



Exploring Newcastle's Potential as an Industrial Heritage Tourism Destination

Rohini Chatterjee¹

Karine Dupre²

Abstract

Coal, a prominent factor in the origins and growth of the European settlement of Newcastle (New South Wales, Australia) is not a part of the current city's narration. The city in some ways is still governed by the mines of the penal settlement but a tourist may remain oblivious to this when they visit. This paper looks at the tourism potential of Newcastle's mining heritage. It introduces the factors considered in terms of a heritage site, the importance of memories related to heritage structures, the role the industrial landscape plays in a city's social and economic life as well as rehabilitation aspects. This research was done based on qualitative and quantitative methodology drawing on a comparative analysis of case studies. The detailed analysis of four case studies on industrial heritage tourism was executed based on heritage value, transformed spaces, the businesses the sites support, factors of authenticity, site areas, revenue generation and average footfall. This research helps to identify the positive traits of Newcastle in terms of mining heritage tourism and opens the possibility of future research.

Keywords

Newcastle (New South Wales, Australia) • Industrial heritage • Tourism • Mines

1 **Correspondence to:** Rohini Chatterjee (Architecture), Griffith University, Faculty of Architecture, Gold Coast, Australia. E-mail: rohini.chatterjee@griffithuni.edu.au ORCID: 0000-0003-3063-9844

2 Karine Dupre (Assoc. Prof.), Griffith University, Faculty of Architecture, Gold Coast, Australia. E-mail: k.dupre@griffith.edu.au ORCID: 0000-0002-1936-0597

To cite this article: Chatterjee, R., & Dupre, K. (2019). Exploring Newcastle's potential as an industrial heritage tourism destination. *Journal of Tourismology*. Advance online publication. <https://doi.org/10.26650/jot.2019.5.1.0017>

Introduction

Newcastle in New South Wales (Australia) has had a rich history since its inception in 1797. It was initially a convict settlement, then a free coal town with railways, shipyards and also allied steel industries which helped the city to grow to how we know it today (Murcott, 1892-1901; Hardy, 2015; Eklund, 2005). Currently the city is largely reliant on the health and education sector, whilst the local government is still trying to attract more inhabitants and is developing new schemes to promote the city (NCC, 2016 a & b).

However, despite the city showing and embracing the markings of history through its buildings and industries, less has been done to address the convict-made structures and mines which could open potential to develop a new heritage tourism scheme. This is quite surprising considering the maze of underground mines existing in the downtown and surrounding suburbs of Newcastle that are notorious for creating financial and logistical hurdles in the construction of high rises in the city (NCC, 2018). Construction and redevelopment of the downtown area is restricted and property damages have been reported owing to subsidence due to mining in this area (Page, 2014).

Admittedly, the government is currently in the process of locating and mapping the old convict mines to accurately update the mine subsidence maps (NCC, 2018) and local community initiatives, such as *The Hunter Living Histories*, have also tried to gather more knowledge on the Newcastle mines. Looking at the mines as a possible source of income (and increase of population through tourism) has not been fully investigated in Newcastle, although there are many examples of commendable practices of heritage tourism specifically related to mining heritage.

Therefore, this research looks at the tourism potential for Newcastle's mining heritage. The paper is divided into four sections. The first section introduces a literature review on the importance of memories related to heritage and some existing examples of old mines that have been converted into tourism destinations. This is followed by the methodology section, which also includes the Newcastle context. The third section concerns the analysis of the featured case studies prior to the section's discussion and conclusion.

Literature review

Several scholars have discussed the significance of collective memory. Specifically, Halbwachs (1992) wrote about the 'memory' of people who visit places and how the physical surroundings leave a lasting impact on the individuals occupying these spaces. Spaces become a part of the users and the memories they create. The users build a relationship with spaces without realising it (Halbwachs, 1992). Bachelard

also explained the importance of built forms for the human psyche in the *Poetics of Space* (1994), emphasising how the structures people use remain with the people long after they have been destroyed, and how the experiences people have in them cannot be destroyed even if the physical structures themselves can (Bachelard, 1994). Pallasmaa (2009) re-centred heritage as a tangible aspect of memory and as a means for societies to preserve memory. Places of historic, cultural and regional significance are demarcated by preserving a visible tangible aspect (Pallasmaa, 2009).

Heritage is clearly a legacy from our past, a living, integral part of today's life, and, as almost anywhere else in the world, the Australian government recognises heritage and has enacted laws for its conservation. As per the Environment Protection Biodiversity Conservation Act in Australia, the heritage value of a place is defined as including, "A place's natural and cultural environment having aesthetic, historic, scientific or social significance of other significance, for current and future generations of Australians" (EPBC, 1999). In addition two successive Australian-focused analyses, respectively based on surveys conducted in 2005 (Armitage and Irons, 2013) and 2010 (McDonald, 2011) confirmed the strength of support within the community for a wide range of heritage considerations including education, identity and culture.

However, given the relative size of Australia (the planet's sixth largest country), it could be argued that heritage has not yet reached its full significance (and hence protection and conservation), when looking at the number of Australian properties listed on the world heritage list: there are 19 of them, which represent 1.73% of the UNESCO list (WHC, 2018). This could be explained by the lack of envisioning the positive relationships between heritage conservation and economic benefit, as found in the 2005 survey (Armitage and Irons, 2013). Others, such as Carter and Bramley (2002), propose that this discrepancy might come from a lack of integration into the management process.

