



GRYTVIKEN  
CONSERVATION  
MANAGEMENT PLAN  
ISSUE 06  
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*James Jansen (CEO, GSGSSI) and  
Steve Brown (Operations Director, GSGSSI)*

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# GRYTVIKEN CONSERVATION MANAGEMENT PLAN

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# EXECUTIVE SUMMARY

## GRYTVIKEN WHALING STATION

Grytviken Whaling Station is an internationally significant site as the first shore-based whaling station constructed for Antarctic whaling in the modern era, which was established by the pioneer of Antarctic whaling, Carl Anton Larsen. The longest operating station on South Georgia, Grytviken was closely connected with Antarctic exploration and particularly Sir Ernest Shackleton, whose grave is in the Cemetery. Since the station's closure, Grytviken played a minor role in the Falklands Conflict and remains important as the only whaling station on South Georgia that is accessible to visitors.

Grytviken is located at the west end of King Edward Cove in Cumberland Bay and is the second southernmost of the shore-based whaling stations on South Georgia. Occupying the relatively flat land on the edge of the shore, it is surrounded on three sides by hills with snow-capped mountains beyond. Along the bay to the east is King Edward Point (KEP), where the British Antarctic Survey (BAS) maintains a base on behalf of the Government of South Georgia & the South Sandwich Islands (GSGSSI).

At the centre of the Whaling Station is the remains of the Flensing Plan, which is surrounded by the plant and limited structural remains of the three main components of the Factory: the Blubber Cookery to the north, the Bone Cookery to the west and the Meat Cookery to the south. Other plant includes the Guano Factory, Separator Plant and the Glue-water Plant. To the north of the factory lies the former Manager's Villa, now home to the South Georgia Museum; the former Slop Chest, now the Post Office; and various minor buildings. The Church and the one surviving barracks building, Nybrakka, are located to the west of the factory. Large oil tanks are massed to the north and the south. The Repair Yard lies to the south of the factory, where the Main Store survives along with the Engineering Workshop, which remains in use by the Government's Building Team during the summer. Amidst the few standing buildings are various building bases, some with plant on them, which are the surviving remains of buildings that were mostly removed in 2003/4 as part of the asbestos and oil redemption project. The Cemetery is located a short distance apart from the rest of the Whaling Station.

Along the shoreline are the remains of Tijuca and Harpon jetties and the catcher slipway. Four vessels are beached along the shore: the barque *Louise*, which has been at the station since its creation in 1904, the whale catchers *Albatros* and *Petrel* and the transport vessel and sealer *Dias*, all of which arrived in the 1920s.

## SUMMARY HISTORY

Grytviken was used for sealing in the nineteenth century and was rediscovered by the Swedish Scientific Antarctic Expedition at the beginning of the twentieth century. One of those involved in the expedition was a Norwegian captain with a whaling background, Carl Anton Larsen, who established a whaling station at Grytviken in 1904. It was operated by the Argentinian-registered *Compañía Argentina de Pesca*.

Despite doubts as to the success of this pioneering venture, Larsen proved the potential for whaling in the Antarctic and five other whaling stations were later established on South Georgia. From the initial factory building processing only whale blubber, Grytviken evolved with new buildings added to develop effectively a small settlement.

Although the demand for whale oil and other by-products soared as a result of the First World War, it was not until the mid-1920s that there was substantial investment to modernise the factory. By this time, meat and bone were being processed as well as blubber and guano (bone and meat meal) was also being produced.

Grytviken experienced another period of stagnation in terms of investment in the site during the 1940s, which was followed in the late 1950s by a substantial period of investment to modernise and diversify the factory. However, whale stocks were declining and pelagic whaling using factory ships was more efficient than shore-based whaling. In the early 1960s, Grytviken was transferred to the British company, Albion Star, which in turn leased it to a Japanese consortium. Whaling ceased in 1964 and the station was abandoned.

The Falklands Conflict began in April 1982 with the Argentinian invasion of South Georgia and Grytviken's church was briefly used as a refuge by BAS staff before they were taken hostage. British military presence in the area continued for two decades until 2001.

In 2003/4 a major remediation project was undertaken to remove asbestos and oil from Grytviken, which also resulted in the removal of many buildings. Since then, the GSGSSI has undertaken a series of projects to bring the surviving buildings back into use.



Grytviken viewed from Gull Lake dam

## STATEMENT OF SIGNIFICANCE

Grytviken Whaling Station is of high significance at an international level as the first shore-based whaling station to be constructed for the modern era of Antarctic whaling. It is also the first and longest operating whaling station of the six that existed on South Georgia as it ran from 1904 for 59 seasons out of 60 until 1964. At times during its operation, it was also the highest oil and meal producing station on South Georgia, alternating with Leith Whaling Station.

