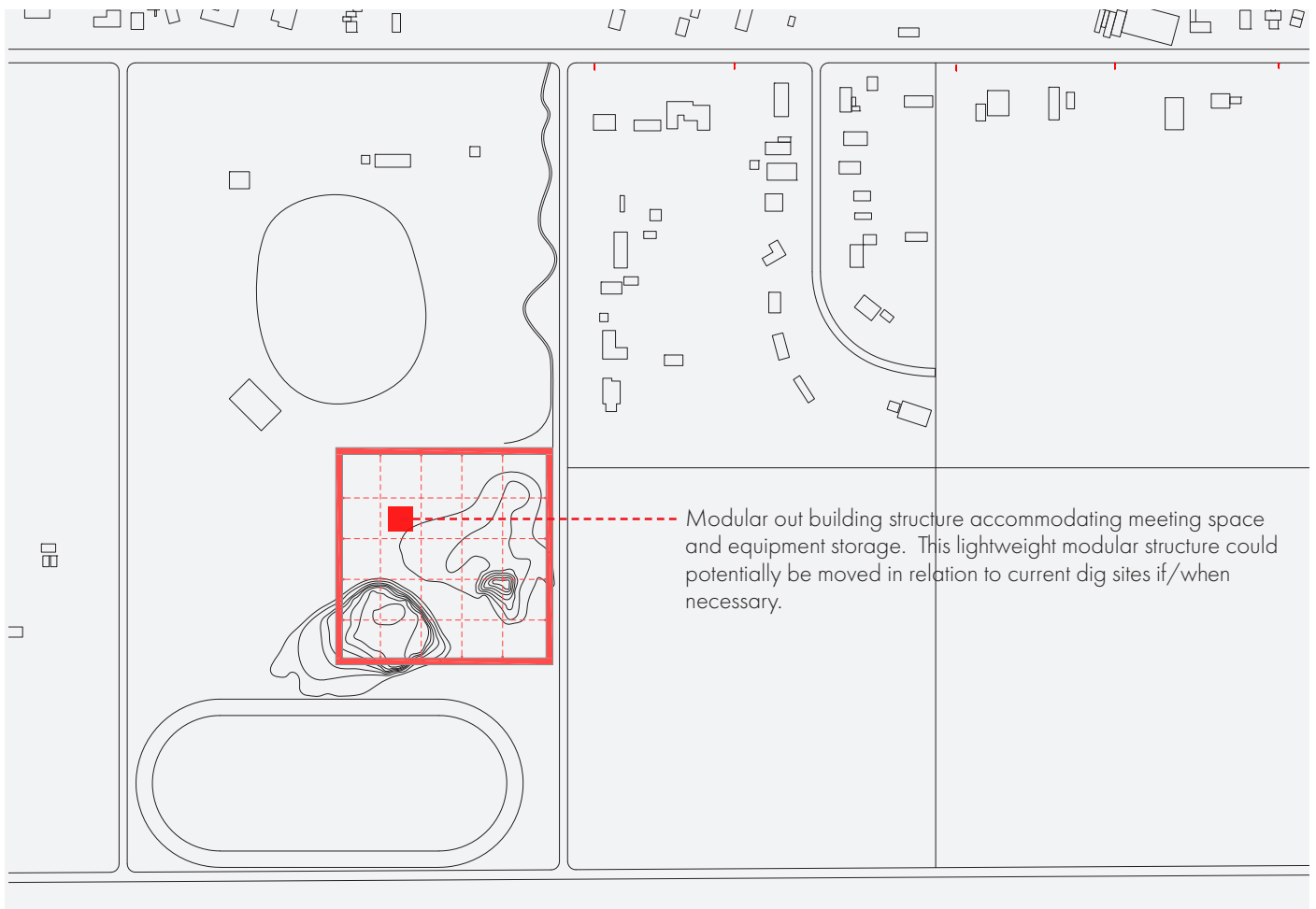
Creating a structure that is very ordered, connects to that activity.

It must sit lightly on the ground. It must give safe passage to the visitors. It must provide places to sit, gather, wonder at the past and be informed.

The site will include a meeting space where experts can talk about the site and the place more generally, as well as about the future and threatened species today.

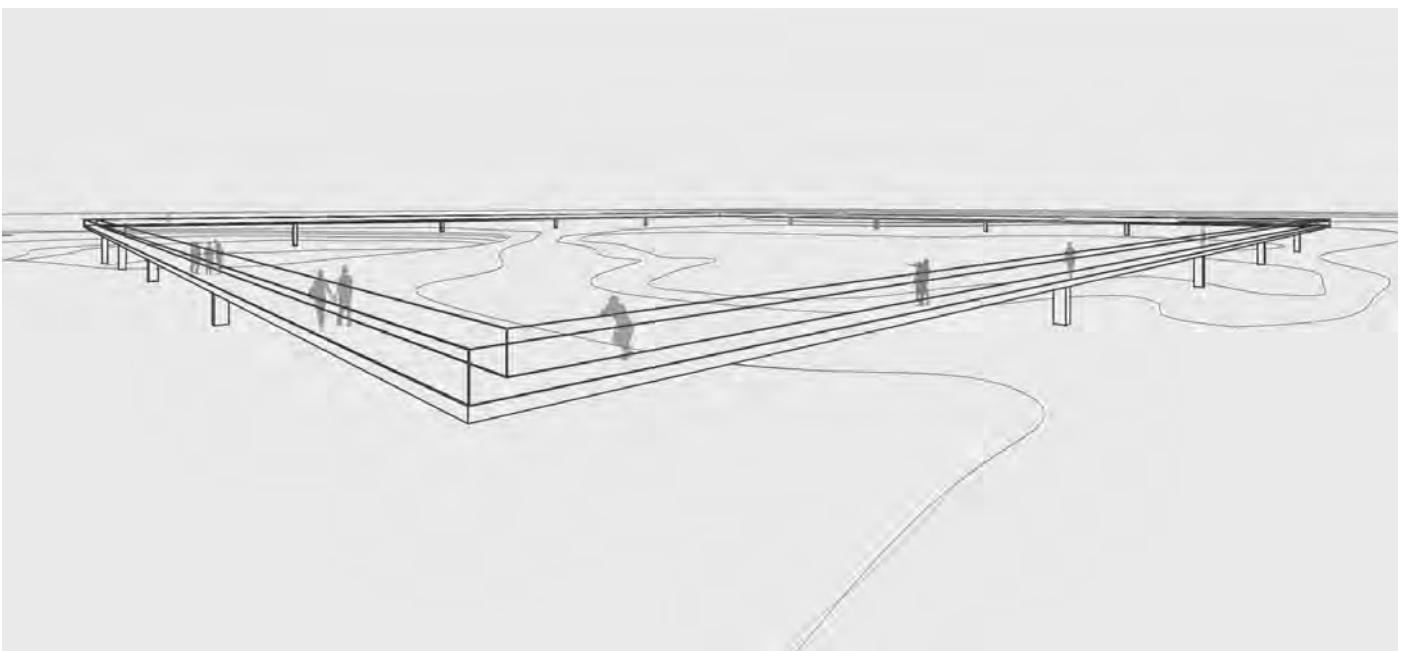
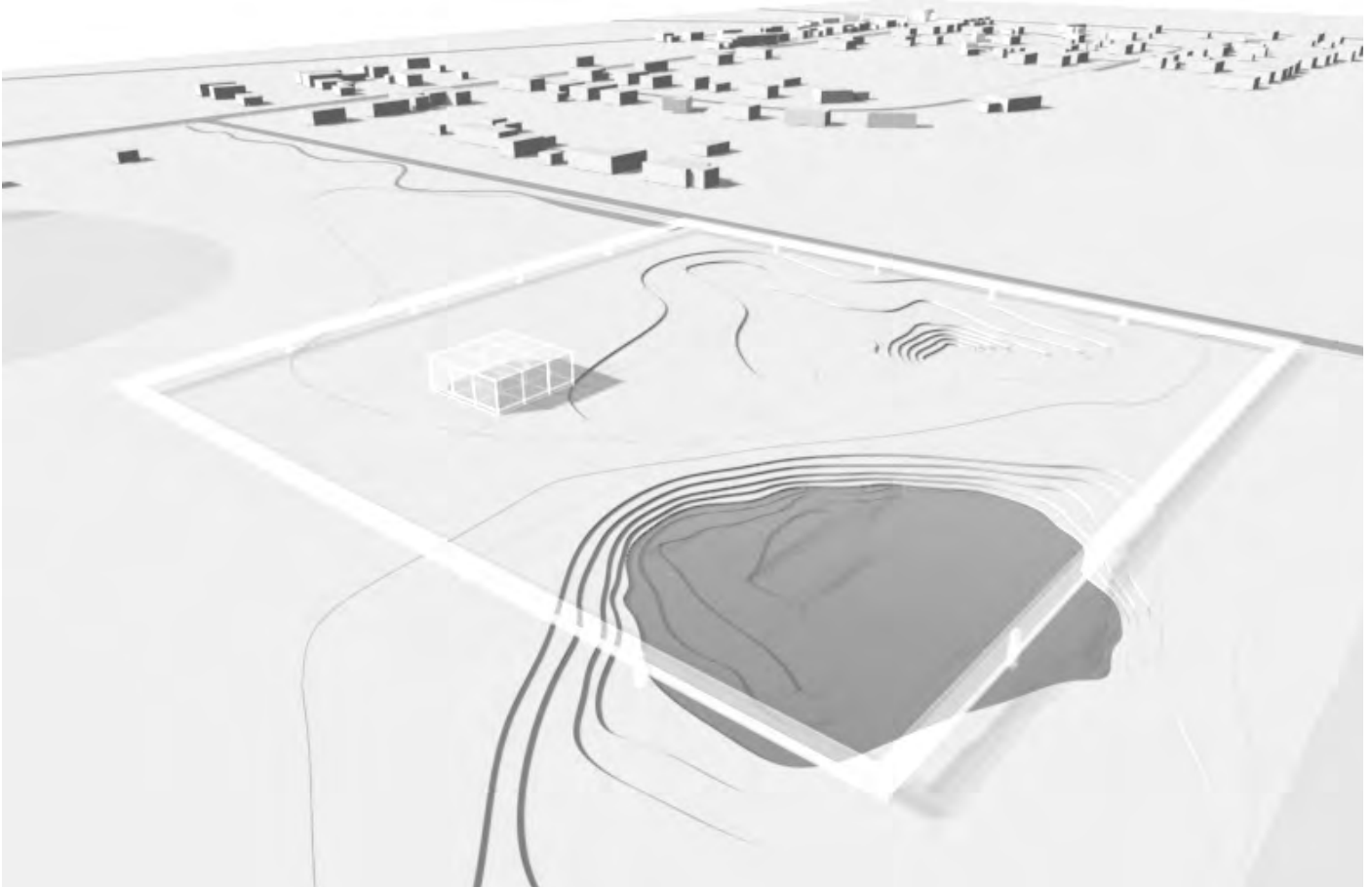
It will also include functional space to examine and store found objects as they are collected, and equipment that might be used during a dig.

This is conceptual and should not be considered as a 'design' at this point.



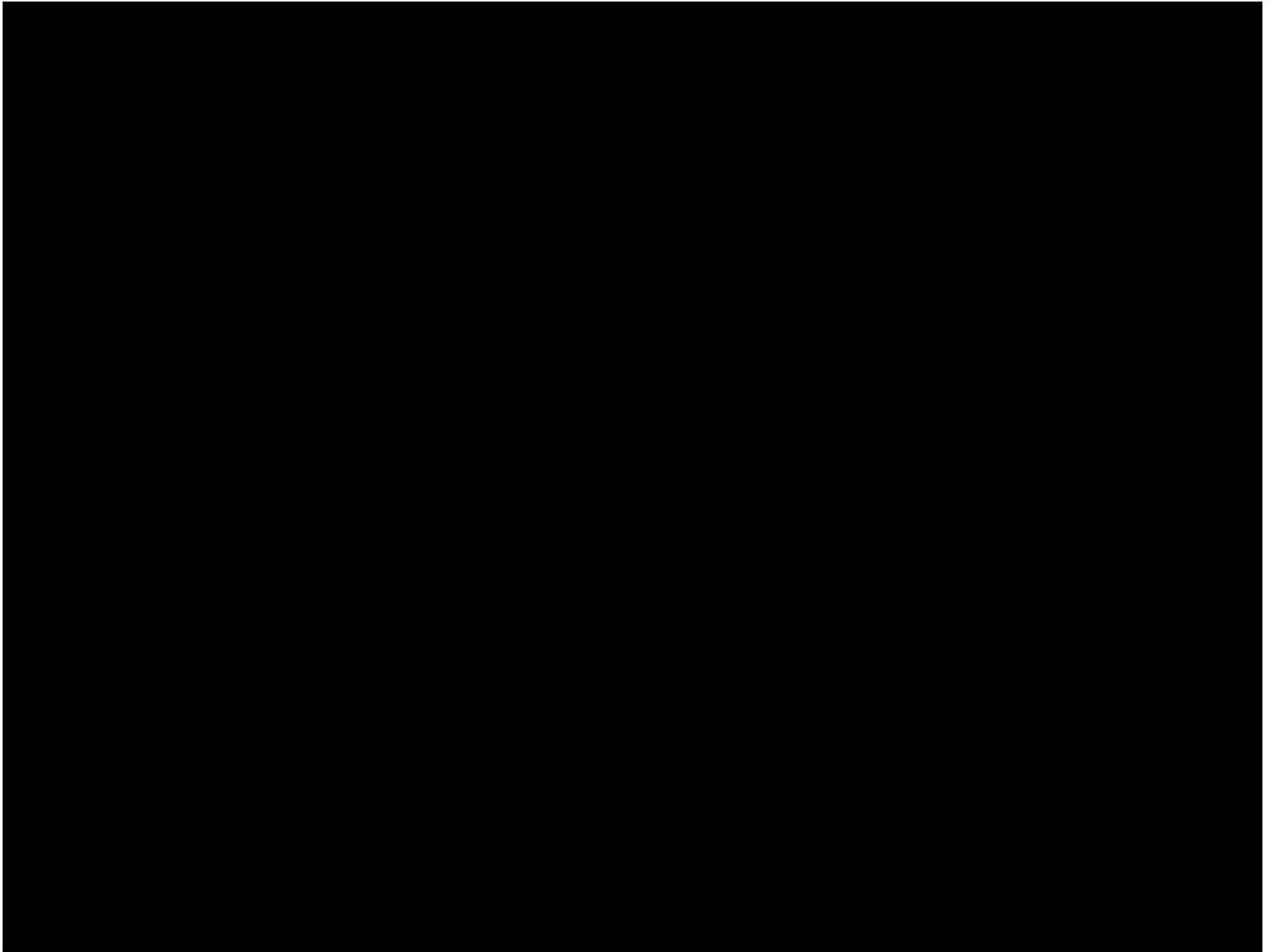
SWAMP SITE: The Excavation Experience

Preferred Response - cont



LMIC

Costings Summary



APPENDIX B: BUSINESS ANALYSIS AND ECONOMIC IMPACT REPORT

B

Lancefield Megafauna Interpretation Centre

Business Analysis & Economic Impact Report

<Revised>



<Michael Connell & Assocs.>

May 2020

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Disclaimer

This report is for the use only of the party to whom it is addressed and for the specific purposes to which it refers. We disclaim any responsibility to any third party acting upon or using the whole or part of the report and its contents.