Specifically, regarding the benefits of heritage, there is a wide range of scholarship demonstrating what heritage places can positively deliver, both at the individual as well as at the broader level of society overall (AGPC, 2018; Armitage and Irons, 2013; Lichfield, 1997). In the same way, several scholars have already discussed and demonstrated at length the economic and social benefits of heritage in the context of tourism (Dupre, 2018, Gravari-Barba, 2013; Goodall, 1993). The latter for instance underlined the symbiotic relationship between heritage and tourism, since heritage sites generate tourism and tourism generates income to assist with the upkeep of those sources whose economic rationales have declined or disappeared (Goodall, 1993). This effect may be short term or long term depending on the reuse of the sites. In the region of Wales (UK), the government is taking efforts to make the

locals aware of the benefits of tourism and community tourism. The benefit of this being that the money the tourists will spend on local attractions will stay within the local community, safeguarding local jobs and encouraging regeneration (Williams, 2013). This is affirmed by Chand (2013), in his study on how residents perceived the benefits of heritage and support tourism development in Pragpur, India. He shows that tourism can generate good income, develop the local economy, and bring about other possible benefits such as employment and local access to outside goods and services (Chand, 2013). Furthermore, his study is a good example of pro-poor tourism because it embraces the different cultural realities rather than hiding them. This example takes into consideration the local scenario and promotes it with application of other limitations like the income difference between the visitors and the locals.

Tourism is also a great opportunity and alternative for areas in decline such as former industrial sites (Beaumont 2018; Gravari-Barbas 2013; Del Pozo et al. 2012; Dupre, 2010). For instance, it can bring a higher standard of living (Lichfield, 1997) and indirect or passive use value (Throsby, 2012). It can also provide a new source of economic activity with enormous potential for social and business development and job creation (DOIIS, 2018); yet every area is unique and the driving force behind heritage tourism is different. UNESCO recognises this and tries to generate awareness in their meetings regarding the positive influence of a UNESCO world heritage site (Garrod, 2014). Within this context, it has long been researched that authentic experiences and places are key-factors for successful tourism development (Taylor, 2010; Theobald, 2005; Leary and Sholes, 2000; Bell, 1999).

Importantly, authenticity is not bound to one type of heritage tourism (or even tourism at large) or to one type of expression. Places and voices convey authenticity while transitioning industrial heritage sites into tourist attractions (Leary and Sholes, 2000). This latter aspect is emphasised in the research conducted by McQueen (2012) who concludes that creating awareness about the mines and creating mining tourism contributes in educating the community and new generations to understand the need of mining that we have as of today. This is confirmed with the research conducted by Misztal (2003), who demonstrates how the re-integration of old industrial structures with modern amenities has revitalised the structures and given the people a part of their history back in their daily lives in the Warsaw region (Poland). Weaver (2011) observed a similar phenomenon with the industrial heritage of Lowell and Leeds, once forgotten, now proudly projected. The factor of authenticity ushers in a need for a relatable link to the visitors when they visit a site.

Furthermore, industrial heritage also calls for a variety of experiences. Leary and Sholes (2000) show how curators and historians of industrial museums feel the need to conserve places but also the voices that attract and inform the public. They say

that merely focusing on the surviving items and treating them as display pieces is not enough, inclusion of the factory complexes, landscapes, and entire communities should be a part of the voice which tells the story. Recovering industrial experiences calls for immersion in the details of everyday life. The physical features of textile mills, for example, differ from those of steel plants in scale, sounds, smells, and other sensory details. The people who laboured in different environments speak of the specific characteristics of their work (Leary & Sholes, 2000).

Lastly, regarding the specific topic of mines, it is obvious that all mines might not transition into heritage and tourism destinations. Some are used as garbage dumps (Ward, 1989) or recreational areas (Mallo et al, 2010), clearly generating income and jobs and supporting communities nearby but overlooking the heritage aspect. Others, however, are interesting, especially for this research, as they are places that transitioned to heritage tourism. For example, Hallet (2002) researched the Wieliczka Salt Mine, which is one of the oldest continuously operating industrial ventures in Poland, having started production in 1290. He demonstrated how the government has utilised the heritage value of the salt mine that is still being operated to create awareness, promote business and generate income from an active mine (Hallett, 2002).

Another interesting case study is the failure of the Big Pit (Wales), which exemplifies what a mine could face regarding the footfall of tourists. The Big Pit closed as a coal mine in 1980 and was reopened as a “working” mining museum in April 1983 (Wanhill 2000). However, it was quickly realised that two challenges needed to be addressed. The first one concerned the mine accessibility as not everybody could or would want to take advantage of the underground experience which involved wearing five kilos of safety equipment (Wanhill 2000). The disabled, elderly, young children, and claustrophobics were thus excluded. The other challenge concerned the existing surrounding competition: nearby other cheaper tourism attractions existed, which were not properly considered when the mine was reopened (Wanhill 2000).

In conclusion, there is no doubt that heritage and the idea of conservation comes from a connection to the past, which needs to be recognised. To address them, understanding the affecting factors are important. In the same way, heritage tourism and the reuse of mines are both complex topics in themselves. Research has shown that heritage tourism works very well if all the factors related to redevelopment are considered; one cannot reuse a space unless the cultural, physical and environmental factors are considered. There is evidence of research regarding the rehabilitation of mines and examples of successful reuse of closed mines. There is also evidence regarding the reuse of significant structures as heritage tourism. Thus, this research is interested in drawing from this knowledge the guidelines and framework that would help Newcastle to embrace its mining heritage through tourism.

Thus the research objectives of this paper are twofold. Firstly, the research aims to produce an analysis to show how to use mining heritage in Newcastle (New South Wales - Australia) through a comparative case study approach of four mining case studies emblematic of post-industrial heritage for creating tourist attractions. Secondly, a SWOT (strengths, weaknesses, opportunities and threats) analysis for Newcastle will provide the basis for discussing how to promote the city from a heritage perspective and in relation to the findings from the case study analysis.

Method and Newcastle

Method

For this research a combination of qualitative and quantitative methodologies were used in order to investigate the potential of 'tourism mining heritage' in Newcastle. Firstly, field trips to Newcastle and data collection from archives and historical societies such as the *Hunter Living Histories* have helped to retrace the history of mines in Newcastle. They have helped to understand the broad context of mining in this city's past and present.