Grytviken Whaling Station is strongly associated with the Norwegian-born pioneer of modern Antarctic whaling, Carl Anton Larsen, who founded and managed the Whaling Station from 1904 until 1914. The strongest connection with the surviving built fabric is arguably the Church, which he instigated and in which he is commemorated. Grytviken is also strongly associated with Sir Ernest Shackleton, the Anglo-Irish Antarctic explorer, who spent time at what he called 'the gateway to the Antarctic' and is buried in the Cemetery.

Despite the loss of many of the buildings and much of the character of the Whaling Station in the asbestos clearance works, many important elements survive of the layout of Grytviken Whaling Station in its last incarnation. These include the factory bases and plant around the Flensing Plan outline, the jetties and the beached vessels as well as the repair yard and accommodation structures. The distinction between the different areas remains discernible.

The surviving historic buildings are illustrative in their design and appearance of the strong connection with Norway, something deliberately fostered by Larsen in the procurement of everything from structures and provisions to vessels and men from his home country. Although the buildings were prefabricated and have been much repaired subsequently, they are distinctively Scandinavian in their appearance. Whilst the factory plant and massive storage tanks were designed to be functional, there is a certain Romantic aesthetic quality to the rusting structures today.

Of lesser importance but nonetheless contributing to its interest is Grytviken's place in the enduring issue of the island's sovereignty from the Argentinian registration of the company that originally operated Grytviken under British licence to the bullet-riddled buildings evidencing the military presence on the island in the 1980s and 1990s.

The setting of the Whaling Station is fundamental to its existence and makes an important contribution to the significance of the Whaling Station. The relatively flat land in the safe, deep natural harbour made it the ideal location for a shore-based whaling station. The dramatic mountains not only created a setting appropriate for the Norwegian buildings but offered protection to the station from winds as well as, with the numerous streams, enabling the provision of water and power through the creation of dams.

## CONSERVATION FRAMEWORK

The purpose of conservation is to preserve and enhance the significance of heritage assets, such as Grytviken. This Conservation Management Plan (CMP) provides various levels and types of guidance for future management of the site. These include overarching, strategic policies outlined in Section 4: Conservation Framework, more detailed recommendations and actions are provided in Section 5: Issues and Opportunities, and a Maintenance and Management regime set out in a separate Management and Maintenance Plan.

These are all designed to be applied and considered immediately as well as with any work moving into the future. They are also designed to be reviewed and updated on a regular basis to ensure that the CMP continues to be accurate and that the recommendations and policies within it remain applicable to the site and its sustainability.

## ISSUES AND OPPORTUNITIES

Grytviken Whaling Station presents a complex conservation challenge. There are significant factors, such as the weather, climate change, snow and ice, that are beyond human control but the impacts of which need to be addressed and minimised proactively and reactively. The remote location of the island presents a range of issues including provision of internet access, ease of communications between staff based at Stanley and KEP and time taken to move personnel and materials to and from the island. Other key issues are the delivery of materials, the use of appropriate materials and design details, the need for a continuous log of maintenance and project works and materials used, the procurement of materials, and the need to ensure the safety of staff and visitors to the site.

There are opportunities to enhance conservation at Grytviken through staff training as well as the maintenance and development of relationships with stakeholders. There are also opportunities to enhance the significance of the site through improving its legibility.

## POTENTIAL FOR CHANGE

Grytviken will not remain unchanged with the effects of the weather, sea, ice, wildlife and visitors affecting the built fabric. Some change will be necessary in the form of repairs and renewal of fabric to slow the impact of decline. Other change may be more proactive with the introduction of new elements. Such change should be concentrated in areas of least significance.

Section 6 explains this in further detail and identifies the priority areas for concentrating conservation efforts and for change to enhance the significance of the site. These include the Flensing Plan, the jetties, the shoreline, the Repair Yard, the bridges, the factory, the storage tanks and the vessels.



The factory viewed from the ski-jump

# SECTION 1.0

## INTRODUCTION

### 1.1 PURPOSE AND SCOPE OF THE CMP

Grytviken Whaling Station was the first whaling station to be built on South Georgia and is the only one that is publicly accessible for visitors to gain an insight into the history of whaling in the Antarctic. It has been the subject of various projects in recent years to repair and bring into use the remaining buildings on the site. Its remote location, harsh climate and changing environmental conditions make a conventional conservation approach challenging yet it is nonetheless essential that change is planned based on a sound understanding of the history and significance of the built fabric and associated structures and landscape features. This will preserve and enhance the heritage values of the heritage assets. This Conservation Management Plan (CMP) provides a framework of understanding that will facilitate future decision-making.

This CMP has been commissioned by the Government of South Georgia & the South Sandwich Islands (GSGSSI) in accordance with the stated heritage objectives in its *SGSSI Strategy 2016-2020* to develop a CMP for Grytviken. It develops the existing assessment of significance for all the whaling stations on South Georgia prepared by Purcell previously.