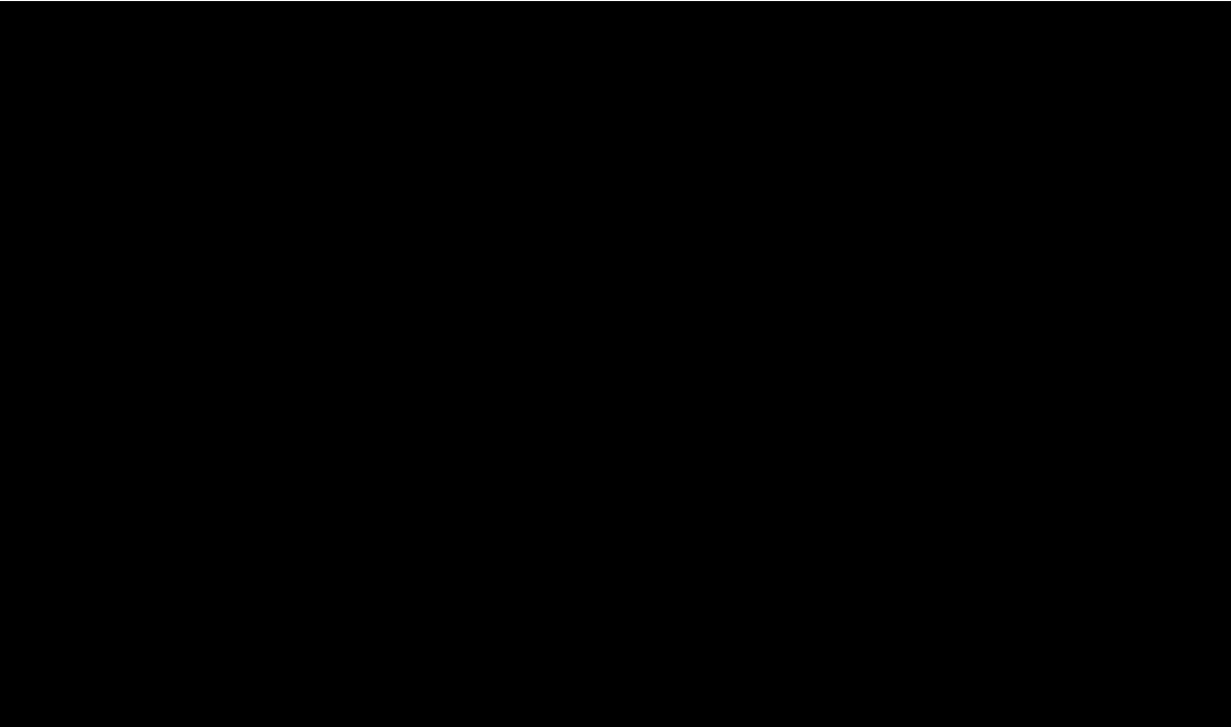
This report (including appendices) is based on estimates, assumptions and information sourced and referenced by MCA < Michael Connell & Assocs.>. These estimates, assumptions and projections are provided as a basis for the reader's interpretation and analysis. In the case of projections, they are not presented as results that will be achieved.

The report has been prepared on the basis of information available at the time of writing. While all possible care has been taken by the authors in preparing the report, no responsibility can be undertaken for errors or inaccuracies that may be in the data used.

Executive Summary

A. Visitors

This report provides an indicative business analysis of the proposed development of the Megafauna Interpretation Centre and an economic impact assessment of the project. Three cases are examined: Base Case; Low Case; and High Case.



The operating objective for the Centre would be to achieve a result between the Base Case and the High Case in the initial stages of operations of the Centre.

C. Economic Impact Assessment

Construction Phase



Operations Phase

The operations phase economic impacts of the Centre are driven by the expenditure (outside the Centre) of visitors during their visit to the region. MCA's regional impact model is used to estimate the employment and income impacts. The model allocates spending across relevant industry sectors and takes account of the significant shares of the gross spending by visitors, which leaks out of the region.

Jobs Generated



- On a sector basis, the jobs (FTE-direct and indirect) generated by visitors are mainly concentrated in: food and beverage; other visitor services; and other retail.

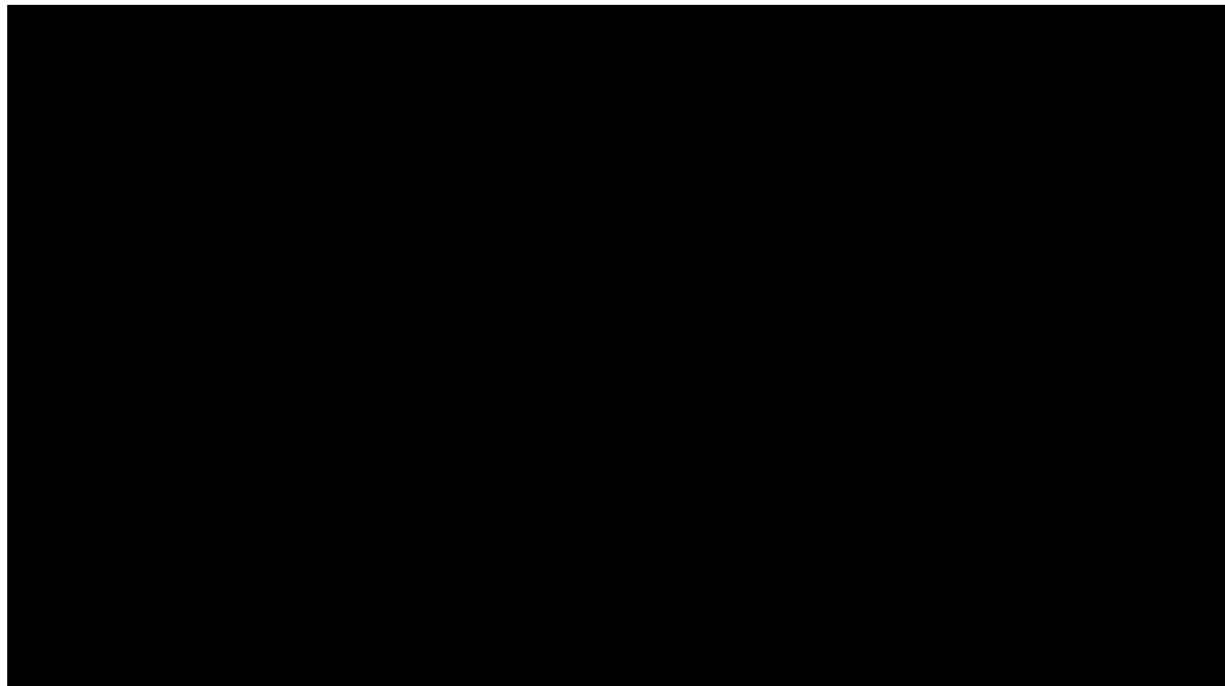


Regional Income Impacts



Benefit Cost Analysis

The benefits are measured (over a 10-year period) by: the value of services used by visitors; the increase in regional income generated by visitors to the region; and centre employees' income. The costs include construction costs, and asset maintenance costs.



2 Regional income is the total net income generated from the activity and covers wages and salaries of employees and profits of businesses within the region. It includes income generated directly within the business and indirect income, which is generated in other regional businesses (wages and profits) from the multiplier impacts of employee spending on the region. In the modelling of income generated income tax and GST on spending, are both treated as leakages from the region.

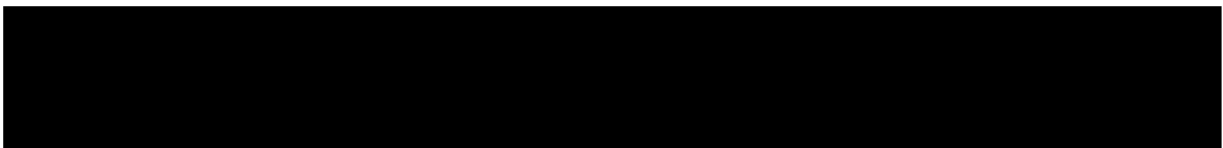
1. Introduction

This report provides an indicative business analysis of the proposed development of the Megafauna Interpretation Centre at Lancefield and an economic impact assessment of the project.

The development comprises: The Exhibition Experience (at the Courthouse site), The Walk Experience and The Excavation Experience. The Exhibition Experience would comprise interactive exhibits; a shop; and a base for the Walk Experience Tours and a Deep Time Tour – conducted by Aboriginal guides.

Several potential visitor groups were identified, and visitor numbers estimated. The groups are: tourist visitors (internationals and domestic visitors) to the region; school groups; research students; and volunteers at the dig.

Business analysis: detailed estimation, modelling, and analysis was undertaken of the proposed development. This includes estimates of potential visitor numbers to the proposed Centre, and revenue and operating expenses over a 10-year period. The estimates are based on a number of assumptions, which are outlined in this report. The visitor, revenue and operating cost estimates are indicative only and designed to test the feasibility of the Centre.



The financials show net operating results (EBDITA) for the proposed business operations on the site.³ It does not include interest on any loans required to fund the development. Interest costs will depend on the financial structure of the development (i.e. the mix of equity investment, grants, and loans). Interest costs would need to be included in a full business case. A full business case would also need to include depreciation on buildings and other assets.

Economic impact assessment: this segment analyses the regional economic impacts (jobs and increased regional income) of the Centre for the construction and operations phases. It examines the Base Case only.

³ Net Operating results are EBDITA – earnings before depreciation, interest, taxation and amortisation.

2. Modelling of Operations – Megafauna Interpretation Centre

2.1 Facilities and Activities

The following are the facilities and activities that would operate at the Megafauna Interpretation Centre.

Modelling has been undertaken to estimate the number of visitors, the take-up of services and the annual revenue generated from each activity. The financial analysis is for a 10-year period.

Table 1 Facilities & Activities

Megafauna Interpretation Centre	Description
Exhibition Experience	Exhibition and interactive exhibits
Shop	Sales of books and souvenirs
The Walk Experience	Walk to Dig
The Excavation Experience	No entry fees for viewing – public space
Programs	
Schools Program	Experience Centre orientation/Guided Walk /Guided Dig Experience
The Walk Escorted Tour	Experience Centre orientation/Guided Walk /Guided Dig Experience
Deep Time Tour	Aboriginal Tour & Stories – Aboriginal guide
Research	Supervised research excavation with university researchers, university research students and volunteers

2.2 Visitor Groups

Several potential visitor groups are identified, and visitor numbers estimated over a 10-year period. The groups are tourist visitors (internationals and domestic visitors) to the region; school groups; research students; and volunteers at the Dig. Assumptions used in estimating visitor numbers and spending at the Centre are contained in Appendix A.