Then, a comparative and detailed analysis of four case studies, known as mine heritage sites, was conducted in order to evaluate and potentially recognise the 'recipe' for success. The need for these case studies is to understand the factors affecting a heritage site. The case studies were selected according to their function (mining heritage) and evaluated with seven criteria that were drawn from the literature review. The first criterion concerns heritage value by using a worldwide recognised benchmark, that is listing on UNESCO's world heritage sites. Criteria two, three and four represent general quantitative data such as site area, annual revenue and annual visitor footfall respectively, to give a comparative overview across the four case studies. The last three criteria give more qualitative insights in terms of experience deemed authentic; businesses associated with the mines and transitioned spaces. Transitioned spaces are to be understood as those refurbished or reused spaces which are used for new purposes.

The review through the above-mentioned comparison aims to study and recognise the influence of the features or aspects of Newcastle. This research can lead towards redefining a lost heritage and understanding the possibilities of future development through a detailed procedure. Newcastle's history is rich, but it can learn from these case studies to further develop its industrial heritage. Successive strategies can be prepared to work towards a sustainable, heritage oriented and tourist friendly destination in Australia's first coal mining town.

However, this research has certain limitations. The main limitation relates to the topic of research itself. Firstly, it was not possible to visit the mines and assess them in terms of heritage as they are not currently open for the public. The fact that Newcastle's maze of underground mines lies right beneath the existing city is a big limitation in itself. The city might not possess enough revenue to resurface the mines on a grand scale and if it is given a serious consideration, the question remains as to who will bear the cost. Secondly, the location of these mines is also a limitation. Most of Newcastle's mines were traced back to their exact locations by the Hunter Living Histories in 2006, yet not being able to visit them also hindered the results. A third limitation regards the selection of the case studies themselves. As it was quite impossible to find a replica of Newcastle's conditions elsewhere, the choice of relevant case studies was deliberately reduced to mining industrial heritage which has been retrofitted for tourism purposes. Stages of development and mining product were not taken into consideration. This limits the depth of the comparison. However, despite the limitations, it is believed that the current research is relevant in order to establish grounds for the mines to become heritage tourism attractions.

Newcastle

This section presents a historical overview of Newcastle that provides a background to the interest in developing mine heritage tourism.

The entire city of Newcastle has seen extensive mining in the last two centuries since the discovery of coal in the region and is still working on various underground and open cut mines in the suburbs and countryside to extract more and more coal for export. The Awabakal are believed to be the only Aboriginal tribe to discuss coal in their Nikkin legends (Goold, 1981). In the same way during the first visit of Lieutenant John Shortland (1797), who made a preliminary survey of the area that would later become Newcastle, he was the first to discover the coal and reported it to the authorities in Sydney (Goold, 1981; Murcott, 1892-1901). This indicated the start of the Australian coal mining industry and the vertical coal shafts in the Government Domain are believed to be the first in use in Australia and possibly the entire southern hemisphere (Hardy, 2015; Henry, 1969).

Interestingly, the development of coal mining in Newcastle was firstly based on private initiatives and convict labour forces, and even with the instalment of the Government Domain, the few number of plans that exist today not only show the lack of research but also the lack of interest towards this mining history. The growth of the mining industry in Newcastle is still ongoing and the city currently handles some of the largest exports of coal in the world and has one of the most efficient and largest coal handling ports in the world (Slezak, 2017). This coal has shaped Newcastle's history over the years and helped bring heavy industry to the town. It is

an important part of the city’s heritage which contains an uncovered maze of tunnels under the city (Eklund, 2005; Gerber, 2014). However, despite the current mapping of the mine subsidence (figure 1), more work needs to be done to provide better historical accuracy in order to recognise these mines as heritage sites and potential tourism attractions. The underrepresentation of the mines in the current built fabric of Newcastle ushers in the need for this research.

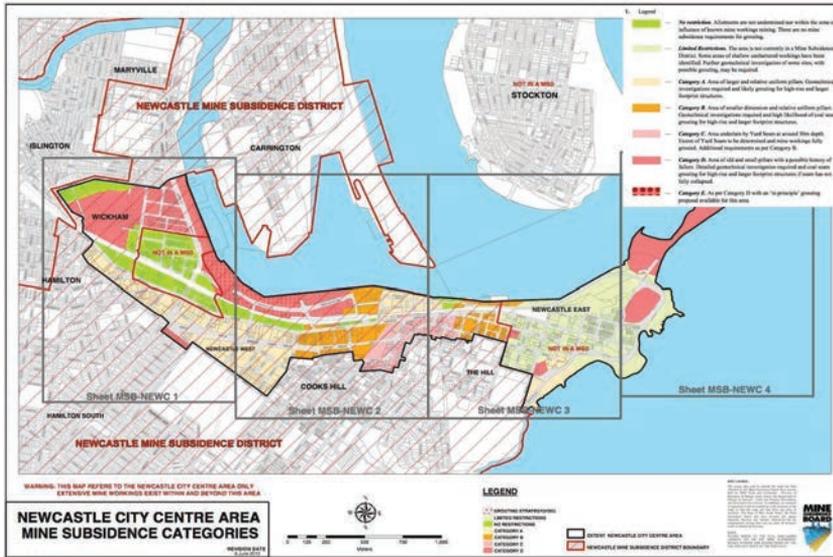


Figure 1. Mine subsidence map released by NCC, 6th June 2018.

Learning from other mines

Case Studies

This section concerns a comparison of four case studies, all regarding mining heritage tourism, the aim of which is to extract best practices and an understanding of the processes at stake. Admittedly, not all the selected case studies were concerned with coal mining - one is for salt mining, the other for gold mining - but all of them are examples of the use of industrial heritage for tourism purposes. This aspect was considered prevalent in the case study selection. From the case studies, context, processes and results were analysed. The first three cases - the Zollverein Mine (Germany), the Big Pit Mine (England), and the Wieliczka Salt Mine (Poland) were chosen for their UNESCO listings and huge success, while the last represented an Australian case (Sovereign Hill).