The CMP covers all the built elements of the Whaling Station including the peripheral sports features (the football field and ski-jump) and the dams that served the Whaling Station together with the beached vessels and jetties. A site assessment was undertaken over several days in April 2018, when there was no snow on the ground and the weather was generally fair to good.

The CMP is intended to be a live document that aids the management of the site and which should be updated as new information becomes available.

### 1.2 STRUCTURE OF THE DOCUMENT

The CMP has been informed by best practice guidance but tailored to meet the brief of the GSGSSI.

SECTION	CONTENT
<b>2 Understanding the Site</b>	<ul style="list-style-type: none"> <li>• An overview of the site as it currently exists.</li> <li>• A description of its setting and key views within the site and to and from it.</li> <li>• An account of the historical development of the site.</li> <li>• A brief statement of its heritage context.</li> </ul>
<b>3 Significance</b>	<ul style="list-style-type: none"> <li>• An assessment of the site's heritage values and significance.</li> <li>• An overview of the heritage values and significance of its component elements.</li> </ul>
<b>4 Conservation Framework</b>	<ul style="list-style-type: none"> <li>• A conservation framework with policies to guide future decision-making.</li> </ul>
<b>5 Issues and Opportunities</b>	<ul style="list-style-type: none"> <li>• An analysis of issues and opportunities in relation to site management, conservation and maintenance, visitor experience, safety, and the natural environment.</li> </ul>
<b>6 Potential for Change</b>	<ul style="list-style-type: none"> <li>• A list of priorities to guide future conservation.</li> </ul>

In addition, the existing Gazetteer has been updated, which provides a more detailed description of different built elements on the site. This is a separate supplementary report to the CMP. The existing Management and Maintenance Plan (MMP), which lists the tasks for caring for the site, has also been updated.



Petrel

## I.3 FRAMEWORK

The GSGSSI has a *Heritage Framework and Strategy*, which was prepared by Purcell and adopted in 2017. This sets out the understanding of what comprises South Georgia's heritage, how the significance of that heritage should be assessed and the approach and principles governing conservation in the territory. The Conservation Philosophy and Principles are reproduced below.

### Conservation Philosophy

*The cultural heritage of SGSSI [South Georgia & the South Sandwich Islands] is of territorial and international significance. It will be preserved through physical conservation or recording of individual heritage assets. The significance of these heritage assets will be better understood through research, comparison with other examples on SGSSI and through analysis of the relationships between the heritage assets on SGSSI and related artefacts held overseas.*

*Decisions regarding the conservation of any heritage asset on SGSSI will be made based on an understanding of its significance in relation to:*

- *the category of heritage asset it belongs to,*
- *a wider understanding of the cultural heritage of SGSSI,*
- *historic international social, economic and cultural patterns.*

*This will enable the limited resources available to be deployed to greatest effect.*

*Where heritage assets are in good condition and safely accessible, regular maintenance is essential to the preservation of the heritage assets and their significance. Appropriate materials should be used to preserve the historic fabric and the appearance of the heritage asset.*

*It is recognised that SGSSI is of outstanding nature conservation value. Cultural heritage assets should be preserved wherever this is possible without undue harm to the natural environment.*

*SGSSI's cultural heritage will be made better known through conveying the growing understanding of its significance to visitors and to the wider world by the sharing of information.*

### Conservation Principles

- 01 *The cultural heritage of SGSSI should be preserved.*
- 02 *There is a presumption in favour of heritage assets being retained on SGSSI.*
- 03 *Where it can be demonstrably proven that heritage assets can be studied, conserved or better preserved in perpetuity elsewhere, consideration will be given to proposals to remove heritage assets from SGSSI. Decision-making should be transparent.*
- 04 *The significance of SGSSI's cultural heritage will be understood and documented.*
- 05 *Significant heritage assets will be managed to preserve their cultural heritage value.*
- 06 *The setting of significant heritage assets will be preserved where it contributes to the understanding and values of the heritage assets.*

The *Heritage Framework and Strategy* also sets out a strategy for the future management of the territory's heritage assets comprising seven key actions:

- 01 Developing legislation to protect the heritage assets and regulate change;
- 02 Categorising the heritage assets to understand what heritage assets comprise the physical heritage of SGSSI and their relative value;
- 03 Developing a Heritage Asset Management System to enable the ongoing management and recording of works to the heritage assets;
- 04 Developing management plans for key sites;
- 05 Ensuring the provision of advice from a group of informed experts, the Heritage Advisory Panel;
- 06 Furthering research and understanding of the heritage assets; and
- 07 Facilitating conservation of the heritage assets and managing change to them whether through recording or active conservation.

The Conservation Framework for Grytviken set out in this CMP has been written in accordance with the Conservation Philosophy and Principles set out in the *Heritage Framework and Strategy*. The preparation of the CMP is one of actions in the strategy whilst the CMP is mindful of the other works that are underway or may be forthcoming to manage South Georgia's heritage.