2.3 Visitor Estimates

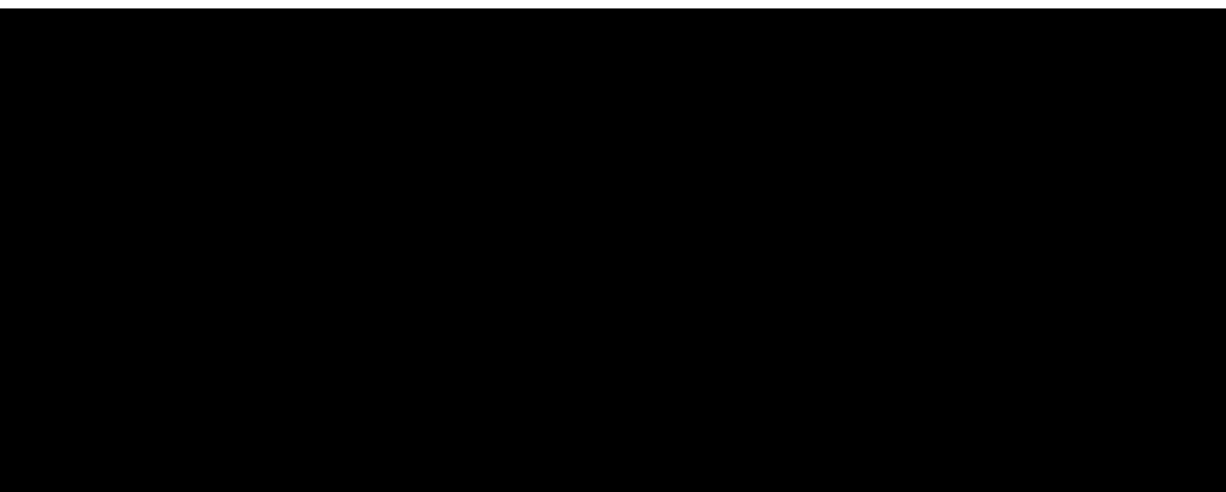
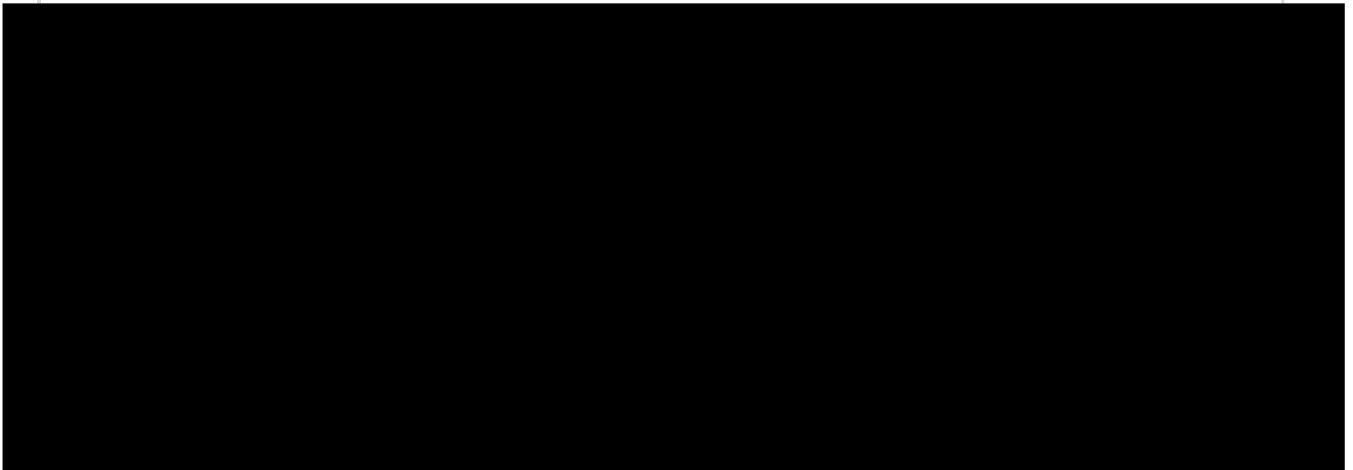
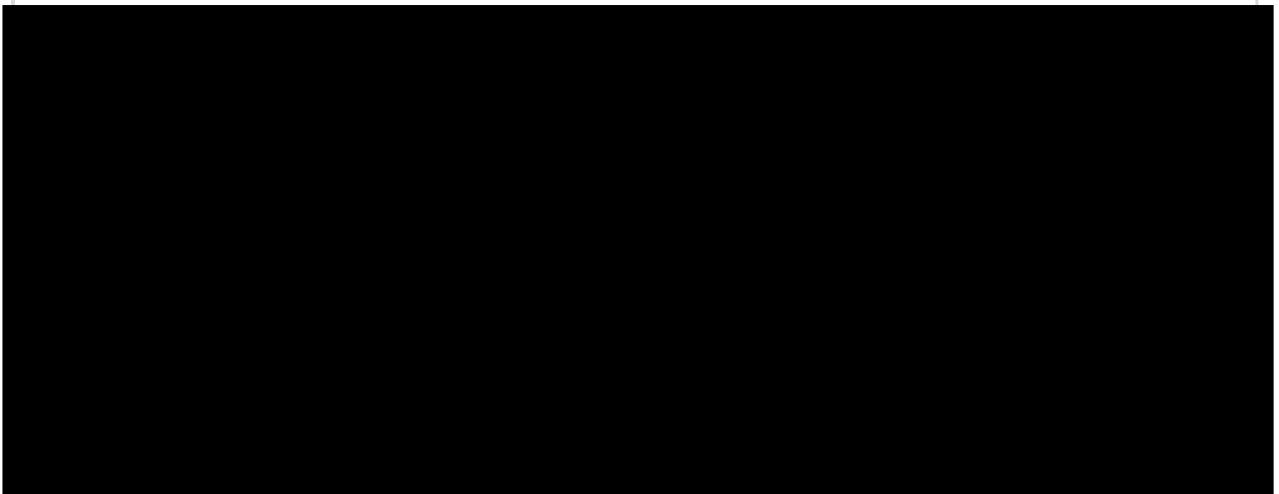


Chart 2 Megafauna Interpretation Centre Visitors - Comparison of Cases



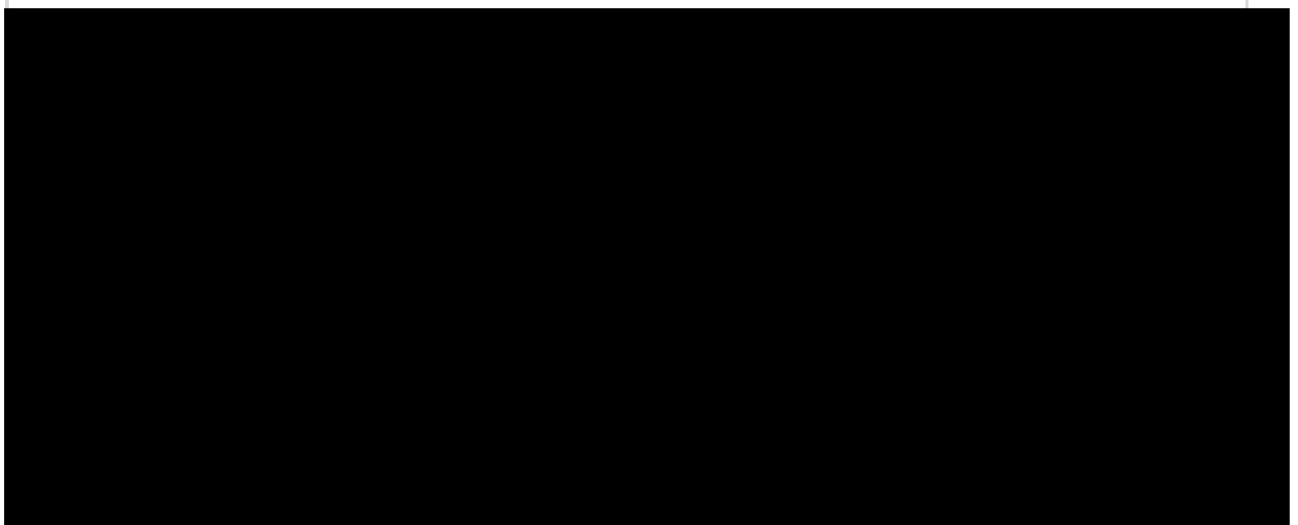
Base Case

Chart 3 Megafauna Interpretation Centre Visitor Estimates - Base Case



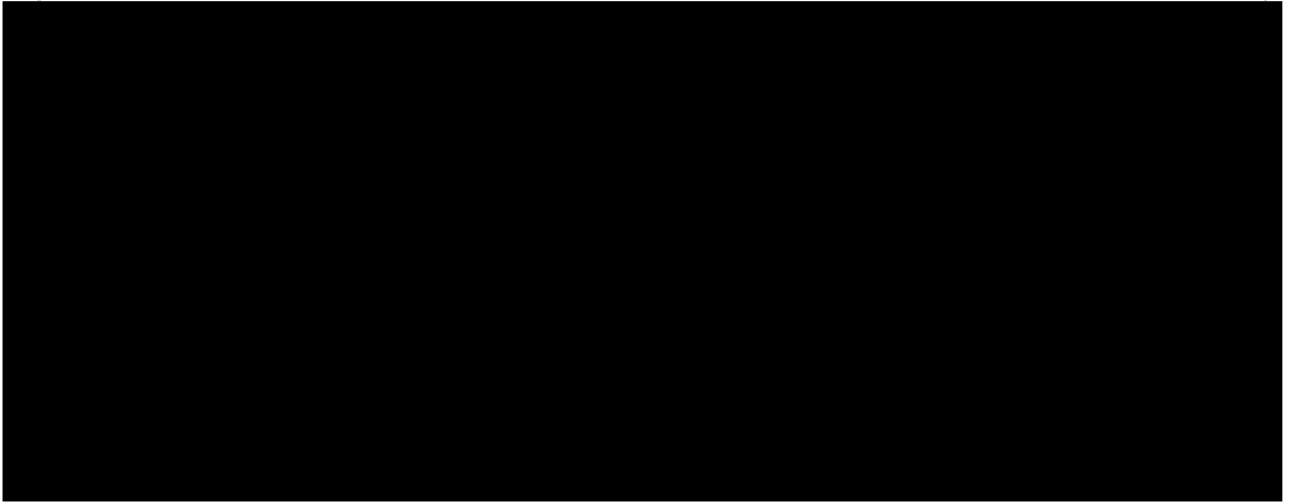
Low Case

Chart 4 Megafauna Interpretation Centre Visitor Estimates - Low Case

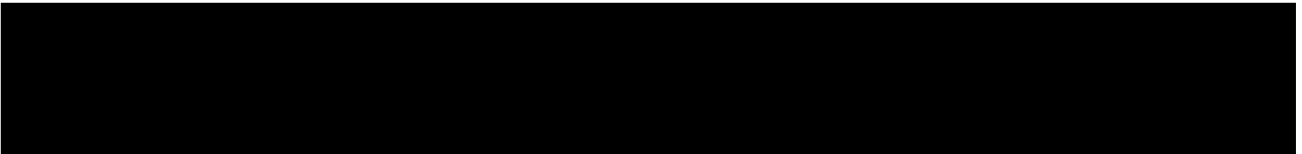


High Case

Chart 5 Megafauna Interpretation Centre Visitor Estimates - High Case



2.4 Spending by Centre Visitors



2.4.1 Base Case

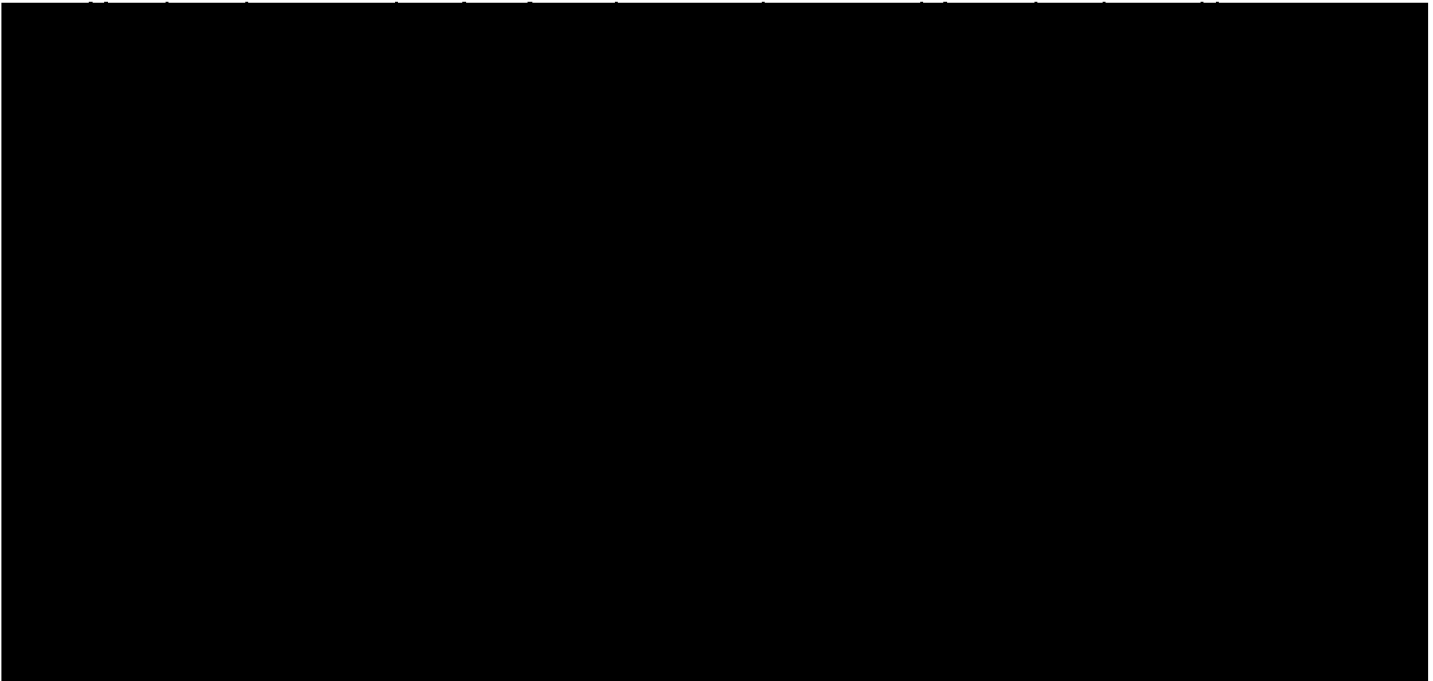


Table 3 Base Case: School Programs – Groups and Student Numbers

[illegible]

Research visitors and volunteers at the dig are the same for each of the cases.

Table 4 Base Case: Other Visitors to Excavations – Researchers & Volunteers

--

Table 5 shows the estimated expenditure by visitors (centre revenue) to the Centre on each of the services and programs.

--

Table 5 Base Case: Centre Revenue (Visitor Spending at Centre)– Years 1-10

--

2.4.2 Low Case

Table 6 shows the estimated number of annual visitors to the centre and the numbers that would purchase each service. School visits, researcher and volunteer numbers are the same as for the Base Case.

Table 6 Low Case: Visitors to the Centre and Buyers of Services– Years 1-10 (no.)

--

Table 7 shows the estimated expenditure by visitors to the Centre on each of the services and programs. [REDACTED]

Table 7 Low Case: Centre Revenue (Visitor Spending at Centre)– Years 1-10 [REDACTED]

[REDACTED]

2.4.3 High Case

Table 8 shows the estimated number of annual visitors to the centre and the numbers that would purchase each service. School visits, researcher and volunteer numbers are the same as for the Base Case.

Table 8 High Case: Visitors to the Centre and Buyers of Services– Years 1-10 (no.)