As part of the industrial history of the Ruhr Valley and the once largest coal mine in Europe, the Zollverein Mine is a symbol of the rise and fall of German heavy

industry, with the economic and political impact it had in the country's history (Dorstewitz, 2013; Hemmings and Kagel, 2010). The Zollverein closure in 1986 brought about economic and social changes that the region had to grapple with and despite years of uncertainty and struggles (well described by Dorstewitz (2013)), the former mine managed a remarkable transformation, becoming not only a cultural icon but a World UNESCO heritage site bringing a footfall of 1,250,000 people every year (Zollverein, 2018). The successful tourism destination combines historical consciousness alongside the creative use of buildings and structures for museums, exhibitions, concerts, film screenings, and other cultural or recreational activities such as rock climbing (Hemmings and Kagel, 2010; Zekas, 2009; Bösch, 2015). The link to the mine itself is provided with a variety of experiences that challenge the visitors senses. For example, the chambers are not heated and this acts as a simple reminder of the harsh conditions of the miners; as well as the dark steps in some parts that provide an authentic experience. The retention of some original buildings, such as the unique double pit head tower, also contributes to the authenticity of the place. The sum of the activities and projects mentioned above has helped to shape anew the very distinct character of this site and give it a new functionality, shaping cosmopolitan memory (Dorstewitz, 2013; Beaumont, 2018; Barndt, 2010).

The Big Pit Mine in England shares a similar trajectory. Located in South Wales and historically well reputed for its industrial background, the Big Pit opened as a 'working mine museum' in April 1983, just three years after its closure (Wanhill, 2000; Davies, 1984). As already mentioned previously, the Big Pit did not initially see the expected visitor numbers and underwent serious planning to eventually become a property of the UNESCO world heritage list and now welcomes over a million visitors each year (Wanhill, 2000). Authenticity is provided through the conservation of the industrial landscape but also with human interaction as the ex-miners are the guides for the museum. The oral narration by the ex-miners is a key element in the experience and the view of the miners in their uniforms and experiencing the cold underground conditions wearing protective gear does engage the visitor to the fullest (Davies, 1984; Coupland and Coupland, 2014). The Big Pit and surrounding areas are indicators of how ordinary people worked and lived in coal mining districts of the industrial era (Davies, 1984). Other than the mine, there are cafés and souvenir stores, a blacksmith's shop which provides goods, galleries exhibiting the coal and other older structures. In targeting and showcasing how ordinary people lived and worked in coal mining districts, the Big Pit eventually succeeded its transition by creating awareness, developing recognition and using well-thought promotion.

The Wieliczka Salt Mine in Poland presents a somewhat different story, as firstly it concerns salt extraction; secondly it has a longer working time span (from the 13th century onwards) and thirdly, it is still partially in use in the lower levels with the upper

levels having been converted into a tourist attraction. Furthermore, besides being a UNESCO listed heritage site, Wieliczka Salt Mine has been recognised as a geopark, that is a geologically important landscape (Alexandrowicz & Alexandrowicz, 2004). The world's oldest salt mine provides a museum, has an indoor lake, contains a church and attracts over one million visitors every year (WSM, 2018). The Josef Pilsudski Chamber, which is a double chamber with a lake, was a popular venue for receptions and entertainment before the First World War. The stories of the Nazi occupation of Poland, the use of one of the larger chambers as an aircraft engine factory which used Jewish slave labour, and the escape of two young boys hiding in the mines, engage the visitor with an active relatable dialogue with the surroundings (Hallett, 2002). At the end of the visit, the possibility to buy salt related products also provides a positive participatory experience (Wu et al., 2015). The Wieliczka Salt Mine also hosts a range of additional activities ranging from international fairs to concerts, conferences and a range of parties. There is also an underground tennis court and field for team sports. The Wieliczka mine also became the first mine to host an underground hot-air balloon flight and "Bungee Jumping Show", while a tourist route broadens the tourism attraction (Kruczek & Szromek, 2011). These additional experiences make the Wieliczka mine a complex hub of activities which draws tourists, in turn retaining visitor numbers and increasing popularity.

The last case study concerns Sovereign Hill which has recreated the 1800's gold rush in Australia in the small town of Ballarat. The use of the original site and recreation of the 1800's has led to a tourist destination which brings in more than 500,000 people every year (SHMA, 2018). Frost's (2005) analysis showed that the size of the town, the site location and the local support for the venture, as well as their reconstructions that are based closely on the photographs of the period and from the varied range of activities provided have all allowed the site to generate revenue and achieve success. He also concluded that the unique attention to detail has been a factor which enhances the visitor experience, as the visitors feel that they have been transported back to the 1800's with trades, crafts and stores all being a part of the act (Frost, 2005). However the financial report of the Sovereign Hill Museum Association actually shows that the live experience of the gold rush is what today attracts major visitors, such as the underground mine tours, digging for gold as well as firing, sweet making and candle making (SHMA, 2018). Campbell (2015) also noticed that the celebration of the cultural identity of Ballarat and the fighting spirit of the miners also contribute to the experience; although the Aboriginal history is missing. This 'sanitising' history (Frost, 2005) perhaps reveals this little debated issue of heritage in Australia.

Overall, with these four case studies it was possible to evidence some similar factors in terms of engagement with the visitors. The following table (table 1) shows a comparison of the above case studies with the Newcastle site.

Table 1
Comparison of Case Studies in Regards to Newcastle

	Wieliczka Salt Mine, Poland	The Big Pit Mine, England	Zollverein Coal Mine, Germany	Sovereign Hill, Australia	Newcastle
Heritage Value	UNESCO WHS	UNESCO WHS	UNESCO WHS	Not listed but has value due to the site of Gold Rush	Not listed but has value due to its coal mining origins
Site Area (Approximate)	2728 Acres	12.3 Acres	247 Acres	25 Acres	720+ Acres
Revenue Generation (Annual Approximate)	26.13+ Million AUD	59.65+ Million AUD	Not found	\$20+ Million AUD	\$30+ Million AUD (estimated)
Average Visitor Footfall (Annual)	1,200,000	1,549,603	1,250,000	560,000	3,000,000 (Total visitors estimated)
Authentic experience	Underground levels with geological features	Underground coalface working conditions with ex-miner guides	Structure size, unheated spaces with dark steps	Live experience of gold miners from 1850's recreated	Potential
Business	Shops, cafes, restaurant	Shops, galleries, blacksmith shop, café	Exhibition spaces, open air cinema, ice skating rink, shops	Shops, galleries, exhibits, theatre	Potential
Transitioned spaces	Museum, lake, church	Working Mine Museum	Museum, rock climbing wall	Museum, living quarters, activities	Potential