Grytviken Whaling Station is a group of heritage assets that are safely accessible and in comparatively good condition and therefore a group that should be maintained both in reflection of its inherent significance and also as an example of its type on the island.

## I.4 EXISTING INFORMATION AND RESOURCES

There are a small but useful number of publications that set out the history of the whaling station at Grytviken and how a shore-based whaling station would have been. Of particular use in the preparation of the CMP have been:

- *Pesca: A History of the Pioneer Modern Whaling Company in the Antarctic* by Ian Hart (2001);
- *The Shore Whaling Stations at South Georgia* by Bjørn L. Basberg (2004); and
- *South Georgia*: by Robert Headland (1984).

Archival research was outside the scope of this CMP but historic plans of the whaling station were consulted at the Scott Polar Research Institute (SPRI) in Cambridge.

A number of existing reports on the site have also been used to inform the CMP including:

- 'Inspection of the Disused Shore-Based Whaling Stations' by Purcell Miller Tritton (July 2011);
- 'Disused Whaling Stations: Grytviken Harbour Gazetteer' by Purcell Miller Tritton (July 2011);
- 'Grytviken Management and Maintenance Plan' by Purcell (2012);
- 'Report on the Inspection of the Whaling Stations in February 2015' by Purcell (April 2015);
- 'Building and Maintenance End of Season Reports' by GSGSSI's Building Team (2013/14 to 2016/17);
- 'South Georgia Museum Annual Reports' by SGHT (2011/12 to 2016/17).

Further information has been collected in meetings with:

- Alison Neil, South Georgia Heritage Trust (SGHT)
- Sarah Lurcock, SGHT
- James Jansen and Steve Brown, GSGSSI
- Adrian Faill, GSGSSI Building Team
- Thies Matzen, GSGSSI Building Team.

Bjørn Basberg shared his survey plans from 1992 via email. These are included in Appendix A.

For further secondary resources, see the Bibliography in Section 7.

## 1.0 INTRODUCTION

### 1.5 CONSULTATION

The first draft of this document was submitted to the GSGSSI, specifically James Jansen, CEO, and Steve Brown, Operations Director.

Following receipt of comments from the initial consultees, the CMP has been amended and circulated by GSGSSI to external consultees for comment, including representatives of:

- Foreign and Commonwealth Office (FCO);
- South Georgia Heritage Trust (SGHT);
- Norwegian Government's Cultural Directorate
- Øyas Venner;
- Friends of South Georgia Island (FOSGI); and
- South Georgia Association (SGA).

The draft CMP was also made available on the Government's website for public consultation.

All the consultee comments were collated and, where necessary, discussed with GSGSSI and the Heritage Advisory Panel (HAP) and the CMP amended accordingly. The final CMP and Gazetteer will be made publicly available via the Government's website. The associated Management and Maintenance Plan will be a working document used by the Government only.

### 1.6 GAPS IN KNOWLEDGE

Record keeping associated with the site has either been poor or records have not survived. Consequently the exact dates of many of the buildings and structures on the site are not known nor are the dates of alterations and repairs. Dates have been assigned based principally on a comparison of historic plans together with very recent records of maintenance works.

Similarly, the exact use, origin and date of installation of each item of plant on the site has not been attempted. It is known that many pieces of plant were reused, being moved from one part of the factory to another or from a factory ship to the shore-based station, as recorded by Hart in *Pesca*. The engineers and smiths at the Whaling Station were also adept at creating plant from pieces of existing plant or from scratch.

### 1.7 ADOPTION

The final CMP will be formally adopted by the Government of South Georgia & the South Sandwich Islands with the CEO being responsible for its implementation.

A hard copy of the CMP will be kept in the GSGSSI's offices in Stanley, Falkland Islands and at King Edward Point, South Georgia. A hard copy will also be deposited at the South Georgia Museum in Grytviken and the Scott Polar Research Institute in Cambridge, UK for archival purposes. Electronic copies will be held by the GSGSSI, the British Antarctic Survey (Cambridge) and the FCO. An electronic copy will be available on the Government's website.

### 1.8 ABBREVIATIONS

ASDIC	Anti-Submarine Division
BAS	British Antarctic Survey
CA	Conservation Action
CEO	Chief Executive Officer
CMP	Conservation Management Plan
CP	Conservation Plan
FCO	Foreign and Commonwealth Office
FIG	Falkland Island Government
FOSGI	Friends of South Georgia Island
GSGSSI	Government of South Georgia & the South Sandwich Islands
HAP	Heritage Advisory Panel
IAATO	International Association of Antarctica Tour Operators
KEP	King Edward Point
MMP	Management and Maintenance Plan
OV	Øyas Venner
SGA	South Georgia Association
SGHT	South Georgia Heritage Trust
SGSSI	South Georgia & the South Sandwich Islands
SPRI	Scott Polar Research Institute
UKAHT	UK Antarctic Heritage Trust