[REDACTED]

Table 9 shows the estimated expenditure by visitors to the Centre on each of the services and programs. [REDACTED]

Table 9 High Case: Centre Revenue (Visitor Spending at Centre)– Years 1-10 [REDACTED]

[REDACTED]

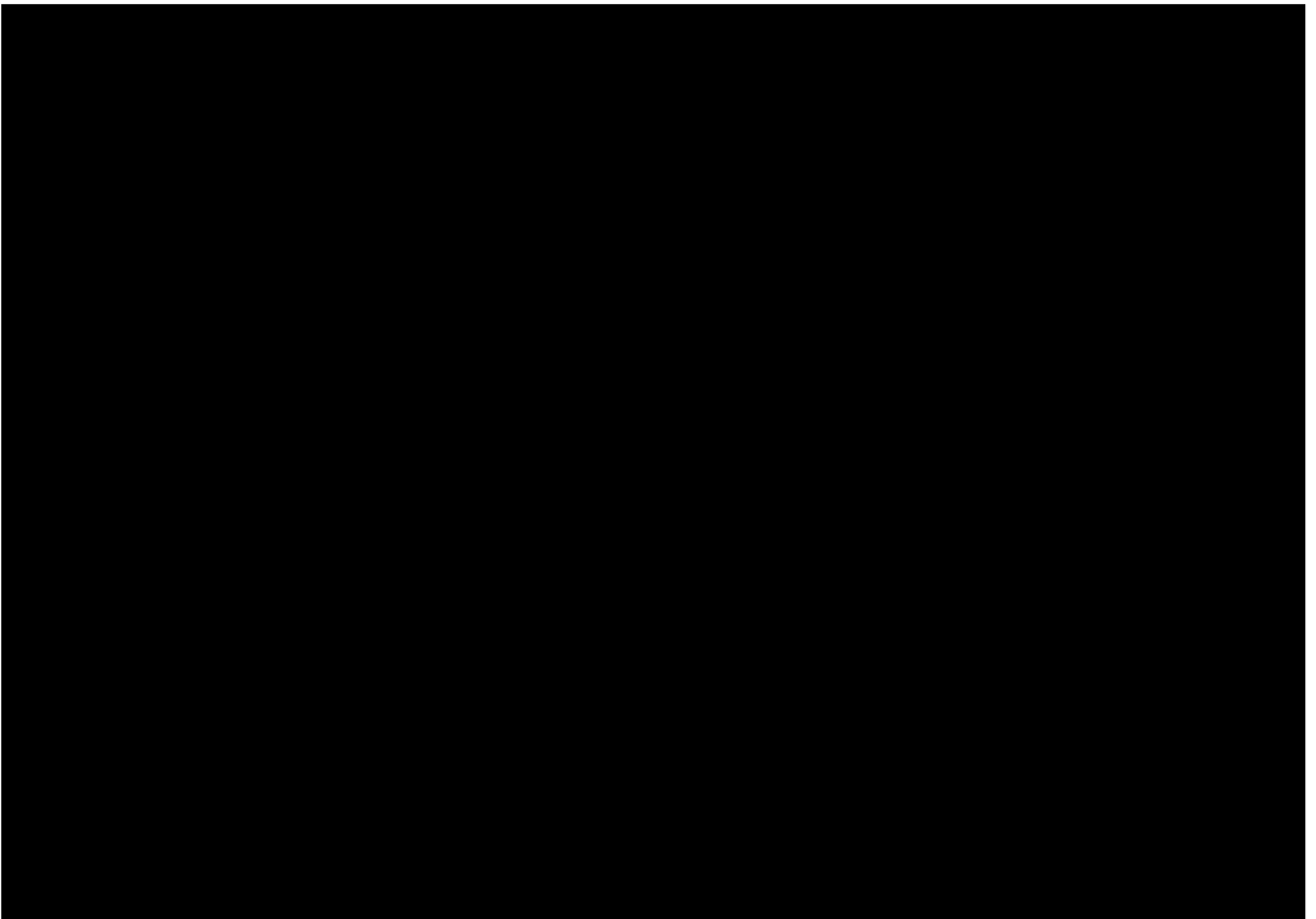
3. Financial Analysis - Megafauna Interpretation Centre

3.1 Overview – Financial Modelling

This section provides an indicative financial analysis for the Megafauna Interpretation Centre.

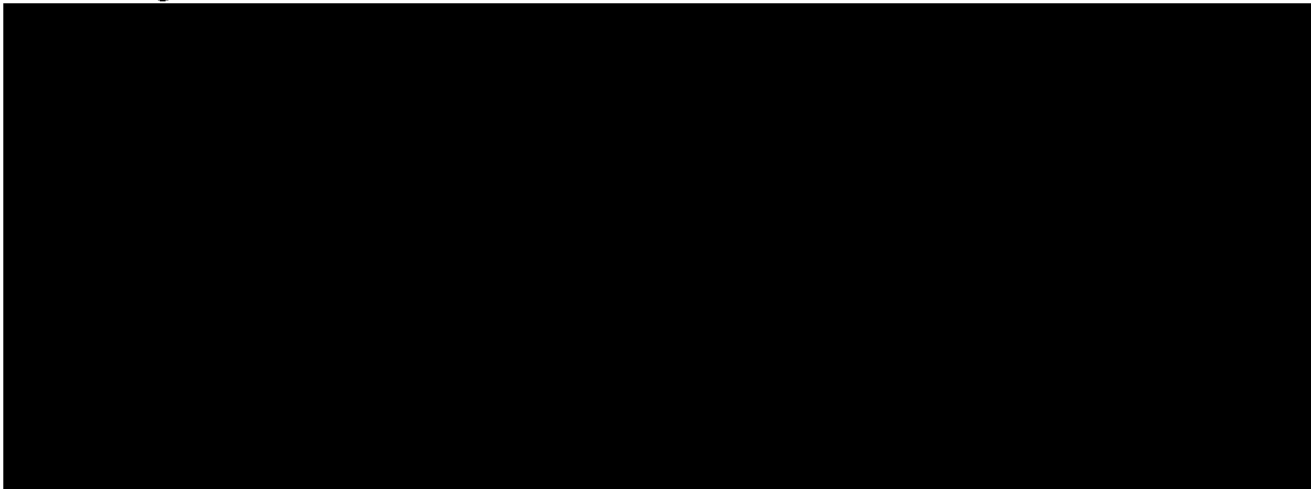
- **Revenue estimates:** are based on the assumptions and estimates outlined in Section 2 and in Appendix A.
- **Operating expenses:** are based on the assumptions outlined in Section 3.3. They are based on a combination of statutory requirements, industry benchmarks for the type of business activities proposed, and indicative estimates for the type and scale of business activities.
- **Employment:** the modelling is based on staffing requirements to deliver the Centre programs.

3.2 Centre Operating Revenue



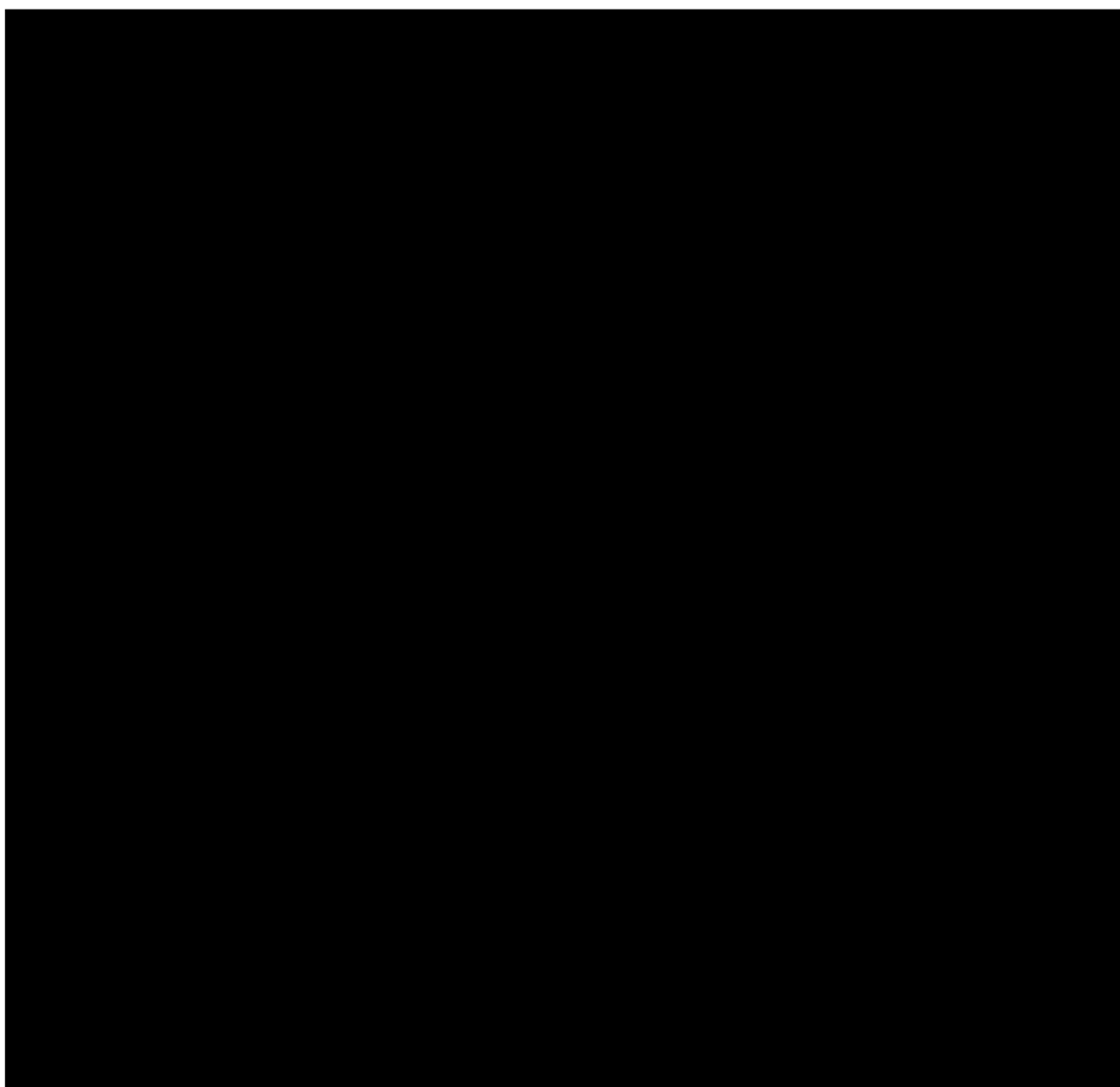
3.3 Centre Operating Costs

3.3.1 Staffing and Salaries

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3.3.2 Operating Cost Assumptions

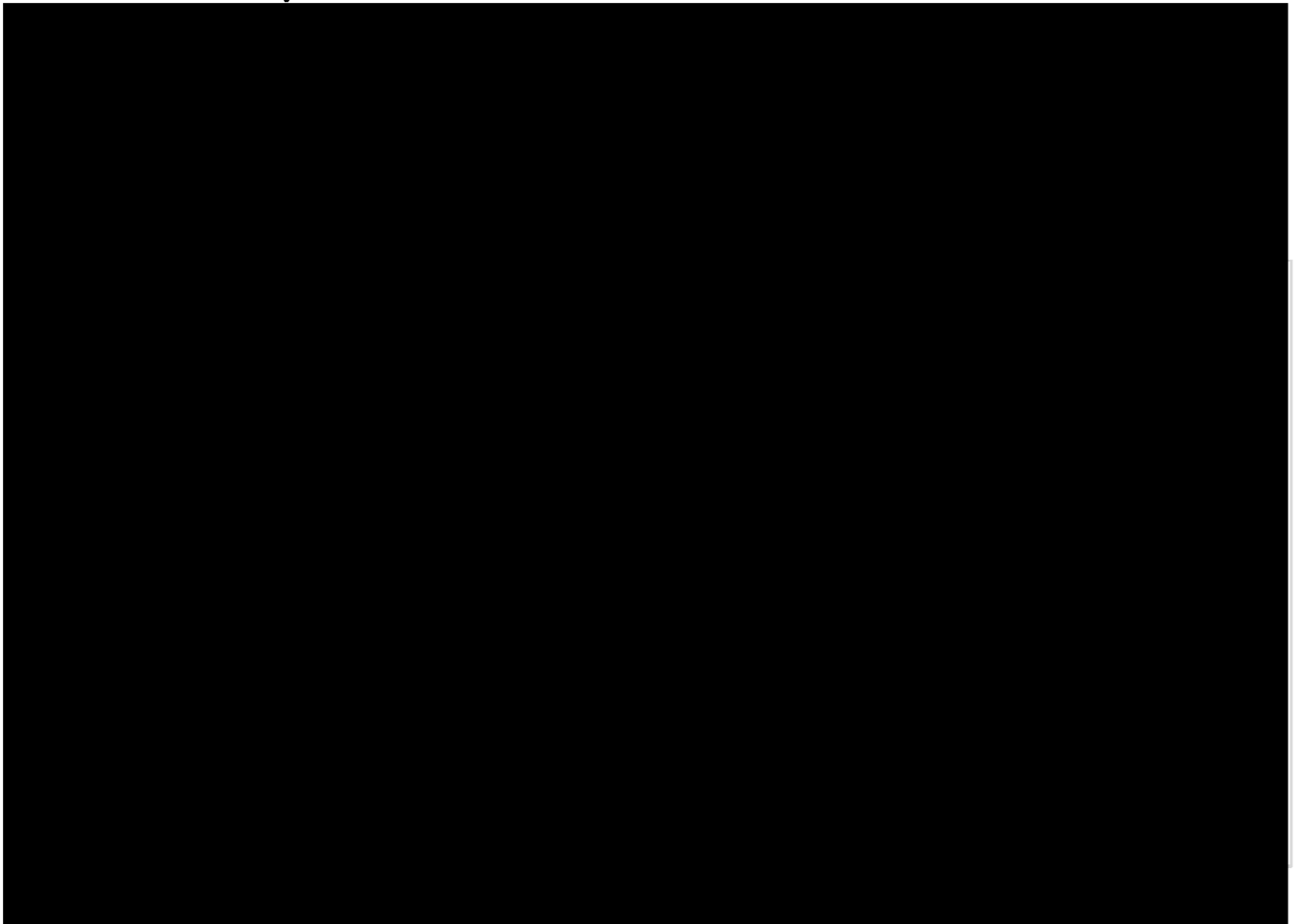
The following table shows the assumptions used in the financial modelling of operating costs for the Centre. They are based on statutory requirements and benchmarks for similar business types and operations of this scale.

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3.4 Megafauna Interpretation Centre – Financials

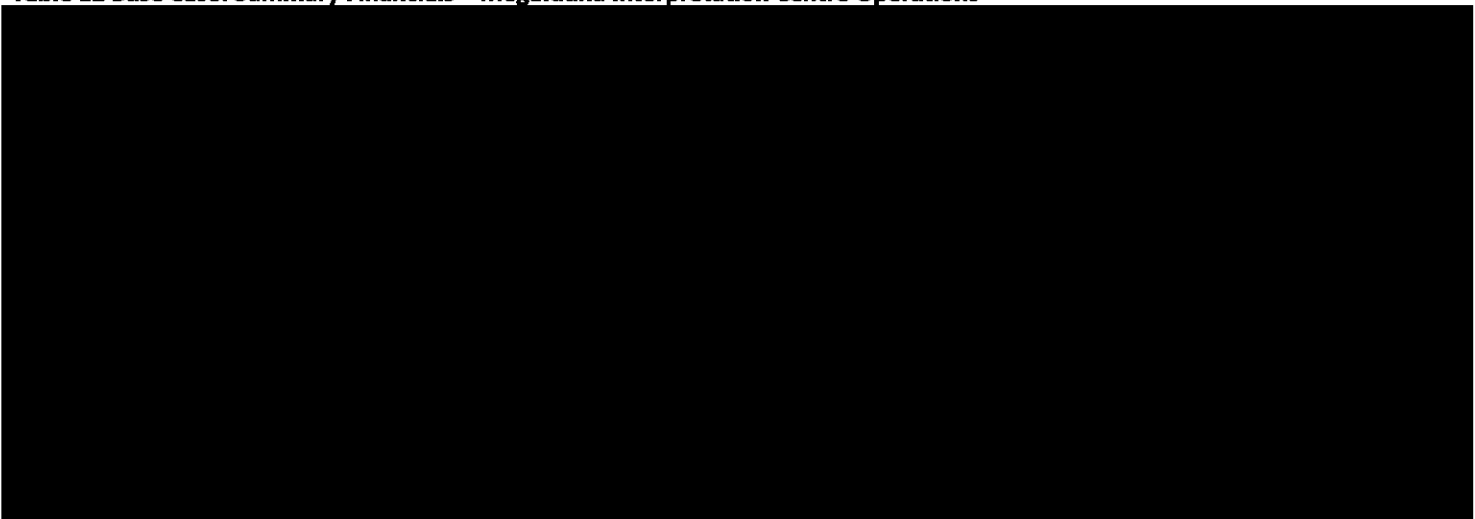
3.4.1 Operating Financials – Base Case

Base Case: Summary Financials

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The following table summarises the revenue, expenses, and net operating results for the centre.