Results

Several findings emerged from the comparative analysis. The first concerns the need (or not) for a mine heritage site to be UNESCO listed. In this research, three out of the four case studies are UNESCO world heritage sites. UNESCO listing presents some advantages such as the publicity it brings once listed. World heritage sites reach such a global audience that it helps in generating awareness and earning recognition not just in the region, state, province or in the country but, in the entire world. Thus, it contributes in publicising important landmarks and reinforces a region's identity (Chand, 2013). However, some scholars have also denounced the negative impacts that UNESCO listing could have (Harvey, 1982; D'eramo, 2014). In this analysis, the last case study is not in the world heritage site listing but it is still considered successful. As such, it shows that UNESCO listing is not an absolute requirement for success, yet there is no doubt that such a listing would contribute to the promotion of the city, creating awareness, and bringing more visitors.

The industrial mining background is the major context for these case studies as similarities can be drawn between them and Newcastle. This context provides tangible and intangible effects. Even though all of them vary in geographical

locations and context, the use of industrial machinery provides clear tangible traces that have been well used for mine retrofitting. For example, the visual impact of looking at the large machinery at the Zollverein mine (Germany) is astounding. The enormous scale creates a harsh, rough and crude atmosphere, that contrasts sharply with the surrounding developed lush green spaces that connect to the human scale. The use of machinery (working or not working) is not only to display its might, but also to connect the visitor with the historical role played by such structures. They also became important elements for industrial tourism. The industrial landscape can be an exciting opportunity to create new visual and special experiences for visitors. In the case of Newcastle, using machinery from Broken Hill Proprietary, or other industries which are closed now, could be used for a similar impact. In terms of the underground mines in Newcastle, if opened to the public, their accessibility, safety and other parameters need to be considered.

Not all machinery can be used as exhibits due to their level of disintegration or other factors. This may create a void of space. Void spaces have been transitioned in all the above-mentioned case studies. These spaces were transformed to make a continuous experience for the visitor. Additionally, transitioned spaces may be intentionally created for recreational activities. An underground lake or church, or a working mine museum can become a highlight for a tourist. These spaces are the ones that stand out for a visitor. These transformed spaces may also contain additional activities to enhance the visitor's experience.

The third finding concerns the analysis of businesses that are associated with the site. Additional businesses in support of the main heritage sites are seen across all the case studies. They range from food retail outlets (cafes, restaurants), to arts spaces (galleries, exhibition spaces, theatres) and plain shops or more specialised businesses such as ice rinks. This creates a variety of choices for the tourist visiting the site. Overall, the recurrent businesses are restaurants, cafés and retail stores. Some include entertainment businesses like theatres, galleries and exhibition spaces in addition to these spaces. Some specialty stores are also seen in a few of them like the salt store in Wieliczka mine and the blacksmith's shop in Big Pit mine. All these places have one goal - to generate enough revenue for the site. The local communities are supported by the tourists and a socially diverse dialogue is created. New jobs and business opportunities may arise helping the local economy grow and therefore generating more revenue. Newcastle can benefit from such diversity, revenue and opportunities.

The fourth finding concerns authenticity. Authentic experience has been discussed in the literature review as an important factor in tourism. Establishing a narrative of how the space or object stood the test of time over adverse circumstances gives it

significance. It also speaks about the people who lived in that era. All case studies have certain unique features which help in creating an authentic experience. These spaces accompanied by oral stories engage the visitor emotionally and help set up a dialogue with the space. This can leave a lasting impact on the visitor. This can be any space which highlights a rare phenomenon or space on the site. This can be as simple as retaining the same weather conditions, using the ex-workers as guides, or using audio visual tricks for an amplified effect. In the case of Newcastle, the ex-employees of the Broken Hill Proprietary or ex-miners could provide a narration of the techniques, technologies and schemes used in the procedures of the production. Findings related to the early miners could be displayed and narrated to understand the conditions of the penal colony and to create a dialogue with the visitors. For example, 'the lasting effects of working in the mines led to a miner becoming blind later in life' creates a powerful impact on the visitor. It speaks about history as it is without sanitising or sugar-coating anything.

The last findings are related to size, income and visitor numbers. The size is considered as the average space requirements to fit in such a diverse range of activities on a site. The areas vary from 12.3 acres to 2728 acres. So, the number of activities and the layout denote the size. The existing structures and the parts visible to the tourists can vary. In the case of Newcastle, the potential area could include the mine subsidence area downtown. The income is provided in some case studies, in others it has been calculated to understand the workings of such a diverse site. The need of generating enough revenue to sustain the site for future purposes is the core reason for these criteria. The aspect of an average annual number of visitors is used as all the case studies are well established sites. The numbers give a clear idea of the amount of footfall required to make sure that the site is financially viable and to create awareness. The calculations may be affected by a variety of factors like surrounding attractions, and local political and economic conditions. The footfall creates several possibilities for further businesses and for other related development. The case study of Sovereign Hill is important as it gives an Australian perspective of the average number of people in a year required to sustain a successful tourist destination.

Overall, a strategic approach to business planning can be observed in most cases. In the case of Sovereign Hill, there are schemes used to convince visitors to revisit the site by opening new attractions or activities periodically. In the case of Zollverein, new exhibitions and displays are the reason people revisit the site. Bringing more people into the site can also be achieved by involving local artists, universities and businesses. This can benefit the individuals but it creates greater public awareness and generates sensitivity among people related to the heritage. These examples also reflect that the aesthetics of mining landscapes have potential too. The conservation of these unique landscapes brings out the dark truth of human existence which needs

to be acknowledged and respected as well. The fighting spirit of people working in extreme conditions and surviving and shaping the environment - physically, socially and culturally - need to be celebrated. In the case of the Polish salt mine, research explores further possibilities of its classification as a geopark. This shows that after identification of a heritage site, it ushers possibilities of future research on a site.