## SECTION 2.0

### UNDERSTANDING THE SITE

#### 2.1 SITE OVERVIEW

The Grytviken Whaling Station occupies the low lying, relatively flat area of land at the west end of one of the southern inlets of Cumberland Bay. As shown on the plan on the next page, the plant and footings of the main factory buildings are located around the Flensing Plan at the centre of the station. To the north-east are located the former senior staff accommodation, offices and stores, now used predominantly by the South Georgia Museum and the Post Office. To the north-west of the factory are the footings of the men's accommodation together with the refurbished Nybrakka and the Church with the football field beyond. Two large areas of oil storage tanks occupy the north-west and south-west corners of the station.

To the south of the factory is the former Repair Yard where the Main Stores and Engineering Workshop still stand. Further south are the footings of the Refrigeration Plant and the old Hydro-electric Power Station. A new hydro-electric power station is located on the site of the former Radio, ASDIC and Radar Workshop. The Cemetery is located around the bay on an elevated site with the remains of the Radio Station in the tussock to the east.

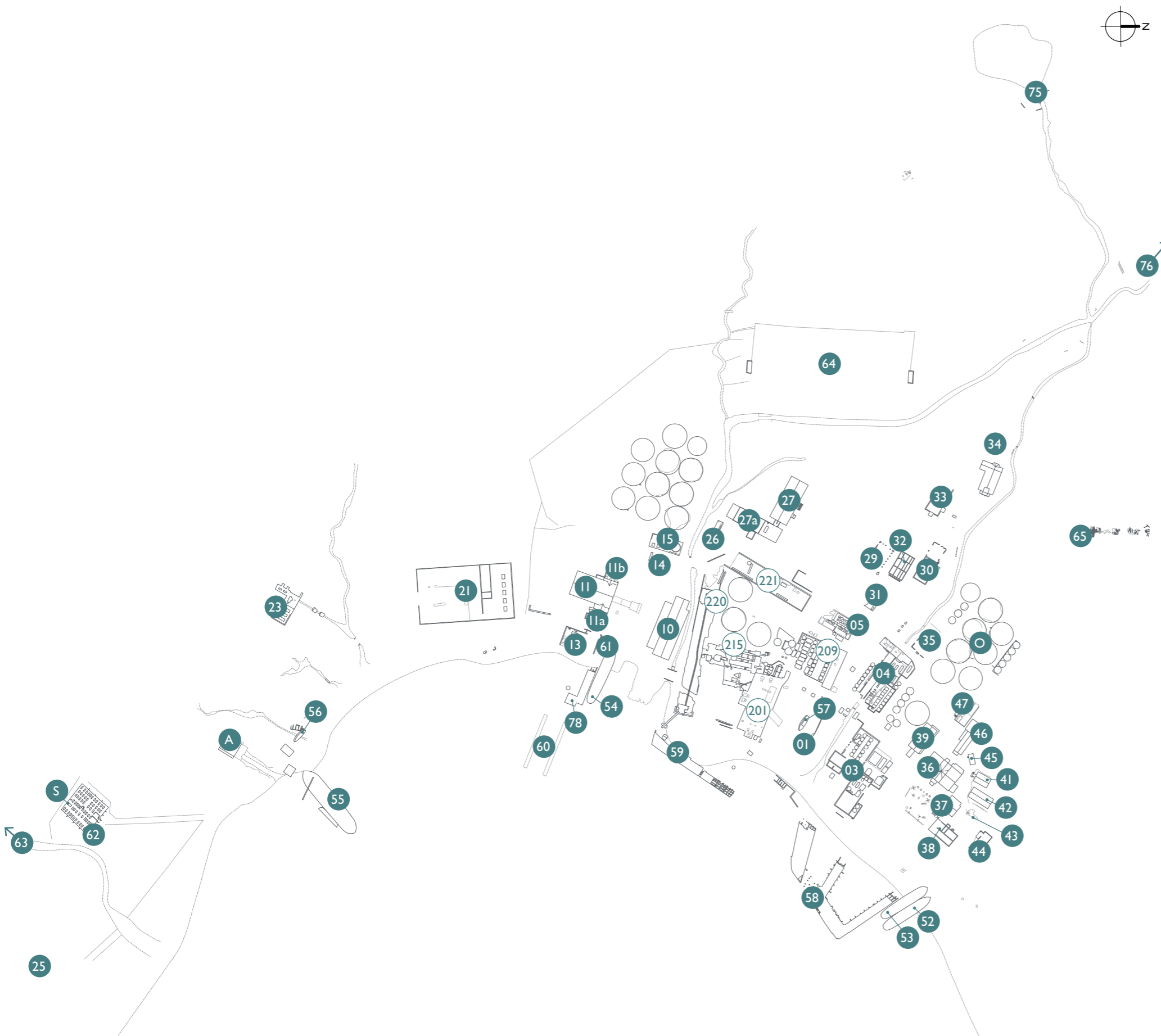
Along the frontage of the Whaling Station are located the remains of the jetties and three beached vessels and the remains of the barque *Louise*.

