



Ellie Swinbank*

Collecting and displaying the decommissioning of North Sea Oil and Gas at the National Museums Scotland

Gromadzenie i eksponowanie obiektów związanych z wydobyciem ropy naftowej i gazu z Morza Północnego w National Museums Scotland

Introduction

National Museums Scotland (NMS) has a long history of collecting industrial objects. Our predecessor museum, the Industrial Museum of Scotland, was founded with the intention of collecting the materials and processes of manufacture; that is, contemporary technologies and the tacit skills that went with them [1]. For a lot of the museum's lifetime the emphasis has tended to be more on historical collecting but there has always been a remit for collecting relevant current material. In recent years, this has been distilled and formalised into a strategic priority within our Collections Development Strategy.

In terms of our energy collections this means that we aim to build on our world-class collections and expertise in the areas of energy generation and consumption, working with industry and universities to collect innovative technology and industrial material as its working life concludes [2].

This collecting target aligns closely with the acquisition of material from transforming industries. This includes the nuclear industry, the oil and gas industry and the renewable energy sector.

Contemporary collecting and decommissioning – looking back and forward

A key acquisition from recent years is the flare tip from the Murchison oil platform. Although this is a piece of

contemporary collecting, it in many ways represents the end of a technical endeavour, rather than the beginning [1]. That said, the decommissioning of Scotland's oil and gas industry is an industry in itself. It will take approximately 25–35 years to dismantle nearly 500 offshore installations and looks set to cost between £45 billion and £77 billion [3]. So, collecting the flare tip from the Murchison oil platform is a way of looking back at the recent past and also of representing the beginning of a new and significant chapter. The item itself has just entered the realm of obsolescence, but the process of retrieving it and dismantling the platform, where it operated from 1982 until 2014, is part of a new, expanding and evolving discipline that is going to be relevant for decades to come, as is reflected in the fact that the University of Aberdeen is now offering a master's degree in the decommissioning of oil rigs, platforms and offshore structures.

The Significance of North Sea Oil and Gas (NS O & G) and how it is already represented in our collections

North Sea Oil has been vital to Scotland and Britain for more than half a century. The first licenses to drill were granted in 1964. Since then, thousands have been employed in the industry and it has generated vast income for the government and private companies alike. We have become reliant on oil and gas products for fuel for transport, manufacture of plastics, cleaning products and heating. In its peak year of production, the Brent oil field supplied enough energy to meet the annual needs of half

* ORCID: 0000-0002-2720-2054. National Museums Scotland, Scotland.

of the UK's homes [4]. The industry has been central to UK politics as well, playing a prominent role in the Scottish independence debate and being used to make various arguments during the Brexit discussion, from the impact that the loss of access to markets and EU workers may have on the industry [5], to whether it would provide the economic buffer needed in the event of a hard or no deal Brexit [6].

Oil and gas have been, and continue to be, central to our economy and politics and have provided employment to an enormous workforce both off and on shore. Up to 200 people may be working on an oil rig on one shift and a vast support and supply industry of goods, services and cargo vessels is based on the mainland to provide safety cover and maintain the cities in the sea [7]. In 2014, the website Scotjobsnet.co.uk said, *It is difficult to put an exact figure on how many jobs oil and gas supports in the Aberdeen area, although 23,500 people, equivalent to 10.3% of the workforce, are employed directly by the industry. It has been estimated that a further 82,000 people work locally in the supply chain, which would mean the sector accounted for 46% of jobs in the area* [8].

The developments in the industry since the 1960s were already well represented in the NMS collections by drill and platform models used to inform manufacture, samples of North Sea oil, and a cross section of the Ninian oil pipeline from Sullom Voe terminal in Shetland, which is on display alongside drill bits and a model of the Elgin wellhead in the *Scotland: A Changing Nation* gallery in the Museum of Scotland (Fig. 1).



Fig. 1. Oil objects in *Scotland: A Changing Nation*
(source: © National Museums Scotland)

Il. 1. Obiekty naftowe w galerii *Scotland: A Changing Nation*
(źródło: © National Museums Scotland)

These collections form a powerful core of the Science and Technology collections and enhance our ability to tell the story of 20th and 21st century Scotland. In order to continue to tell that story we needed to collect the beginning of the decommissioning story and that is where our relationship with the Murchison platform began.