Discussion

This research shows that there are certain obstacles to be overcome in terms of establishing a successful industrial tourist destination. The support from the local authorities, awareness amongst the people, and the recognition of a particular site in question are all factors whose support is monumental and can make or break a project. As seen in the case studies, public and government support are key factors in these types of rehabilitation cases, as well as financial commitment from public and/or private sectors. As of today, the question remains for Newcastle regarding who would be willing to consider such a project and its associated limitations.

The current situation in Newcastle doesn't show a great deal of support for heritage. For example, when looking at the Newcastle tourism website (NCT, 2018), it is clear that the city is not promoted for what it is, that is Australia's first coal mining town or even a heritage destination. Instead it uses ambiguous terms like a must travel destination with coastline, events and festivals – terms which may be used to describe most beach based cities in Australia. Could it be due to its proximity to Sydney or a general trend in Australia that does not place enough value on historical heritage? Furthermore, there is evidence of promoting the city as a sports destination by hosting the Supercars event in the city (NH, 2017) or marketing surf spots (Rhodes, 2011). Overall, this shows that Newcastle is reinventing itself but why are the unique aspects still overlooked? Specific studies should further investigate this aspect.

Other elements also confirm the lack of support for heritage. For example, with the recent closing of the Maritime Museum (which had more than 7,000 historical items) Newcastle lost another bit of its heritage (Lobb, 2018). Mismanagement, low visitor numbers, no rotational exhibits and the ageing population of its members were reported as the main reasons for its closing (Kelly, 2018). However, reading between the lines, it also speaks of a lack of interest in heritage education and preservation from the local authorities. This seems sadly confirmed with the latest news regarding the Wickham Arts building which has been a part of Newcastle's make-up since 1882 and which is probably going to be demolished as per the new development plan for Wickham (HLH, 2018). The city council's new development plan does not mention anything regarding the fate of heritage structures (NCC, 2017). There are major changes planned, like the introduction of the new light rail, and use of the railway

corridor for the future development of Newcastle (NCC, 2018), but promoting Newcastle from a heritage point of view is not part of it.

Other reports like the uncovering of 6000-year-old Aboriginal artefacts during the construction of a KFC and no incentive from the council to preserve the site reflects the situation of heritage in the city (Smee, 2018). An archived document in the University of Newcastle shows that 'Old Town' (Newcastle) was a part of Australia's national heritage list (NCCC, 1992) but the current list does not mention Newcastle (AGDEE, 2018). This leads us to the question: Why is nothing in Newcastle part of Australia's national heritage list? Is something being done to recognise this?

Lastly, the aim of this paper, through a comparative critical analysis of case studies was to show how to use the mining heritage in Newcastle (New South Wales - Australia) and how the findings might contribute to promote the city from a heritage perspective. The SWOT analysis (figure 2) helped in summarising some major elements to take into consideration for heritage tourism development and promotion. Firstly, it seems there is a significant drawback not being used. Since Newcastle is still a main stakeholder in coal production, and even today at global level, mining tourism development could be authentically grounded and could also benefit from an interpretation center for its present activities. As such, marketing and promotion could rely on a past-present thread through innovative partnerships with the coal industry to stimulate both industry and tourism economies.



Figure 2. SWOT analysis

Secondly, it seems that work still needs to be done in regards to the collective memory of the city, as Newcastle does not yet fully embrace its history. One reason that could explain this situation is that, unlike the four analysed case studies, abandoned hard coal mines in this city were exploited using prisoners, which is associated with the problem of difficult or contested heritage. Mining heritage in Newcastle concerns

at least three of the contested heritage categories developed by Xiong, Dupre & Liu (2019): colonial, slavery and conflict. However many other heritage-based tourism attractions in Australia have successfully managed this aspect (see for instance, Port Arthur or the Adelaide Gaol); Newcastle could benefit from these experiences.

Lastly, with the mining heritage located right in the downtown's underground system, it could also be suggested that promotion might emphasise the educational value, as the proximity could draw locals, schools and university students.

Conclusion

This research has provided sufficient evidence that many industrial cities of the past have been successful in reinventing themselves and have successfully used tourism as a new means of promotion. The benefits of the heritage conservation of such landscapes can be observed all over the World along with the value of industrial sites which were once considered obsolete or scars on the cityscape. Many of these sites have become heritage monuments, boasting extensive facilities and attracting numerous visitors. Newcastle's lost mines are a significant part of the city today as they still govern the built fabric, yet little has been done to use this tourism capital. In identifying their potential within Newcastle context, this research demonstrated that there are definitely practical implications possible. Firstly, this research can be used as a base to strategise the development of tourism in Newcastle, as the underuse of heritage in general and mine heritage specifically was clearly proven. Another implication would be to conduct a market analysis both within neighbouring cities and on a national scale, to evaluate more precisely the level of competition Newcastle might face if developing mine heritage tourism. Lastly, a tourism master-plan in coordination with the urban development services of the city would be needed to select the sites to open. Future research could investigate further the weight of contested heritage in the contemporary decision-making processes of Newcastle, as well as the economic system or model that would successfully balance mine heritage tourism development and urban development in its downtown.

Acknowledgements

The Hunter Living Histories have been supportive and have aided in this research. The authors are grateful for their help in understanding the history of Newcastle and by giving such a warm welcome. Author 1 is also grateful for the grant scheme she received from her university that helped her in this research.

Grant Support: The authors received no financial support for this work.