There are several streams that flow through the site. Further up the larger of these are located two dams that have been rebuilt to serve the KEP facility and the remains of a further dam and a structure that may have been a sluice or associated building.



View looking east over Grytviken with KEP in the middle distance

## 2.0 UNDERSTANDING THE SITE



- |  |   |
|--|---|
| <p><b>01</b> Flensing Plan (<i>Flenseplan</i>)</p> <p><b>02</b> Plant (<i>Fabrikkanlegg</i>)<br/>[Not shown – number given to a large area of the factory encompassing the numbers below]</p> <p>201 Meat Factory (<i>Kjøttkokeri og presse</i>)</p> <p>209 Bone Cookery (<i>Beinkokeri</i>)</p> <p>215 Guano Factory (<i>Guanofabrikk</i>)</p> <p>220 Guano Store (<i>Guanolager</i>)</p> <p>221 Guano Store (<i>Guanolager</i>)</p> <p>222 Boiler house (<i>fyrhus</i>)</p> <p><b>03</b> Blubber Cookery and Boiler House (<i>Spekkokeri og fyrhus</i>)</p> <p><b>04</b> Separator and Power Plant (<i>Separatoranlegg og kraftstasjon</i>)</p> <p><b>05</b> Glue-water Plant (<i>Limvannsanlegg</i>)</p> <p><b>10</b> Main Store (<i>Magasinet: hovedlager</i>)</p> <p><b>11</b> Engineering Workshop (<i>Mekanisk verksted</i>)</p> <p>11a Foundry (<i>støperi</i>)</p> <p>11b Blacksmith (<i>smie</i>)</p> <p><b>13</b> Plating Store (<i>Plateverksted</i>)</p> <p><b>14</b> Winch House (<i>Vinsjehus</i>)</p> <p><b>15</b> Pumphouse (<i>Pumpehus</i>)</p> <p><b>21</b> Refrigeration House (<i>Fryseri</i>)</p> <p><b>23</b> Hydro-electric Power Station (Historic) (<i>Vannkraftverk</i>)</p> <p><b>25</b> Radio Station (<i>Radiostasjon</i>)</p> <p><b>26</b> Slaughter House (<i>Slakteri</i>)</p> <p><b>27</b> Nybrakka (<i>Nybrakka</i>)</p> <p>27a Mess (<i>messe</i>)</p> <p><b>29</b> Barracks (<i>Tidl. brakke</i>)</p> <p><b>30</b> Barracks (<i>Brakke</i>)</p> <p><b>31</b> Russebrakka: Barracks and Laundry (<i>Russebrakka: brakke og vaskeri</i>)</p> <p><b>32</b> Bath House (<i>Vaskehus</i>)</p> <p><b>33</b> Cinema (<i>Kino</i>)</p> <p><b>34</b> Church (<i>Kirke</i>)</p> <p><b>35</b> Hospital (<i>Sykestue</i>)</p> <p><b>36</b> Villa: Manager's House (now South Georgia Museum) (<i>Villa: bestyrerbolig</i>)</p> | <p><b>37</b> Foremen's House (<i>Drukken Villa</i>) (<i>Formannsbrakke</i>)</p> <p><b>38</b> Foremen's Barracks (<i>Tidl. Formannsbrakke</i>)</p> <p><b>39</b> Carr Maritime Gallery (on site of Provisions Store No.1) (<i>Proviantlager No.1</i>)</p> <p><b>41</b> Provisions Store No.3 (<i>Proviantlager No.3</i>)</p> <p><b>42</b> Potato Store (<i>Potetkjeller</i>)</p> <p><b>43</b> Bakery (<i>Bakeri</i>)</p> <p><b>44</b> Cold Store (<i>Kjølelager</i>)</p> <p><b>45</b> Coffee Roasting House (<i>Kaffebrenneri</i>)</p> <p><b>46</b> Slop Chest (now Post Office) (<i>Slapp</i>)</p> <p><b>47</b> Bakery and Barracks (<i>Bakeri og brakke</i>)</p> <p><b>52</b> <i>Dias</i> (formerly the <i>Viola</i>) (<i>selfangstbåt</i>)</p> <p><b>53</b> <i>Albatros</i> (<i>selfangstbåt, tidl. hvalbåt</i>)</p> <p><b>54</b> <i>Petrel</i> (<i>hvalbåt</i>)</p> <p><b>55</b> <i>Louise</i> (<i>bark</i>)</p> <p><b>56</b> Motorboat (<i>Motorbåt</i>)</p> <p><b>57</b> Motorboat (<i>Motorbåt</i>)</p> <p><b>58</b> Harpon Jetty (<i>Harpon-brygga</i>)</p> <p><b>59</b> Tijuca Jetty (<i>Tijuca-brygga</i>)</p> <p><b>60</b> Floating Dock (<i>Fyltedokk</i>)</p> <p><b>61</b> Catcher Slipway (<i>Hvalbåtsslipp</i>)</p> <p><b>62</b> Cemetery (<i>Kirkegård</i>)</p> <p><b>63</b> Gull Lake Dam (<i>Demning</i>)</p> <p><b>64</b> Football Field (<i>Fotballbane</i>)</p> <p><b>65</b> Ski-jump (<i>Hoppbakke</i>)</p> <p><b>75</b> Lower Bore Valley Dam (<i>Demning, nedre</i>)</p> <p><b>76</b> Upper Bore Valley Dam (<i>Demning, øvre</i>)</p> <p><b>78</b> Jetty (<i>Brygge</i>)</p> |
|--|---|
- A** New Hydro-electric Power Station (on site of Radio, ASDIC and Radar Workshop)
- S** Shackleton's Grave
- O** Fuel or Whale Oil Tank
- Numbering based on that used by Basberg