Murchison

The Murchison oil platform was located 240 km north east of Shetland (Fig. 2). The platform was installed in 1979 and began producing oil in 1980. It produced more than 390 million barrels of oil before its shutdown in 2014. One of the largest North Sea oil platforms ever built, the huge structure has been described as scaled up Gothic cathedral in the sea [7]. Murchison was part of the first wave of North Sea decommissioning, so in many ways embodied what was to come in the industry over the following decades.

It was a perfect collecting target for NMS which wanted to develop its collection on three levels: the decline of the industry; the engineering involved in removing these mega-structures from the North Sea and – perhaps most importantly – the people who work in these alien environments [9].

The first challenge in collecting material of this nature is how to reach out to the companies involved, to start to build a relationship where political sensitivities and concerns about reputational risk could contribute to resistance and to make a case for why elements of these companies' work should be collected for heritage purposes. NMS was incredibly lucky to have a "way in" to Canadian Natural Resources, the owners and operators of the Murchison platform, through the visual artist Sue Jane Taylor (Fig. 3). Sue Jane has a deep understanding of the energy industries, workforce and environments having spent more than 30 years recording people and their technologies [7]. She has gained access to remote and publicly prohibited offshore installations, and had been invited by Canadian Natural Resources to make three visits to Murchison between 2014 and 2016. NMS had the good fortune to have worked with Sue Jane back in 2008 when developing the gallery called *Scotland: A Changing Nation*, which uses some of her sketchbooks and etchings from her earlier work to contextualise the interpretation of the offshore industries. She was therefore able to put NMS staff in touch with the right people at Canadian Natural Resources. Sue Jane has continued to be a good friend to NMS and went on to work with us further on an exhibition called *Age of Oil* in 2017.

The opportunity provided by this existing relationship, along with the significance of Murchison as an early decommissioning project, made it the obvious candidate from which to collect. The first phase of this collection was undertaken with the development of the new science and technology galleries in the National Museum of Scotland in mind. Among these galleries, which opened in 2016, is *Energise* which explores the evolution of, and issues surrounding, the different types of energy in Scotland's portfolio, from fossil fuels to nuclear to cutting edge renewables. At that stage NMS collected a sample of the last crude oil to come from Murchison; the driller's console

Fig. 2. Murchison is one of the most northerly North Sea oil fields
(Base map © Maproom at www.maproom.net)

Il. 2. Murchison jest jednym z najbardziej wysuniętych na północ pól naftowych na Morzu Północnym (mapa podstawowa © Maproom na www.maproom.net)



and telephone that were used on the platform for more than 35 years to control the drilling of 98 wells; and two pipeline pigs, designed to clean debris from oil pipes and named for the squealing noise they make in the process (Fig. 4). One of the pigs and the console are on display in *Energise*, and the other pig, the telephone and the oil have been displayed as part of the *Age of Oil* exhibition. Due to our relationship with Sue Jane Taylor and her work and contacts in the industry and with the Murchison staff, we were able to acquire oral history recordings and film footage sourced by Sue Jane that supported the interpretation of these items, both in the permanent gallery and

the temporary exhibition, and that will become part of the permanent history files for these objects [1].

Flare tip

While these objects all tell parts of the story of the oil industry and its decommissioning, it was the slightly later and much larger acquisition of the Murchison platform flare tip (Fig. 5) that has provided the most impressive and powerful symbol of the technical, human and decommissioning stories. An oil rig is the most recognisable icon of the industry, but collecting an entire rig would be



Fig. 3. Artist Sue Jane Taylor with artwork from her 2017 exhibition, *Age of Oil* (source: © Neil Hanna)

Il. 3. Artystka Sue Jane Taylor z grafiką z wystawy w 2017 r., *Age of Oil* (źródło: © Neil Hanna)

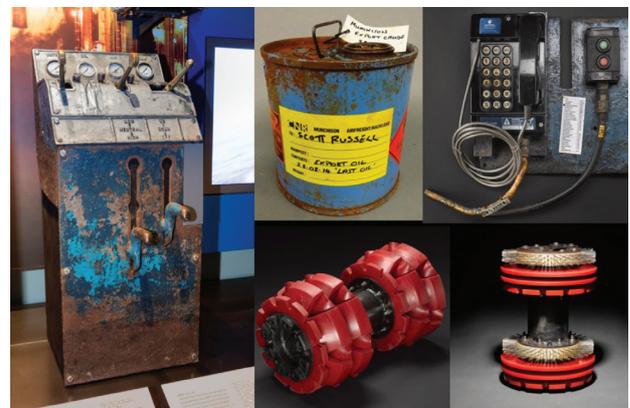


Fig. 4. Objects collected from the Murchison Oil Platform including the driller's console, last oil, driller's telephone and pipeline pigs (source: © National Museums Scotland)

Il. 4. Przedmioty z platformy wiertniczej Murchison, w tym konsola wiertnicza, pojemnik na olej, telefon pracowniczy, złącze gazowe (źródło: © National Museums Scotland)



Fig. 5. Murchison Oil Platform dwarfs the flare tip (top right)
(source: © CNR International, UK, Ltd.)