Table 12 Base Case: Summary Financials – Megafauna Interpretation Centre Operations

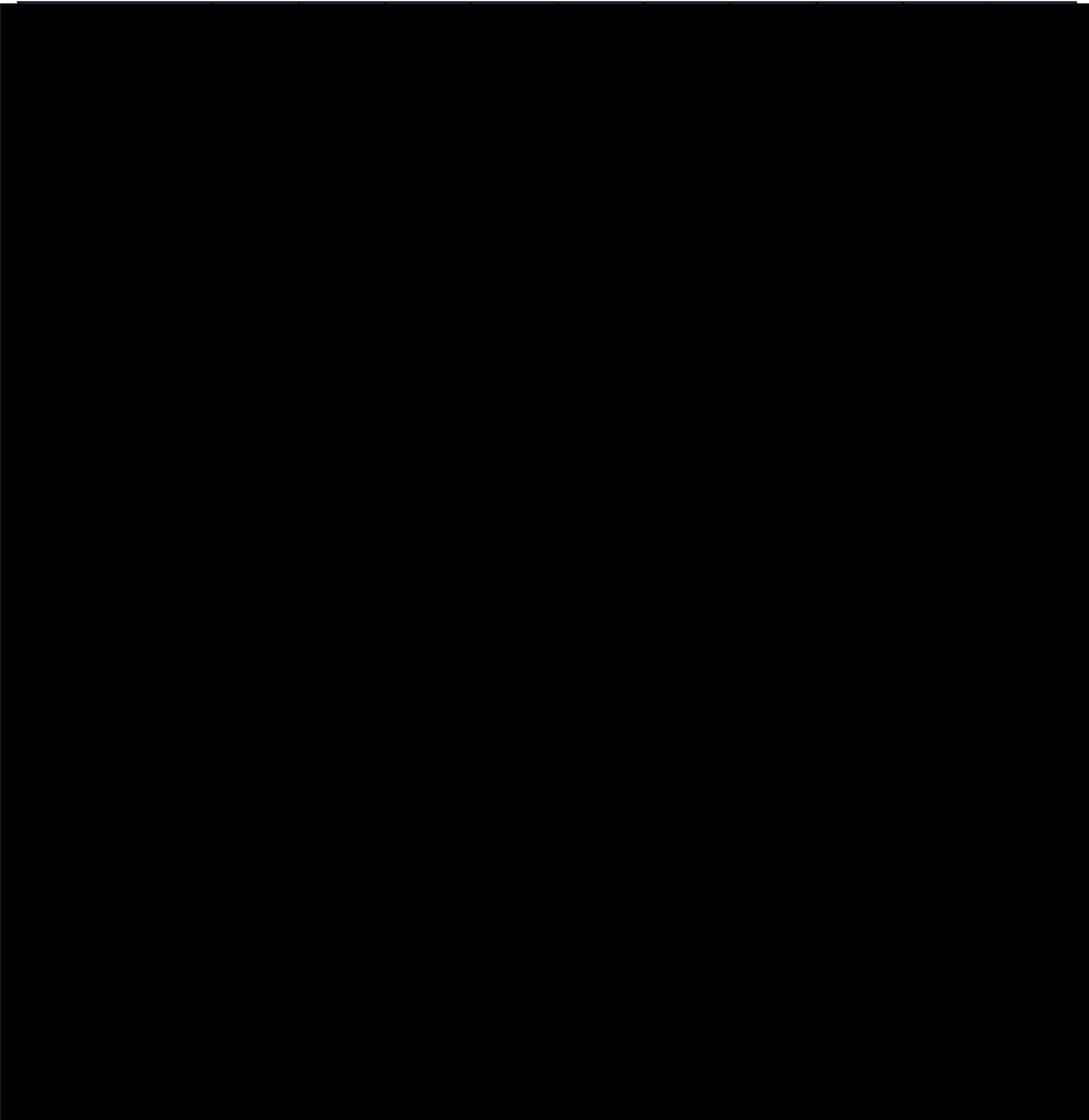
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Base Case: Operating Financials - Detailed

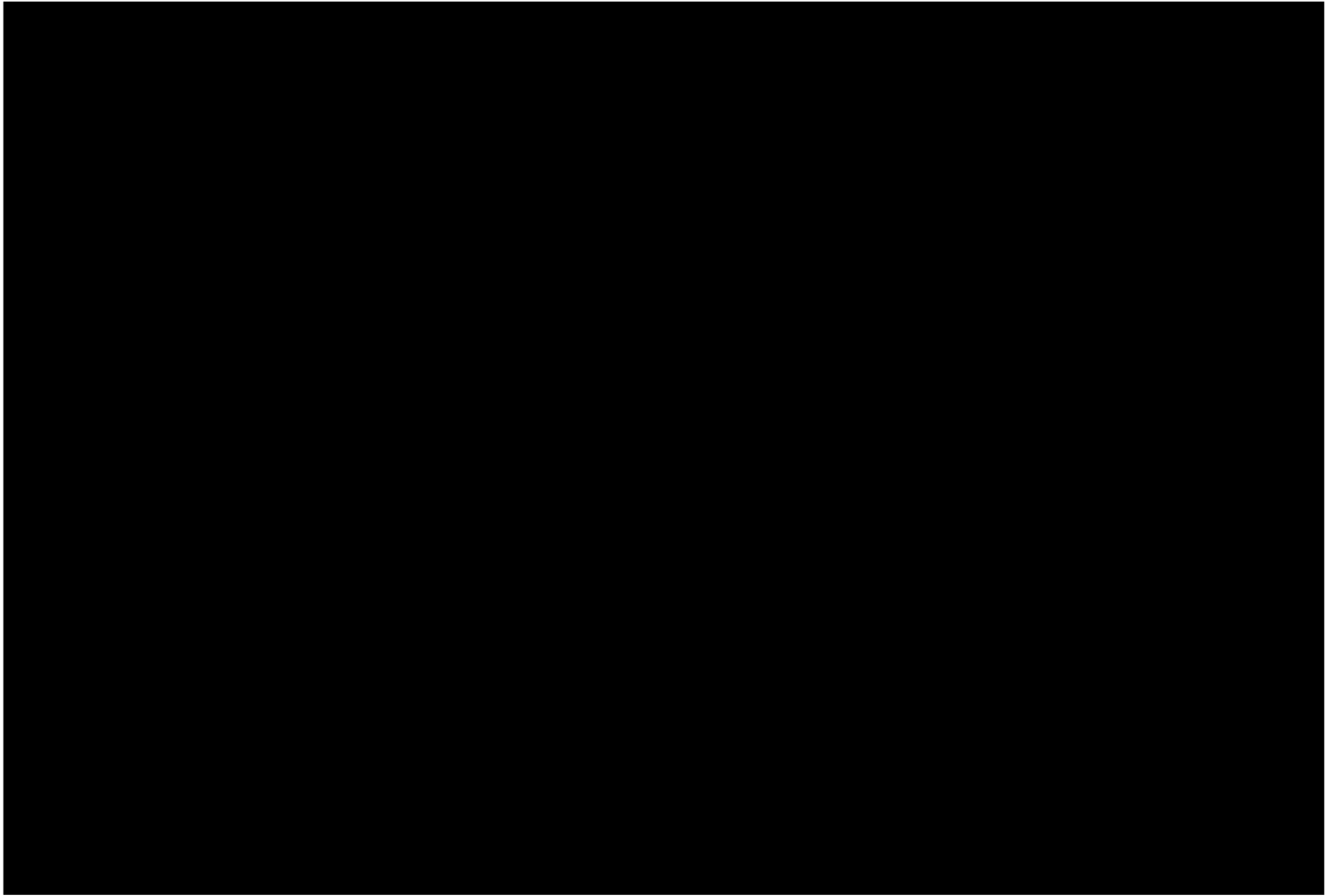
The following table shows the detailed financial estimates (Base case) for the Centre over a 10-year period of operations.

Table 13 Base Case: Megafauna Interpretation Centre Operations - Financial Estimates



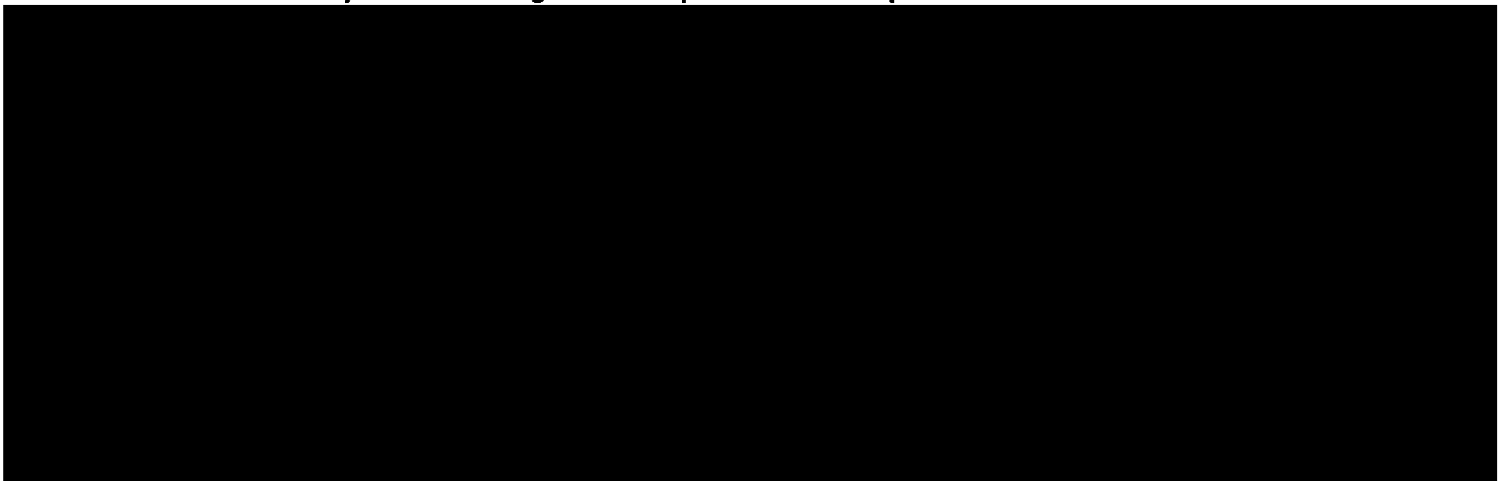
3.4.2 Operating Financials – Low Case

Low Case: Summary Financials

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The following table summarises the revenue, expenses, and net operating results for the centre.

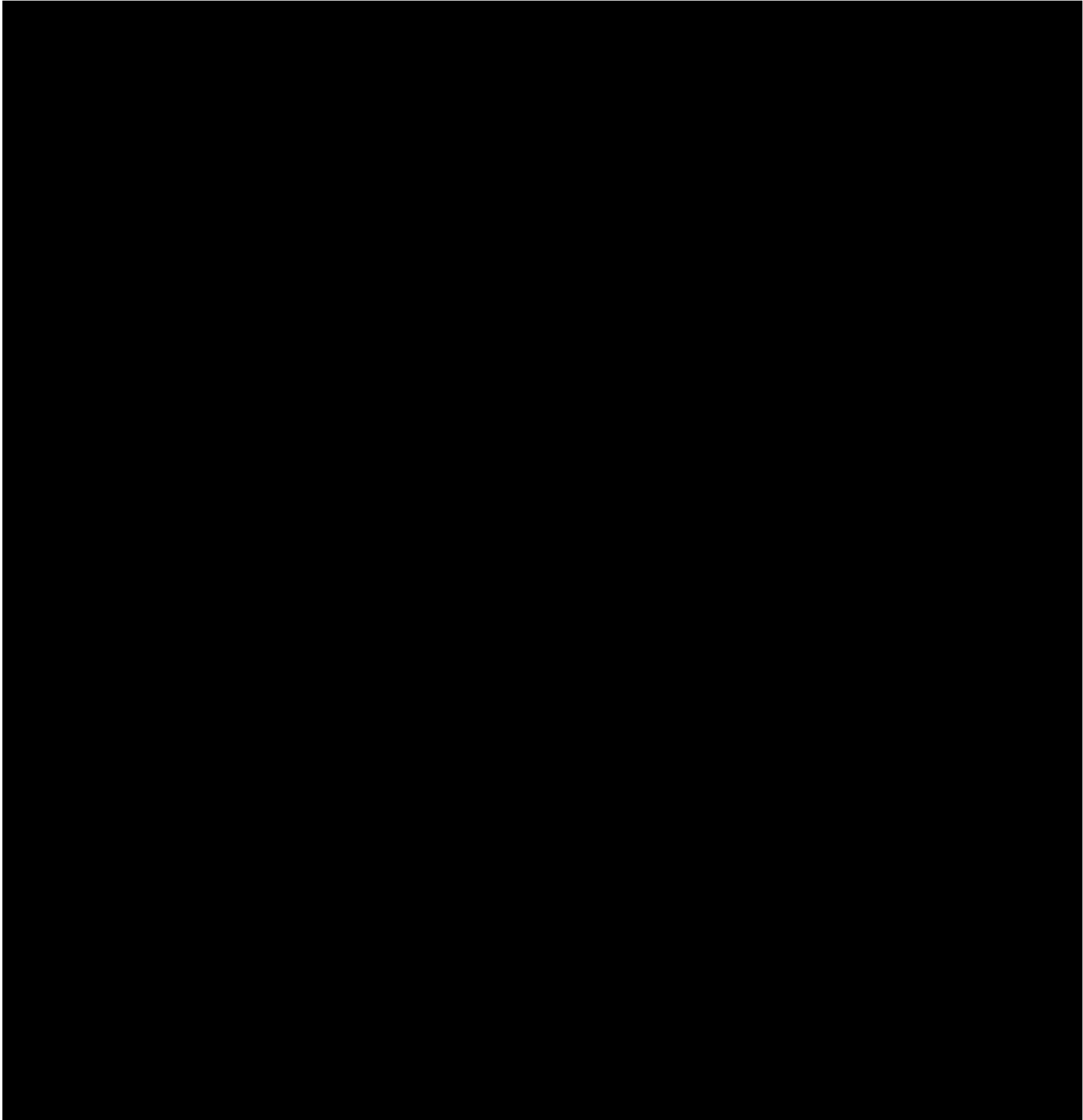
Table 14 Low Case: Summary Financials – Megafauna Interpretation Centre Operations