*This plan is not to scale*

## 2.0 UNDERSTANDING THE SITE

### 2.2 HISTORICAL DEVELOPMENT

This section provides a summary history of Grytviken that gives an overview of its development; an illustrated timeline that focuses on the changes to the built fabric of the Whaling Station and provides more detail; and a plan that indicates the approximate date of the different surviving structures at Grytviken.

#### 2.2.1 Summary

Grytviken was used in the nineteenth century as a site for sealing. The discovery of tryptops on the beach by the Swedish Antarctic Expedition gave the place its Swedish name, Grytviken, meaning Pot Cove. Grytviken Whaling Station was established in the 1904/5 season by Carl Anton Larsen, a Norwegian-born captain who had both a background in whaling and knew South Georgia from his involvement in Antarctic expeditions and initial exploratory whaling expeditions in the 1890s. It was operated by the Argentinian-based *Compañía Argentina de Pesca Sociedad Anónima (Pesca)*. The timing was fortuitous for in 1906 there was a crisis in the world fat supply and the demand for whale oil rose, especially once it was found to be possible to harden it through hydrogenation. The initially small station rapidly grew with the addition of more buildings through the late 1900s whilst the fleet of whale catchers too was increased. By 1910, however, Grytviken was not the only whaling station on South Georgia as four others had been established. At Grytviken in that year, the early blubber factories were substantially rebuilt and a meat and bone factory added to increase production of oil. Throughout Grytviken's whaling history, sealing was also carried out as an ancillary activity.

In 1911, Larsen proposed the considerable expansion of Grytviken but a poor season led to Pesca's directors withdrawing their support. Better seasons followed, however, and further structures were added including the Church and the Gull Lake Dam to provide more hydro-electric power in 1913. Towards the end of what was Larsen's final season as the Manager at Grytviken in 1914, the original Manager's Villa was destroyed by fire and a new larger one was shipped from Norway for the following season. The First World War saw whale oil prices soar as well as a high demand for a by-product of whale oil manufacture, glycerine, needed for ammunitions. During the war, guano (meal made from whale meat and bone for use as fertiliser or animal feed) was produced on land at Grytviken.

By the beginning of the 1920s, the lack of investment was taking its toll and new whale catchers were purchased throughout the 1920s, including the *Albatros* in 1921 and the *Petrel* in 1928. A substantial programme of modernisation to the factory was undertaken in the mid-1920s as the Falkland Island Government (FIG) made it clear that only the most efficient companies would have their licences renewed. This led to the rationalisation of the blubber factories into a single building and the creation of separate factories each for the meat and bone cookeries. Steam-powered bone saws, new elevators, water tube boilers that created high pressure steam, rotary cookers and centrifugal separators were amongst the plant installed to modernise the station in the 1920s. Alongside this, a floating dock and mechanical workshop was added to improve the facilities for the repairs of the boats. The Gull Lake Dam wall was increased and a new hydro-electric power station added. Accommodation and storage too were increased.

The Great Depression that followed the Wall Street Crash of October 1929 led to the closure of all South Georgia's whaling stations apart from Grytviken and Leith. At Grytviken there were short-lived experiments to improve and diversify, such as the production of meat meal concentrate and a silver fox farm. Fire and explosions in the factories led to some rebuilding and replacement of the cookers and boilers in the late 1930s. The outbreak of the Second World War saw the demand for whale oil and meat rise dramatically and it remained high after the war to the extent that Husvik Whaling Station on South Georgia came back into production.