Il. 5. Platforma wiertnicza Murchison przygasza pochodnię
(u góry po prawej) (źródło: © CNR International, Wielka Brytania)

problematic and beyond the capacity of NMS. The flare tip was selected to function as an emblem of the whole rig, a part to represent the whole. At over four metres tall and weighing almost a ton, the flare tip is still NMS's biggest acquisition of recent years, apart from the aviation collections. NMS felt that the flare tip would provide a powerful experience of the scale of the industry and of the interface between humanity and industry.

Sue Jane Taylor's footage of life on Murchison and her oral history interviews provide a real sense of human interaction with technology through the flare tip. A worker must climb 259 steps to inspect the tip, with the ocean churning below. The hair-raising piece of film showing this being done emphasises the riskier side of offshore work and the challenging environment the workers had to face every day to do their jobs (Fig. 6a, b).

Extinguishing the flare tip was highly symbolic and represented the end of the working life of this massive structure. This made the flare tip an even more pertinent object to collect to symbolise the beginning of the decommissioning process.

It was hoped that the flare tip would prompt discussions among NMS's visitors about our reliance on fossil fuels and what this means for the future, raising questions about energy security, dependence on petroleum related products, Government climate change targets, and loss of income from the industry as it declines. It could also spark debate about what to do with the infrastructure of industry when it becomes obsolete or no longer functional. What, for instance, should be done with the almost 500 platforms and the 10,000 km [4] of steel pipeline that will need to be removed from the North Sea over the coming decades? What about the suggestion that the underwater parts of oil rigs could simply be cleaned up and left in the ocean to become marine habitats? Is that viable? Is it environmen-

tal? Given that the Murchison flare tip is the only one that has been saved for heritage reasons, what has happened, or will happen, to all the others?

On that last point, the "proposal for acquisition" that was prepared to make the case to acquire the flare tip says: *No other Museum in the UK holds a flare tip in their collection – we would be the first to do so. It will be as significant a legacy for our successors as the Boulton-Watt engine was for us. It will be a unique synecdoche for the rig as a whole; and therefore decommissioning, and therefore North Sea oil; and therefore the Scottish experience in the twenty-first century*¹.

Challenges of collection

The challenges of collecting large industrial objects from remote and hostile environments are plentiful and various, ranging from how to physically access and move the items, to the potentially huge costs involved.

Again, our good relationship with Canadian Natural Resources was crucial in addressing these challenges. Most of the Murchison structure was being shipped to Norway to be scrapped. Canadian Natural Resources very generously removed the flare tip from the oil platform and brought it to the mainland at their own expense (Fig. 7), and also prepared it for onward transport to Edinburgh. Not only did they cover these costs, but they sacrificed the considerable scrap value of this nickel-chromium based superalloy. Without the relationship nurtured by Sue Jane Taylor and then NMS staff during the earlier phase of collecting, it is hard to imagine this having happened. We were also very fortunate to have the assistance of Canadian Natural Resources Decommissioning Projects Manager, Roy Aspden. Mr Aspden had a good understanding of the importance of preserving elements of the industry for heritage purposes, and commented that his interest in this process had been inspired by a visit to Stavanger in Norway, where remnants of decommissioned oil platforms have been incorporated into the city's physical infrastructure. An example of this is the Geopark, which is built on an abandoned oil platform and whose landscaping is based on the geological layers of the oil field.

Challenges of display

Since arriving at the National Museums Collections Centre in Granton, Edinburgh, the flare tip has been accessible to all visitors on monthly public tours and by appointment (Fig. 8). It does not currently have any interpretation with it, but all of the rich materials generated and collected by Sue Jane Taylor are available for inspection. Recently, some of her images and diary extracts were incorporated into a tour to emphasise the human endeavour that the flare tip represents. It would be ideal to show her film of the worker climbing the steps as part of the tour, because that footage so stunningly illustrates all the elements

¹ Source: National Museum Scotland object database AdLib entry for T.2017.28, link to Proposed Acquisition PA0008.