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Low Case: Operating Financials - Detailed

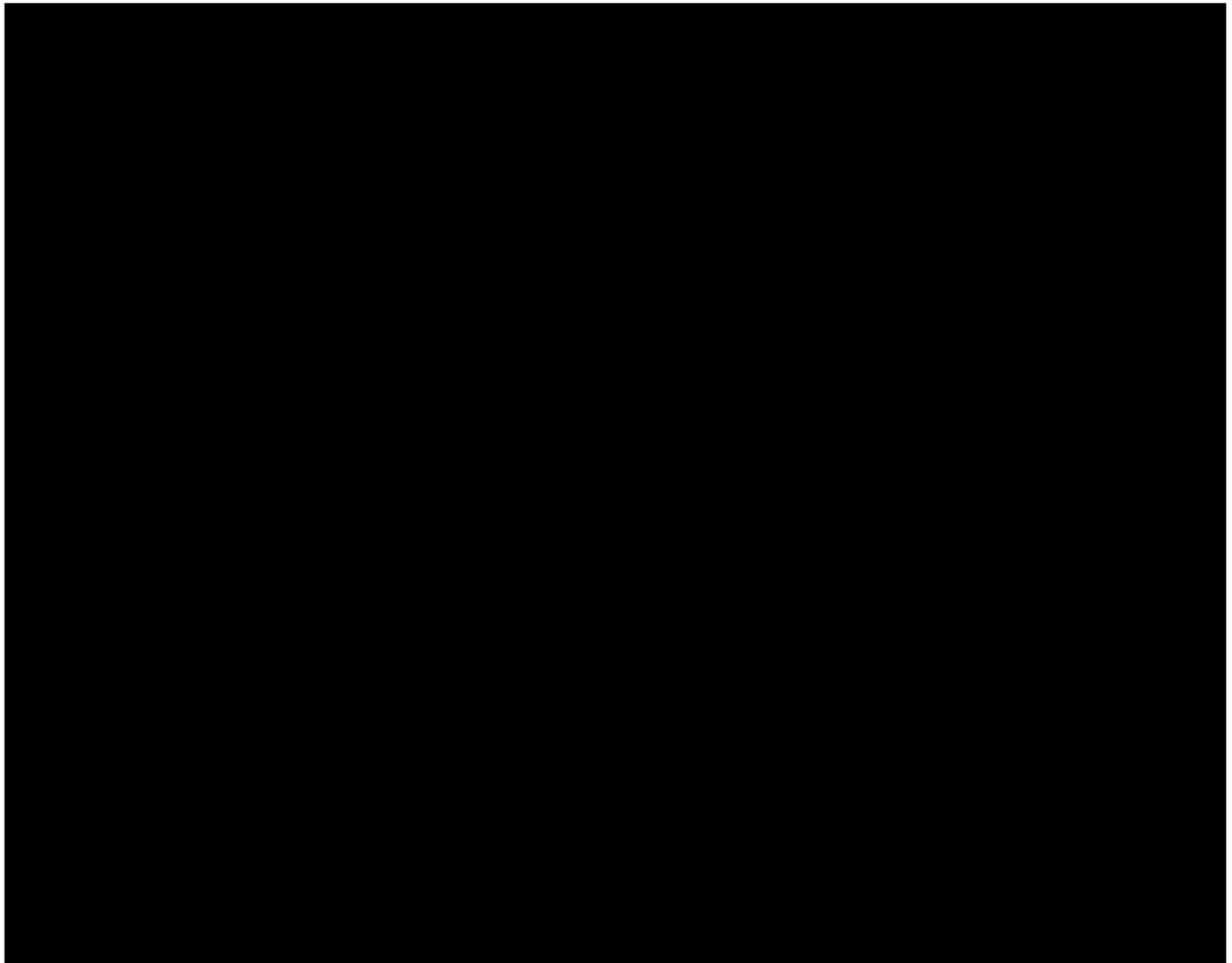
The following table shows the detailed financial estimates (Low Case) for the Centre over a 10-year period of operations.

Table 15 Low Case: Megafauna Interpretation Centre Operations - Financial Estimates



3.4.3 Operating Financials – High Case


High Case: Summary Financials

A large rectangular area of the page is completely blacked out, indicating that the content has been redacted. This area likely contained the summary financial data for the High Case.

The following table summarises the revenue, expenses, and net operating results for the centre.

Table 16 Summary Financials – Megafauna Interpretation Centre Operations – High Case

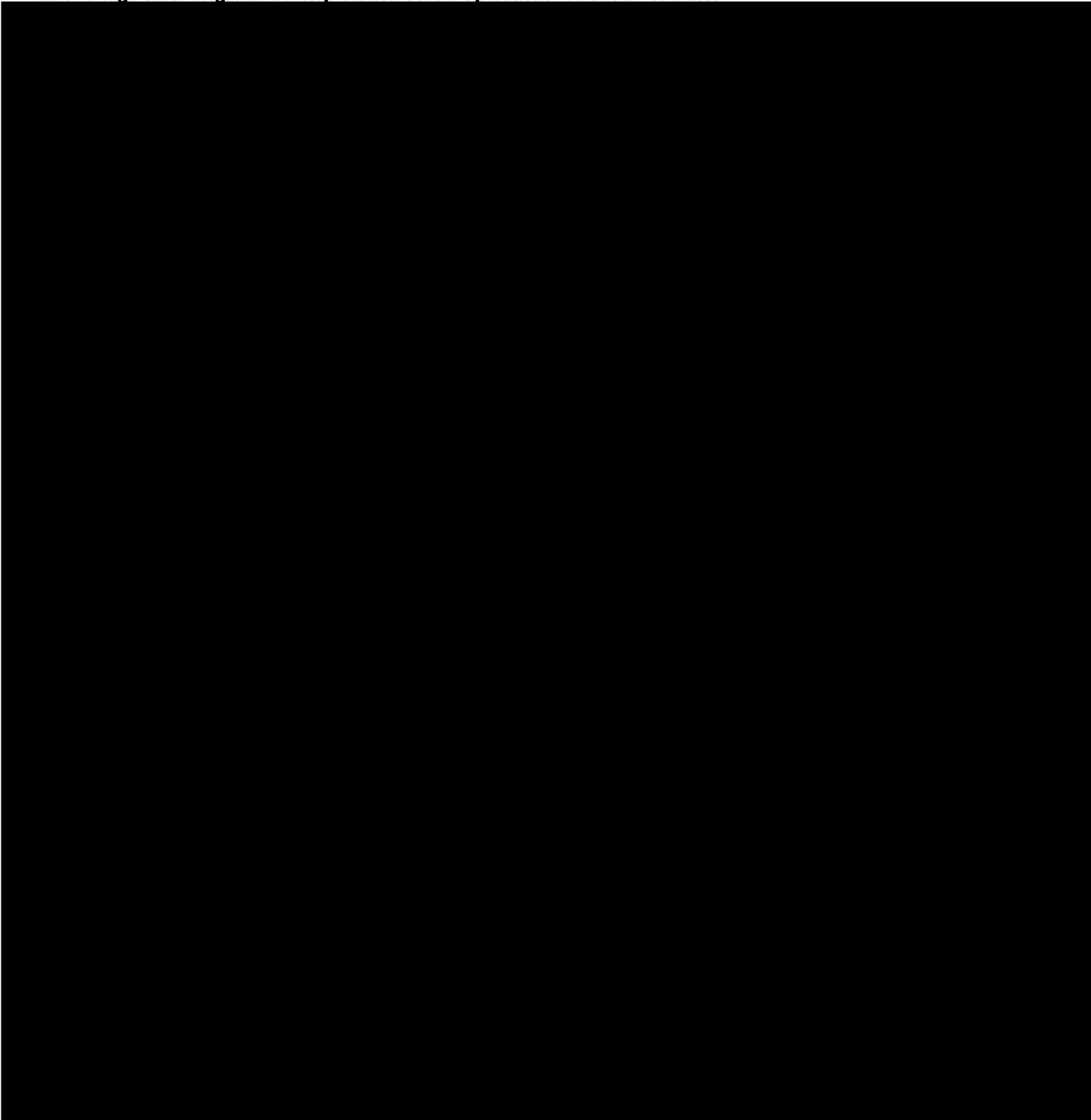
A large rectangular area of the page is completely blacked out, indicating that the content has been redacted. This area likely contained the detailed summary financial data for the Megafauna Interpretation Centre Operations in the High Case.

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High Case: Operating Financials - Detailed

The following table shows the detailed financial estimates (High Case) for the Centre over a 10-year period of operations.

Table 17 High Case: Megafauna Interpretation Centre Operations - Financial Estimates



4. Economic Impact Assessment

The economic impacts of the development of the Megafauna Interpretation Centre are modelled for both the construction phase and the operations phase.

4.1 Construction Phase

4.1.1 Construction Costs

Table 18 Megafauna Interpretation Centre – Onsite Construction and Design

4.1.2 Economic Impacts - Construction Phase Centre Development

Chart 10 Megafauna Centre - Construction Phase Jobs (FTE no.)

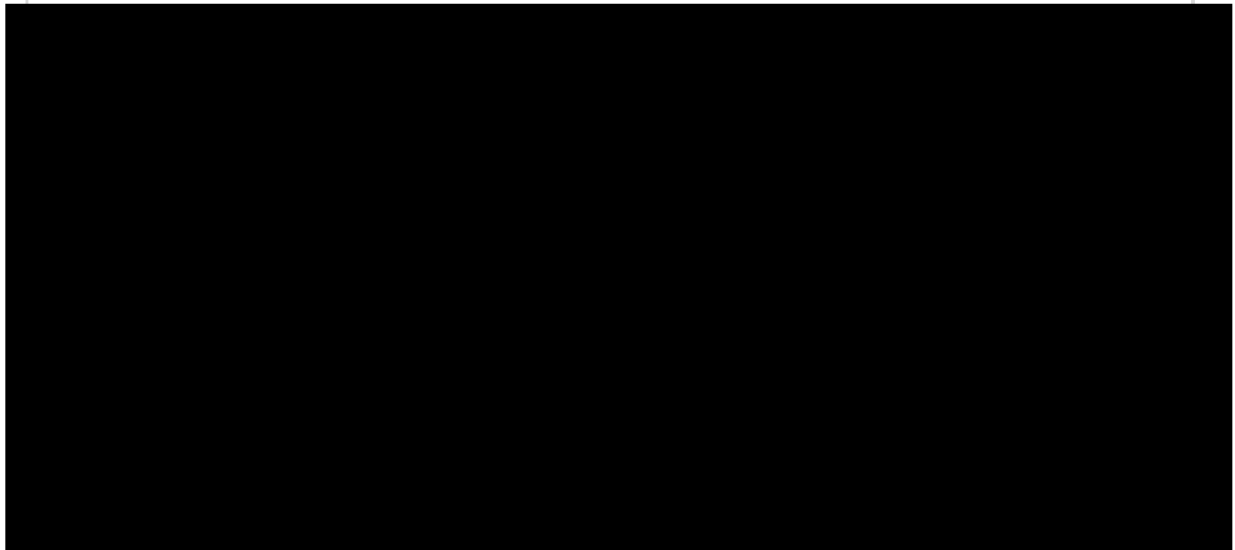


Table 19 Construction Phase –Megafauna Interpretation Centre - FTE Jobs Generated (no.)

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The following chart shows the increase in regional income generated during the construction of the Centre

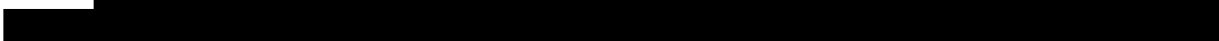
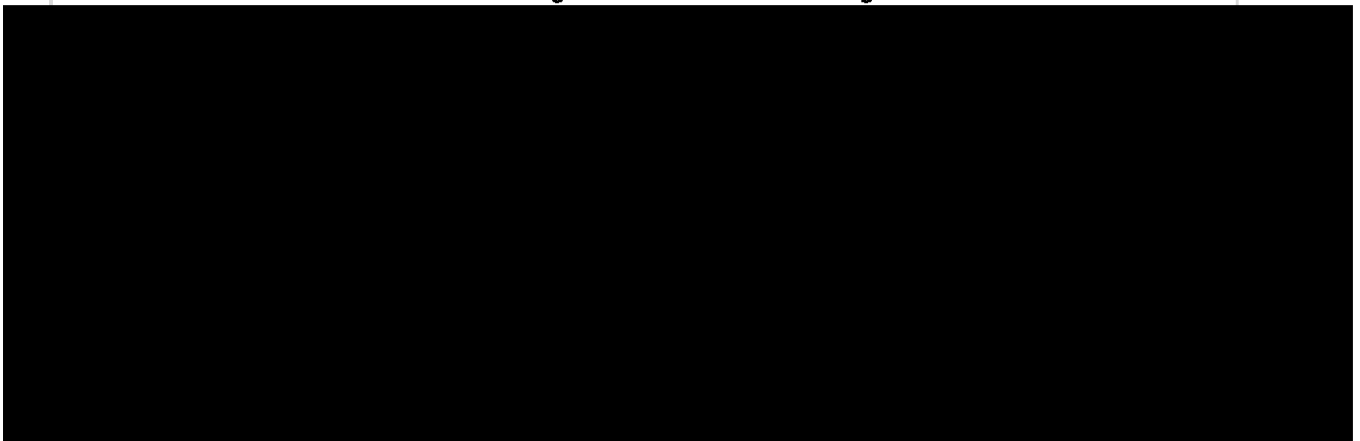


Chart 11 Construction Phase - Megafauna Centre - Increase In Regional Income



⁹ This assumes the construction workforce would come from the local government area and broader region.