References

- AGDEE (2018). *Australia's National Heritage List* [Online]. Australia: Australian Government. Retrieved from <http://www.environment.gov.au/heritage/places/national-heritage-list>
- AGPC (2018). *Productivity Commission* [Online]. Australian Government. Retrieved from <https://www.pc.gov.au/>
- Alexandrowicz Z., & Alexandrowicz S. W. (2004). Geoparks- The most valuable landscape parks in Southern Poland. The Polish Geological Institute Special Papers, 13 pp. 49-56 in *Proceedings of the Conference "Geological heritage concept, conservation and protection policy in Central Europe*.
- Armitage, L., & Irons, J. (2013). The values of built heritage. *Property Management*, 31, 246–259. doi:<https://doi.org/10.1108/02637471311321487>
- Bachelard, G. (1994). *The poetics of space*. Boston: Boston Beacon Press.
- Bardt, K. (2010). Layers of Time: Industrial Ruins and Exhibitionary Temporalities. *PMLA*, 125, 134–141.
- Beaumont, E. (2018). Mine craft: Coal mine at Martinet, Belgium, by Dessin et Construction. *The Architectural Review*.
- Bell, A. (1999). Authenticity and the project of settler identity in New Zealand. *Social Analysis: The International Journal of Social and Cultural Practice*, 43, 122–143.
- Bosch, D. (2015). *Tourism*. Stiftung Zollverein.
- Campbell, A. (2015). Performing Cultural heritage: Authenticity and the Spirit of Rebellion. *Australasian Drama Studies*, 155–178, 302.
- Carter R. W., & Bramley R. (2002). Defining heritage values and significance for improved resource management: an application to Australian tourism. *International Journal of Heritage Studies*, 8(3), 175–199. doi: 10.1080/13527250220000/18895
- Chand, M. (2013). Residents' perceived benefits of heritage and support for tourism development in Pragpur, India. *Tourism : An International Interdisciplinary Journal*, 61(4), 379–394.
- Coupland, B., & Coupland, N. (2014). The authenticating discourses of mining heritage tourism in Cornwall and Wales. *Journal of Sociolinguistics*, 18, 495–517.
- Dangar, H. (1828). *Index and directory to map of the country bordering upon the River Hunter*.
- Davies, C. S. (1984). Dark inner landscapes: The South Wales Coalfield. *Landscape Journal*, 3, 36–44.
- Del Pozo, P. B., Gonz, X. C., & Lez, P. A. (2012). Industrial heritage and place identity in Spain: From monuments to landscapes. *Geographical Review*, 102, 446–464.
- Docherty, J. C. (1983). *The making of an Australian City*, Sydney, Hale & Iremonger.
- DOEE (2018). *Heritage* [Online]. Australia: Australian government, Department of Environment and Energy. Retrieved from <http://environment.gov.au/heritage>
- DOIIS (2018). *Australian Department of Industry, Innovation and Science* [Online]. Commonwealth of Australia. Retrieved from www.industry.gov.au
- Dorstewitz, P. (2013). Planning and experimental knowledge production: Zeche Zollverein as an urban laboratory. *International Journal of Urban and Regional Research*, 38, 431–449.
- Dupre, K. (2010). Inheritance & urban redevelopment : The case study of Pispala district, Finland. *ELSA- International Review*, (3-4), 65–81.

- Dupre, K. (2018). Trends and gaps in place-making in the context of urban development and tourism: 25 years of literature review. *Journal of Place Management and Development*. doi: 10.1108/JPMD-07-2017-0072.
- Eklund, D. E. (2005). In Search of the lost coal mines of Newcastle [Electronic resource] / presented by Dr. Erik Eklund of University of Newcastle. *Coal River Working Party*, 7.
- EPBC (1999). *Environment Protection and Biodiversity Act 1999* [Online]. Australian Government. Retrieved from <http://www.environment.gov.au/epbc/about>
- Frost, W. (2005). Making an Edgier Interpretation of the Gold Rushes: Contrasting Perspectives from Australia and New Zealand. *International Journal of Heritage Studies*, 11, 235–250.
- Garrod, B. (2014). World heritage: Benefits beyond borders. *Journal of heritage tourism*, 9, 91–92.
- Gerber, N. (2014). *Newcastle City Council dealing with Blackbutt Reserve mineshaft* [Online]. Retrieved from <http://www.abc.net.au/local/photos/2014/11/12/4126878.htm>
- Goodall, B. (1993). Industrial Heritage and Tourism. *Built Environment (1978-)*, 19, 92–104.
- Goold, W. J. (1981). *The birth of Newcastle*, Newcastle & Hunter District Historical Society.
- Halwachs, M. (1992). *On collective memory*. Chicago: University of Chicago Press.
- Hallett, D. (2002). The Wieliczka salt mine. *Geology Today*, 18, 182–185.
- Hardy, A. (2015). *Australian coal mining industry (1797-1820s): Beginnings, history and the vanished industrial heritage of early Newcastle*. Barton, ACT. Engineers Australia, 1.
- Hemmings, S., & Kagel, M. (2010). Memory gardens: aesthetic education and political emancipation in the “Landschaftspark Duisburg-Nord”. *German Studies Review*, 33, 243–261.
- Henry, M. H. E. M. (1969). *A saga of coal : The Newcastle Wallsend Coal Company's centenary volume*, Sydney, Angus and Robertson.
- HLH (2018). *Wickham School of Arts* [Online]. Newcastle, Australia: Hunter Living Histories. Retrieved from <https://hunterlivinghistories.com/2018/05/07/wickham-school-of-arts/>
- Kingswell, G. (1890). *The coal mines of Newcastle, N.S.W.: Their rise and progress*, Newcastle, Australia, Newcastle Morning Herald.
- Kelly, M. (2018). Falling Visitor numbers and ageing membership to blamed for maritime museum's demise. *The Newcastle Herald*, 23.05.18.
- Kruczek, Z. & Szromek, A. (2011). Using R. W. Butler's model to interpret the development of tourist attractions, based on the example of the salt mine in Wieliczka. *Folia Turistica*, 25(11), 249–264.
- Leary, T. E. & Sholes, E. C. (2000). Authenticity of place and voice: Examples of industrial heritage preservation and interpretation in the U.S. and Europe. *The Public Historian*, 22, 49–66.
- Lichfield, N. (1997). Achieving the Benefits of Conservation. *Built Environment (1978-)*, 23, 103–110.
- Lobb, A. (2018). Newcastle's maritime museum to close. *NBN* 21.05.18.
- Mallo, J. C., De Marco, S. G., Bazzini, S. M. & Del Rio, J. L. (2010). Aquaculture: an Alternative Option for the Rehabilitation of Old Mine Pits in the Pampasian Region, Southeast of Buenos Aires, Argentina. *Mine Water & the Environment*, 29, 285–293.
- McDonald, H. (2011). Understanding the antecedents to public interest and engagement with heritage. *European Journal of Marketing*, 45, 780–804. doi: 10.1108/03090561111120037
- McQueen, K. E. N. (2012). The importance and future of mining history: An Australian Perspective. *Earth Sciences History*, 31, 316–320.