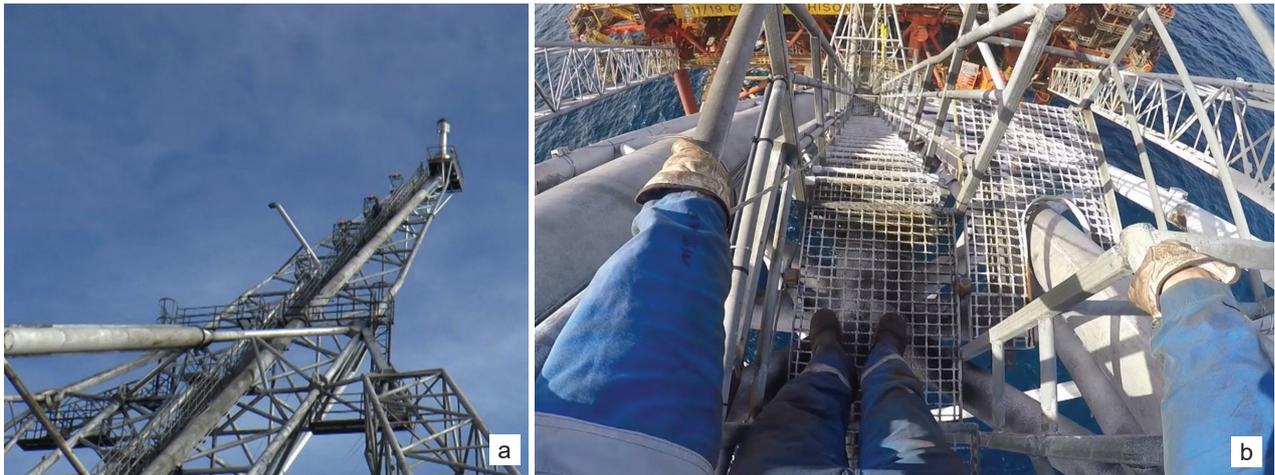


Fig. 6a, b) Stills from Sue Jane Taylor's film showing the hair-raising climb to the flare tip (source: © S.J. Taylor)

Il. 6a, b) Zdjęcia z filmu Sue Jane Taylor pokazującego wspinanie się na szczyt pochodni (źródło: © S.J. Taylor)

that the object brings together, but how to show it as part of a tour in a storage area is not obvious, although carrying a tablet with the film clip on it would be one solution.

However, this demonstrates that, for audiences to fully experience and appreciate the flare tip, seeing it in store is not ideal, and indeed a visitor on a recent tour asked when it was going to be on display somewhere more public. Among the staff at NMS there is fondness and enthusiasm for the flare tip as well as belief in its value as a piece of heritage and a way of communicating with audiences, but its size presents real challenges for us in terms of displaying it in one of our more publicly accessible spaces. However, the director of NMS has asked for it to be placed on display and staff have therefore begun to explore ways of doing this, beginning a process of negotiation between different stakeholder groups within the organisation. Potential locations where the flare tip could be displayed have been identified and the challenges of how to bring it

into the building and display it safely are being addressed, along with the question of how to work a project of this size into museum schedules that are already very tight. However, in the near future we intend to properly share this object with our audiences, as the oil and gas industry and its decommissioning continues to play a central role in Scottish life, albeit a shifting role in an ever-changing social, political and economic environment.



Fig. 7. National Museums Scotland staff inspect the flare tip in a storage yard on the mainland (source: © National Museums Scotland)

Il. 7. Personel National Museums Scotland sprawdza końcówkę pochodni na placu składowym na kontynencie (źródło: © National Museums Scotland)



Fig. 8. The flare tip in storage at the National Museums Collection Centre (source: © National Museums Scotland)

Il. 8. Pochodnia w magazynie w National Museums Collection Centre (źródło: © National Museums Scotland)