4.2 Operations Phase

The operations phase economic impacts of the Centre are driven by the expenditure (outside the Centre) of visitors during their visit to the region. MCA's regional impact model is used to estimate the employment and income impacts. The model allocates spending across relevant industry sectors and takes account of the significant shares of the gross spending by visitors/users, which leaks out of the region.¹⁰ The analysis is for the Base Case visitor numbers.

4.2.1 Employment Impacts

The chart below shows the spending levels over a 10-year period.

Table 20 Spending in Region by Visitors to Centre (Base Case)

Jobs Generated

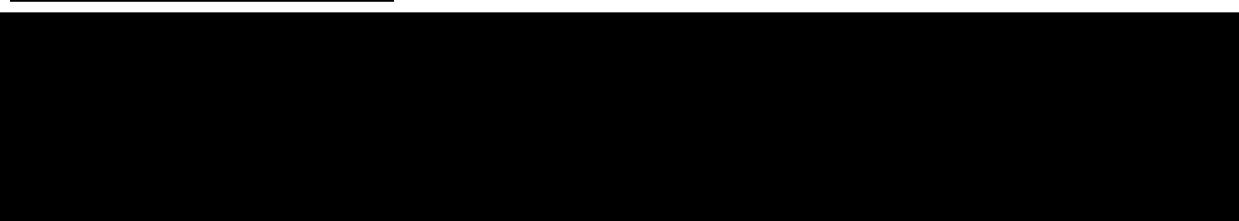
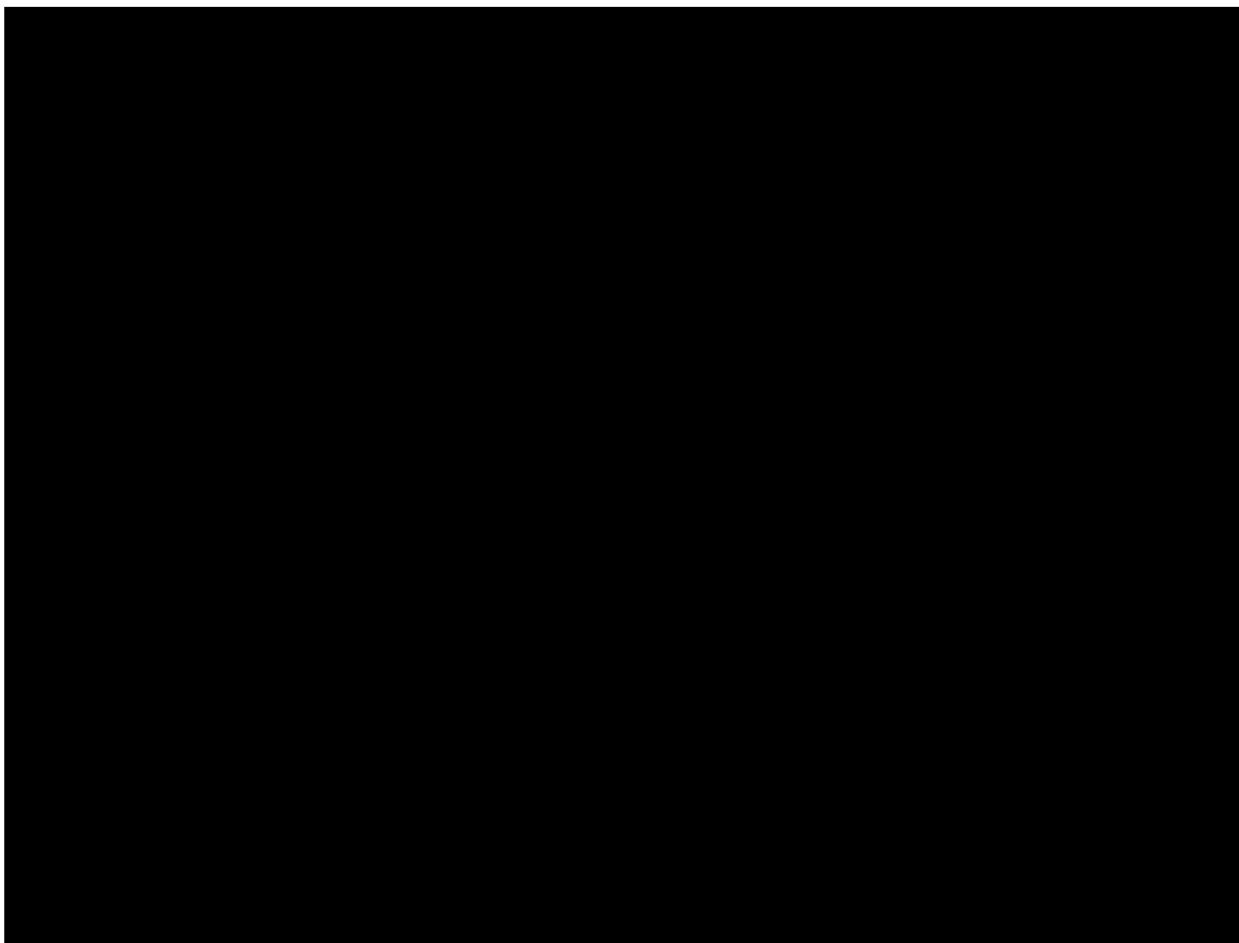
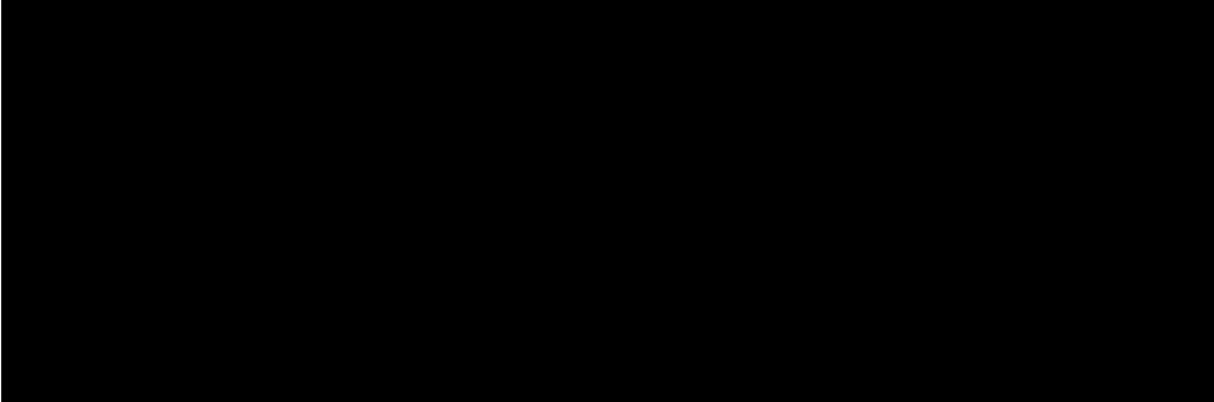
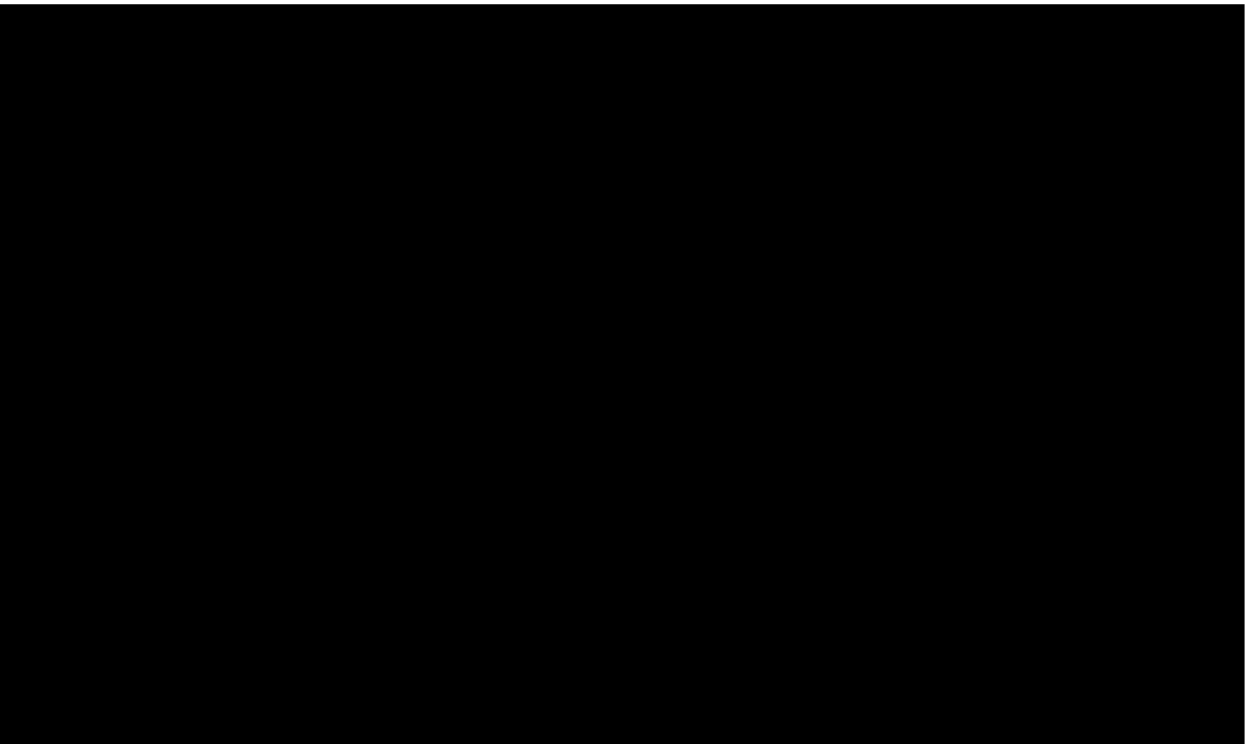


Table 21 Total Jobs Generated by Centre Years 1-10 (FTE no.)

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4.2.2 Regional Income Impacts

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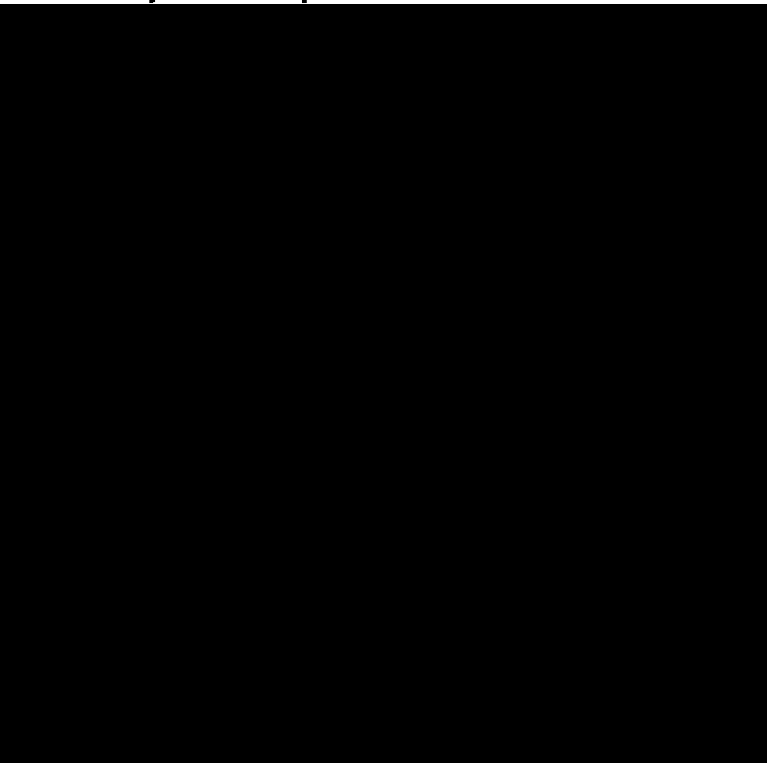
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4.3 Benefit Cost Analysis

The benefits and costs of are analysed for a 10-year period.

4.3.1 Centre Costs - 10 Years

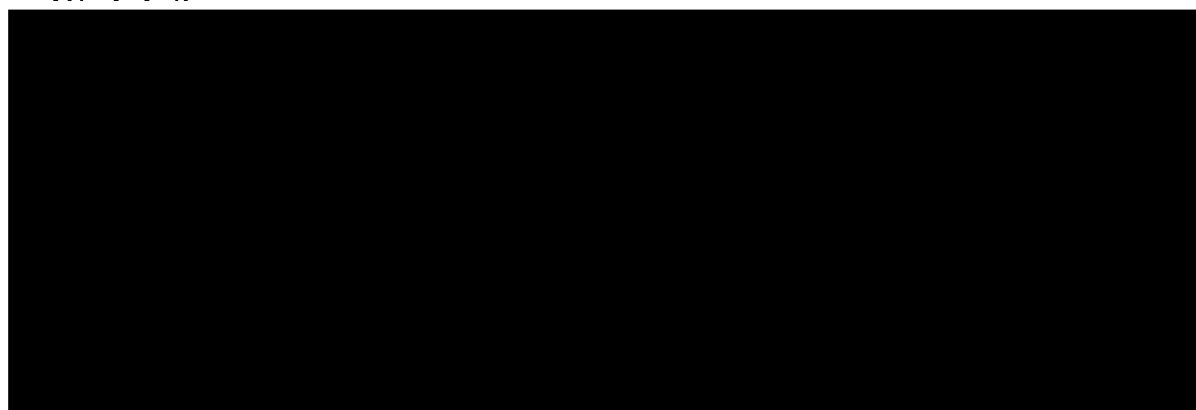
Table 22 Project Cost Components

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4.3.2 Measuring Benefits -10 Years

The measured benefits of the Centre comprise: the value of the services used by visitors at the Centre (Base Case) ; the increase in regional income generated by their other spending in the region; and the income of centre employees. These are all measured over a 10-year period.