- Misztal, B. A. (2003). *Theories Of Social Remembering*, McGraw-Hill Education.
- Murcott, F. M. B. F. (1892-1901). *Historical Records of New South Wales*, Sydney, Government Printer.
- NCC (2016a). *Revitalizing Newcastle short report* [Online]. Newcastle City Council, Urbangrowth NSW. Retrieved from <https://www.newcastle.nsw.gov.au/getattachment/Council/News/Latest-News/Overwhelming-support-for-Newcastle-city-revitalisa/Revitalising-Newcastle-Newcastle-Voice-Summary-Report.pdf.aspx>
- NCC (2017). Redevelopment plan for Wickham Newcastle. In: COUNCIL, N. C. (ed.). Newcastle, Australia: NCC.
- NCC (2016b). *Statistical data of employment in Newcastle* [Online]. Remplan Economy, Newcastle City Council. Retrieved from <http://www.economyprofile.com.au/newcastle/industries#bar-chart>
- NCC (2018). *Subsidiary Advisory NSW* [Online]. NSW Government. Retrieved from <http://www.subsidenceadvisory.nsw.gov.au/newcastle-city-centre-maps>
- NCCC (1992). Newcastle Old Town. Newcastle, Australia.
- NCT (2018). *Visit Newcastle* [Online]. NCC. Retrieved from <https://www.visitnewcastle.com.au/>
- NH (2017). Newcastle Supercars 500: 2017 race times, getting there and everything you need to know.
- Page, D. (2014). *\$8.7m buyout: mounting cost of mine subsidence* [Online]. Newcastle Herald. Retrieved from <http://www.theherald.com.au/story/2383435/87m-buyout-mounting-cost-of-mine-subsidence/>
- Pallasmaa, J. (2009). *The Thinking Hand*. Chichester: U.K., Wiley.
- Pawlikowska-Piechotka, A. (2009). Industrial Heritage Tourism: a Regional Perspective (Warsaw). *Physical Culture and Sport*, 46, 276.
- Rhodes, S. (2011). Hot city, cool life. *Sydney Morning Herald*, 02/19/2011 Feb 19.
- SH. (2018). *Sovereign Hill: It's pure gold* [Online]. Australia. Retrieved from <http://www.sovereignhill.com.au/sovereign-hill/>.
- Slezak, M. (2017). *Newcastle: world's biggest coal export port announces shift away from coal* [Online]. Australia: The Guardian. Retrieved from <https://www.theguardian.com/environment/2017/dec/18/newcastle-worlds-biggest-coal-export-port-announces-shift-away-from-coal>
- SLM. (2018). *Hyde Park Barracks Museum* [Online]. Sydney Living Museum. Retrieved from <https://sydneylivingmuseums.com.au/hyde-park-barracks-museum>
- Smee, B. (2018). KFC Aboriginal artefact loss an act of 'genocide'. *The Newcastle Herald*.
- Taylor, J. P. (2010). Photogenic authenticity and the spectacular in tourism: experiencing the Pentecost goal. *La Ricerca Folklorica*, 61(61), 33–40.
- Theobald, D. M. (2005). Landscape patterns of exurban growth in the USA from 1980 to 2020. *Ecology and Society*, 10, 32.
- Throsby, C. D. (2012). 2006- Paying for the past. Economics, cultural heritage, and public policy. *Australia's Economy in its International Context*. University of Adelaide Press.
- Wanhill, S. (2000). Mines- A Tourist Attraction: Coal Mining in Industrial South Wales. *Journal of Travel Research*, 39, 60–69.

- Ward, M. (1989). County Studies 10 Alternatives for Moving L.A. Trash to Remote Areas. *The Los Angeles Times (pre-1997 Full text)*, 06/24/1989 Jun 24.
- Williams, M. (2013). Benefit from heritage tourism. *Daily Post*, 04/03/2013 Apr 03.
- Weaver, D. B. (2011). Contemporary tourism heritage as heritage tourism. *Annals of tourism research*, 38, 249–267.
- Wojtowicz, B., Strachowka, R., & Strzyz, M. (2011). The perspectives of the development of tourism in the areas of geoparks in Poland. *Procedia - Social and Behavioral Sciences*, 19, 150–157.
- World Heritage Centre (WHC) (2018). Retrieved from <https://whc.unesco.org/en/list>.
- Wu, T. C., Xie, P. F., & Tsai, M. C. (2015). Perceptions of attractiveness for salt heritage tourism: A tourist perspective. *Tourism Management*, 51, 201–209.
- WSM (2018). *Wieliczka Salt Mine* [Online]. Poland: Government and Pvt Co. Available: <https://www.wieliczka-saltmine.com/about-the-mine>
- Xiong, S., Dupre, K., & Liu, Y. (2019). China wrestles with contested heritage of conflict and colonial rule [Online]. Available: <https://theconversation.com/china-wrestles-with-contested-heritage-of-conflict-and-colonial-rule-108158>.
- Zekas, R. (2009). Experiencing history on an Industrial scale; Coal mines are the latest word in cool as they become uber-modern icons of Ruhr heartland. *Toronto Star*, p.T.1.
- Zollverein S. (2018). Zollverein UNESCO World Heritage Site. Retrieved from https://www.zollverein.de/app/uploads/2018/02/Zollverein-UNESCO-World_Heritage-Site.pdf