References/Bibliografia

- [1] Alberti S.J.M.M., Cox E., Phillipson T., Taubman A., *Collecting contemporary science, technology and medicine*, "Museum Management and Curatorship" 2018, Vol. 33, Iss. 5, 402–427.
- [2] National Museums Scotland, *Collections Development Strategy 2017–2022*, 2017, <https://www.nms.ac.uk/collections-research/collections-and-research-policies> [accessed: 6.09.2019].
- [3] House of Commons Committee of Public Accounts, *Public cost of decommissioning oil and gas infrastructure*, 2019, <https://publications.parliament.uk/pa/cm201719/cmselect/cmpubacc/1742/1742.pdf> [accessed: 6.09.2019].
- [4] Jack I., *North Sea oil is in its death throes. But the industry has one last grand act left*, "The Guardian" 2017, 8 April, <https://www.theguardian.com/commentisfree/2017/apr/08/north-sea-oil-death-throes-rigs-decommission-industry> [accessed: 6.09.2019].
- [5] Symon K., *North Sea oil "could be at risk of no-deal Brexit shutdown"*, "Insider.co.uk" 2018, 11 September, <https://www.insider.co.uk/news/north-sea-oil-gas-brexit-13221967> [accessed: 6.09.2019].
- [6] Critchlow A., *North Sea oil can still be the bargaining chip we need*, "The Telegraph" 2018, 8 November, <https://www.telegraph.co.uk/business/2018/11/08/north-sea-oil-can-still-bargaining-chip-need/> [accessed: 6.09.2019].
- [7] *Age of Oil: Artwork by Sue Jane Taylor*, E. Cox, A. Taubman (eds.), NMS Enterprises, Edinburgh 2017.
- [8] Scotjobsnet, *Aberdeen the Scottish capital of growth and employment*, 2014, <https://www.scotjobsnet.co.uk/aberdeen-the-scottish-capital-of-growth-and-employment.cms.asp> [accessed: 6.09.2019].
- [9] Cox E., *Energy Well Spent: Practical Approaches to Contemporary Collecting at the National Museum of Scotland*, [in:] C. Ballé, C. Cuenca, S. Chambaud, R. Halleux, D. Thoulouze (eds.), *Patri-moine contemporain des sciences et techniques*, La documentation Française, Paris 2016, 321–330.

Abstract

This article discusses objects relating to the extraction of oil and gas from the North Sea and now held in the collection of National Museums Scotland. Oil and gas extraction and processing has been a key industry in Scotland in recent decades, important to the economy and also to the debate about Scotland's independence. The industry is now approaching an end and it is expected that, by 2040, around 470 installations will have been closed and dismantled. In this context, the issue of preservation becomes extremely important. National Museums Scotland has been collecting and display these objects for some time. The acquisition in 2017 of the Murchison oil platform flare tip was a key achievement and also probably the biggest challenge for staff in this area to date. Weighing nearly a ton and standing 4 metres tall, the flare tip is not only a symbol of industry but of human history, and accompanying audiovisual documentation, oral history, images and report book entries add depth to this and increase display potential. The flare tip is also a starting point for discussion about contemporary collecting and the future of energy collections in Scotland. The article discusses the significance of this object and the work relating to its preservation and display.

Key words: oil, decommissioning, industry, museum, collection, Scotland

Streszczenie

Tematem artykułu są zgromadzone w National Museums Scotland zabytki związane z wydobyciem ropy naftowej i gazu z Morza Północnego. Niedługo wydobycie i przetwórstwo ropy naftowej i gazu było ważną gałęzią przemysłu, istotną dla ekonomii oraz debaty o niezawisłości Szkocji. Teraz się kończy i przewiduje się, że około roku 2040 jakieś 470 instalacji pozostanie zamkniętych i zdemontowanych. W tym kontekście niezwykle znaczenia nabiera kwestia zachowania obiektów związanych z przemysłem wydobycia ropy naftowej. National Museums Scotland od lat zajmuje się gromadzeniem i eksponowaniem tych zabytków. Jedną z największych zdobyczy Muzeum i prawdopodobnie największym wyzwaniem dla jego pracowników jest końcówka pochodząca z platformy Murchison – ważąca blisko tonę i licząca prawie 4 m wysokości. Końcówka ta to nie tylko symbol przemysłu – opowiada ona ludzką historię, a towarzysząca jej przejęciu dokumentacja audiowizualna, historia ustna, wizerunki i wpisy do książki raportowej dokumentujące tę historię pogłębiają potencjał wystawowy obiektu. Stanowi ona również punkt wyjścia dyskusji wokół współczesnych zbiorów oraz przyszłości zabytków energii w Szkocji. Artykuł przedstawia znaczenie tego zabytku oraz prace związane z jego zabezpieczeniem i ekspozycją.

Słowa kluczowe: ropa naftowa, likwidacja, przemysł, muzeum, kolekcja, Szkocja