Direct Benefits

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Increase in Regional income

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Table 24 Increase in Regional Income Generated - 10 Year Period

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Total Benefits of Centre

--

Table 25 Benefits of Centre – 10 Years Operations (Base Case)

--

4.3.3 Benefit Cost Analysis

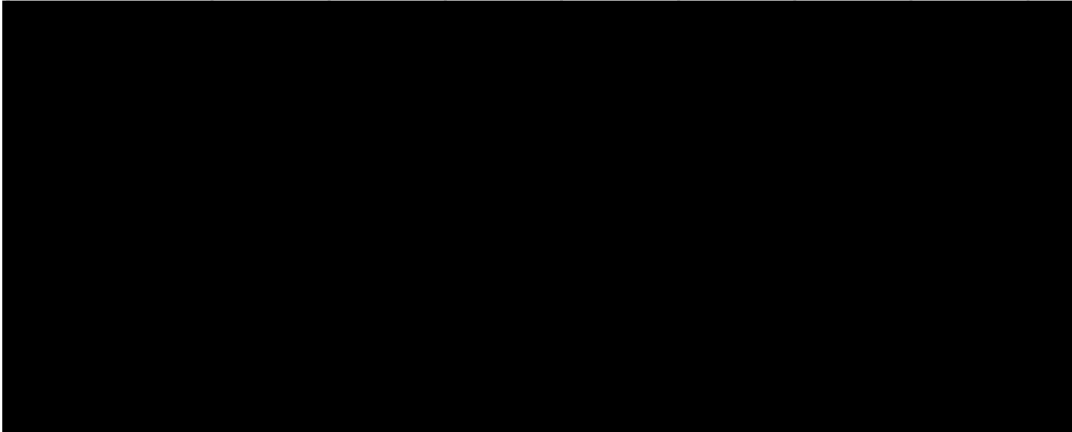
The following table shows the benefits and costs of the operations of the Centre over a 10-year period.

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Table 26 Benefit and Cost Analysis – Centre Development - 10 Years

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Chart 14 Benefit Cost Ratio (BCR) Megafauna Interpretation Centre



Appendix A: Modelling Assumptions – Megafauna Interpretation Centre Business Analysis

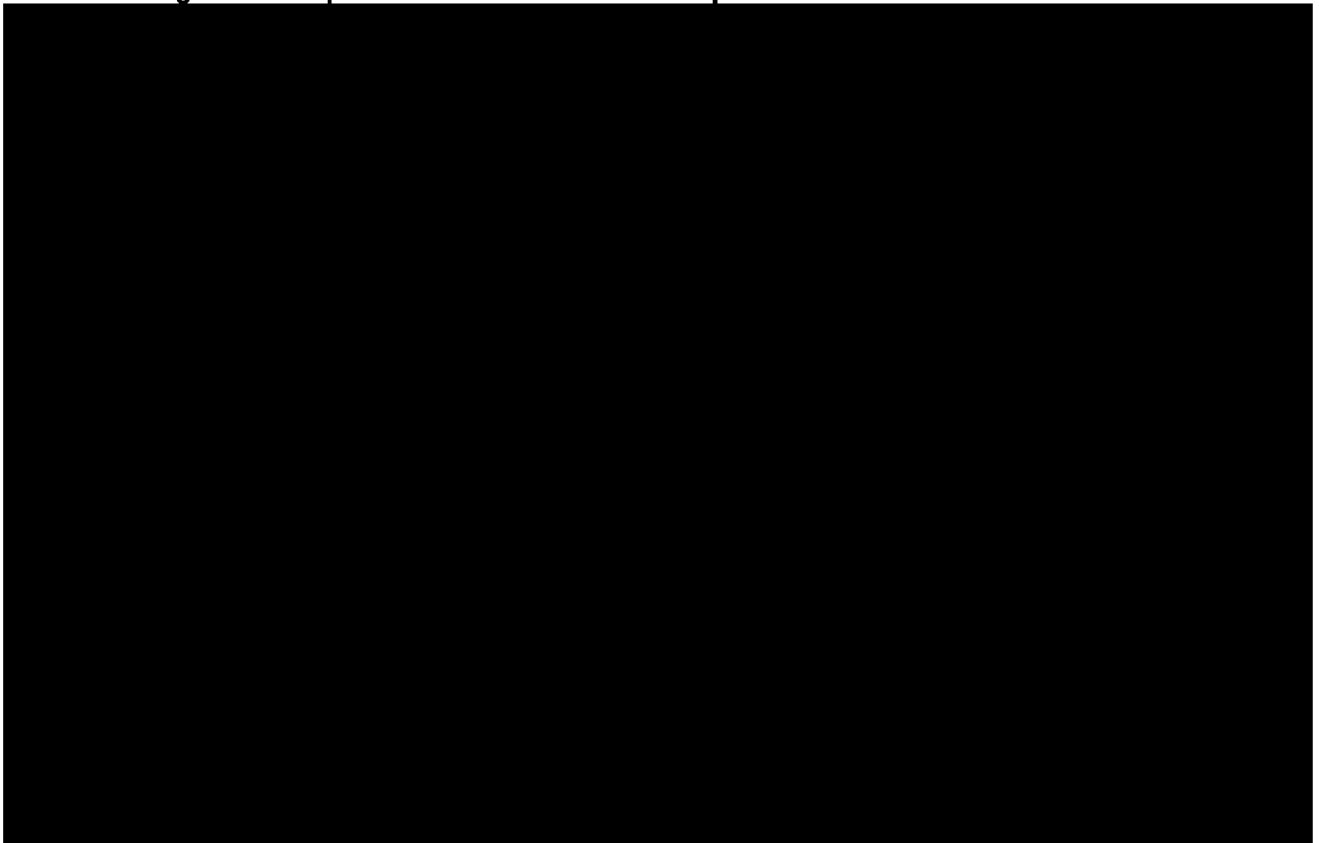
This appendix shows the assumptions used in the modelling of visitors and spending.

A.1 Visitor Assumptions

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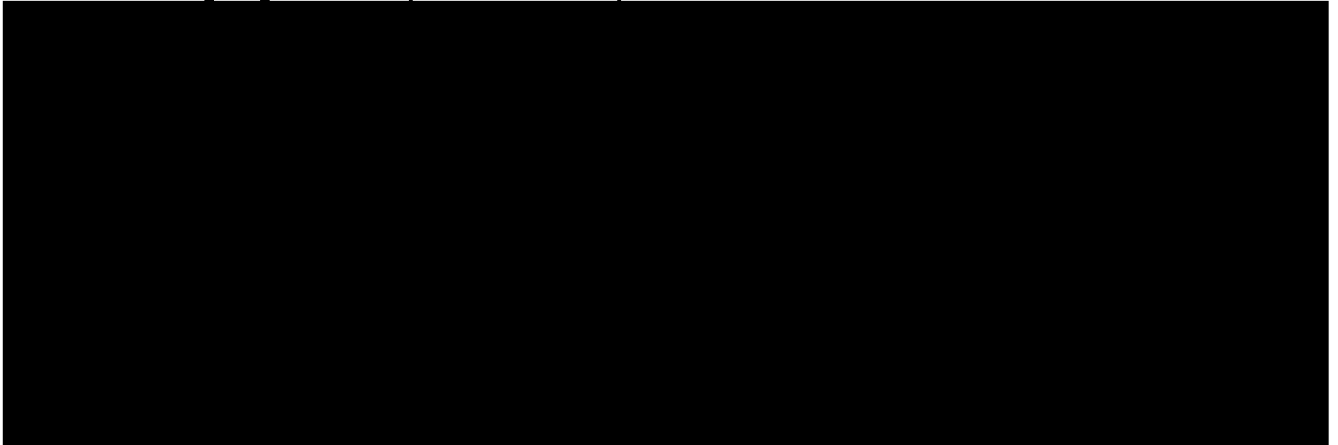
A.2 Revenue Assumptions

Table A.2 Megafauna Interpretation Centre – Revenue Assumptions

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A.3 Staffing Assumptions

Table A.3 Staffing Megafauna Interpretation Centre Operations



APPENDIX C: SPECIES AND
TAXA LIST

C

Class	Family	Genus	Species	Common Name	Mega fauna? (>40kg)	Regionally extinct?	Entirely extinct?	Relative abundance	Classic Site: channel fill	Classic Site: bone bed	South Site: bone bed	Mayne Site: bone bed	Source	Comments
Reptilia	Scincidae	?	sp.	Skink	No	No	No	Very Rare			x		Van Huet, 1999	
Aves	Casuariidae	<i>Dromaius</i>	sp.	Emu	~Yes (marginal)	No	No	Rare		x	x		Van Huet, 1999	
Aves	Dromornithidae	<i>Genyornis</i>	sp.	"Thunderbird"	Yes	Yes	Yes	Very Rare	x	x			Van Huet, 1999	
Aves	Dromornithidae	<i>Genyornis</i>	<i>newtoni</i>	"Newton's Thunderbird"	Yes	Yes	Yes	Very Rare					Gerdztz, MV, 2020	locality listed at MV as "Lancefield Swamp, J8"
Aves	Rallidae	<i>Tribonyx</i>	<i>mortierii</i>	Tasmanian Native Hen	No	Yes	No	Very Rare			x		Van Huet, 1999	
Mammalia	Dasyuromorphi	<i>Thylacinus</i>	<i>cynocephalus</i>	Thylacine Tiger	No	Yes	Yes	Rare	x		x	x	Van Huet, 1999	
Mammalia	Dasyuromorphi	<i>Sarcophilus</i>	sp.	Australian Devil	No	Yes	No	Very Rare	x				Van Huet, 1999	
Mammalia	Dasyuromorphi	<i>Sarcophilus</i>	<i>laniarus</i>	"Greater Australian Devil"	No	Yes	Yes	Very Rare			x		Gerdztz, MV, 2020	
Mammalia	Diprotodontida	<i>Diprotodon</i>	<i>optatum</i>	"Marsupial Rhino"	Yes	Yes	Yes	Rare	x	x	x	x	Van Huet, 1999	
Mammalia	Diprotodontida	<i>Zygomaturus</i>	<i>trilobus</i>	"Marsupial Hippo"	Yes	Yes	Yes	Very Rare			x	x	Van Huet, 1999	
Mammalia	Diprotodontida	<i>Palorchests</i>	sp.	"Marsupial Tapir"	Yes	Yes	Yes	Very Rare					Gerdztz, MV, 2020	locality listed at MV as "Lancefield Swamp (presumed)"
Mammalia	Vombatidae	<i>Vombatus</i>	sp.	Wombat	No	No	No	Very Rare	x		x	x	Van Huet, 1999	
Mammalia	Vombatidae	<i>Phascolonus</i>	sp.	"Giant Wombat"	Yes	Yes	Yes	Very Rare			x		Gerdztz, MV, 2020	
Mammalia	Vombatidae	<i>Phascolonus</i>	<i>gigas</i>	"Colossal Wombat"	Yes	Yes	Yes	Very Rare					Gerdztz, MV, 2020	locality listed at MV as "Lancefield Swamp (presumed)"
Mammalia	Thylacoleonida	<i>Thylacoleo</i>	<i>carnifex</i>	"Marsupial Lion/Drop-bear"	Yes	Yes	Yes	Very Rare		x			Van Huet, 1999	
Mammalia	Potoroidae	<i>Aepyprymnus</i>	<i>rufescens</i>	Rufous Rat-kangaroo	No	Yes	No	Very Rare	x				Van Huet, 1999	
Mammalia	Potoroidae	<i>Potorous</i>	sp.	Potoroo	No	No	No	Very Rare			x		Van Huet, 1999	
Mammalia	Potoroidae	<i>Propleopus</i>	sp.	"Giant Rat-kangaroo"	Yes	Yes	Yes	Very Rare	x				Van Huet, 1999	
Mammalia	Macropodidae	<i>Macropus</i>	<i>dorsalis</i>	Black-striped Wallaby	No	Yes	No	Very Rare	x				Van Huet, 1999	
Mammalia	Macropodidae	<i>Macropus</i>	<i>rufogriseus</i>	Red-Necked Wallaby	No	No	No	Very Rare		x			Van Huet, 1999	
Mammalia	Macropodidae	<i>Macropus</i>	<i>titan</i>	"Giant Grey Kangaroo"	Yes	Yes	Yes	Very Common	x	x	x	x	Van Huet, 1999	
Mammalia	Macropodidae	<i>Cf Onychogale</i>	sp.	Nail-tail Wallaby	No	Yes	No	Very Rare			x		Van Huet, 1999	
Mammalia	Macropodidae	<i>Cf Petrogale</i>	sp.	Rock Wallaby	No	Yes	No	Very Rare			x		Van Huet, 1999	
Mammalia	Macropodidae	<i>Prionotemnus</i>	sp.	"Greater Wallaby"	No	Yes	Yes	Very Rare			x		Van Huet, 1999	
Mammalia	Macropodidae	<i>Protemnodon</i>	sp.	"Long-necked Giant Wallaby"	Yes	Yes	Yes	Uncommon	x	x	x	x	Van Huet, 1999	
Mammalia	Macropodidae	<i>Wallabia</i>	sp.	True Wallaby	No	No	No	Very Rare					Gerdztz, MV, 2020	locality listed at MV as "Lancefield Swamp"
Mammalia	Macropodidae	<i>Thylagale</i>	sp.	Pademelon	No	No	No	Very Rare	x		x		Van Huet, 1999	
Mammalia	Macropodidae	<i>Procoptodon</i>	<i>rapha</i>	"Lesser Procoptaroo"	Yes	Yes	Yes	Very Rare			x		Van Huet, 1999	
Mammalia	Macropodidae	<i>Sthenurus</i>	<i>orientalis</i>	"Eastern Sthenuroo"	Yes	Yes	Yes	Very Rare			x		Gerdztz, MV, 2020	
Mammalia	Macropodidae	<i>Sthenurus</i>	<i>andersoni</i>	"Anderson's Sthenuroo"	Yes	Yes	Yes	Very Rare			x		Gerdztz, MV, 2020	
Mammalia	Macropodidae	<i>Sthenurus</i>	<i>occidentalis</i>	"Western Sthenuroo"	Yes	Yes	Yes	Very Rare	x	x	x		Van Huet, 1999	
Mammalia	Macropodidae	<i>Simotherurus</i>	<i>maddocki</i>	"Maddock's Short-faced Sthenuroo"	Yes	Yes	Yes	Very Rare			x		Gerdztz, MV, 2020	
Mammalia	Macropodidae	<i>Simotherurus</i>	<i>gilli</i>	"Gill's Short-faced Sthenuroo"	Yes	Yes	Yes	Very Rare			x		Gerdztz, MV, 2020	
Mammalia	Muridae	<i>Mastacomys</i>	<i>fuscus</i>	Broad-toothed Native Rat	No	Yes	No	Very Rare	x		x		Van Huet, 1999	
Mammalia	Muridae	<i>Rattus</i>	sp.	Native Bush Rat	No	No	No	Very Rare			x		Van Huet, 1999	