The late 1940s saw some changes to the Whaling Station, such as the extension of the floating dock and slipway as well as the construction of new barracks, Nybrakka. However, the Pesca Chairman, Alfredo Ryan, was exploring floating factory whaling and investment in Grytviken was limited. The first British manager of the station, KS Pierce-Butler, was appointed in 1954 and identified many improvements as there had been little significant investment since the 1930s. The late 1950s saw huge change with the rebuilding of much of the meat factory, creation of a much enlarged guano factory and store, the re-equipping of the blubber factory, the introduction of new equipment in the glue-water separator and the creation of a new separator house. Efficiency was emphasised and a collector was installed in the sea at the foot of the Flensing Plan to collect oil. Five new whale catchers were bought from a Dutch company. Diversification led to the construction of a meat extract plant in 1960 and the purchase of meat freezing plant from Husvik in 1961. 1960 also saw the transfer of the Whaling Station to a British company, Albion Star, though Ryan remained as Chairman. Albion Star purchased Husvik in the same year.

However, the whale stocks were declining. The predominantly caught species had changed over time with the whales getting progressively smaller; in 1904–1912 the main species caught were the southern right and humpback whales, 1917–1937 blue whales; 1937–1965 fin (and sei) whales.<sup>01</sup> Grytviken did not operate for the 1962/3 season. It was leased to a Japanese consortium, which produced high quality oil together with meat and blubber for human consumption in the 1963/4 season. However, lack of profitability meant that the following season was cut short. The following year the lease was paid for but not used and Grytviken was effectively abandoned although a station caretaker remained until 1971.

In 1979 Grytviken was sold to Christian Salvesen, who owned Leith and Stromness. The company in turn made a contract with an Argentinian scrap metal merchant to take the metal from the whaling stations on South Georgia. It was under the guise of inspecting the scrap metal at Leith, that Argentinian marines landed on South Georgia, which began the Falklands Conflict in 1982. Staff at KEP took refuge in the Church at Grytviken. British military personnel remained stationed at KEP for two decades until 2001.

A major project to clean up oil at Grytviken was carried out from 1989 to 1991, which was paid for by Salvesen. In 1992, the Manager's Villa was opened as a museum of whaling. It subsequently developed into a broader museum about South Georgia. In 2003/4, there was a major remediation project undertaken to remove the asbestos and oil from Grytviken, which also resulted in the removal of many structures due to poor condition. Refurbishment and repair works to the remaining buildings have been carried out in subsequent years to bring them back into use.

<sup>01</sup> Ian Hart, *Pesca: A History of the Pioneer Modern Whaling Company in the Antarctic*. (2001: Aiden Ellis, Salcombe)

## 2.0 UNDERSTANDING THE SITE

### 2.2.2 Illustrated Timeline

#### Notes

Dates expressed 1904/5 represent the whaling season, which occurred in the austral (southern hemisphere's) summer.

Relevant background or contextual events that did not directly affect the built fabric at Grytviken, such as the establishment of another whaling station or a piece of legislation, is coloured blue.



1902

May

The Swedish Scientific Antarctic Expedition discovered a fine bay and remains of a sealing site with try pots at KEP so it was named Grytviken, Swedish for Pot Cove. Carl Anton Larsen, who captained the expedition ship, noted its protected position, deep and sheltered harbour, the stretch of flat ground just above sea level and abundance of fresh water. It was later recognised as the best harbour in South Georgia.<sup>02</sup>

1904

February

Compañía Argentina de Pesca Sociedad Anonima was founded in Buenos Aires.

1904

23 July

The barque *Louise* left Sandefjord with the whole of the factory plant comprising 12 open cookers for melting blubber, two blubber presses, two steam boilers and a cooper's workshop<sup>03</sup>, for the proposed whaling station at Grytviken. She also carried provisions for 18–20 months, materials, stores and two prefabricated wooden buildings, one to house factory equipment and one as a dwelling for workers. Everything was erected on wharf side at Sandefjord before being put on ship to ensure reassembly in South Georgia would be quick.

<sup>02</sup> Hart, *Pesca*, 24.

<sup>03</sup> In the early years all the whale oil was stored and transported in barrels.

28 October

The Norwegian-made whale catcher *Fortuna* arrived in Buenos Aires, where the *Louise* was waiting. (The third Pesca vessel, *Rolf*, followed). After formalities, Larsen and his men set off for South Georgia on 3 November. For speed, *Fortuna* towed the *Louise*.

16 November

*Fortuna* and *Louise* arrived at Grytviken. (*Rolf* arrived on 28 December.)

To build the station, tussock had to be cleared and the hauling slip and flensing plan<sup>04</sup> laid out. Timber and corrugated iron buildings were constructed for blubber cookers. A boiler house was also built. Water was provided by damming a watercourse in the Bore Valley (lower down than the existing dam). Rafts were used until a jetty was built. A barracks was erected on the shore on the south side of the bay with the *Louise* being used as accommodation until its completion. The carpentry and cooper shops, oil storage tanks, forges and machine shops, stores and animal shelters were all then constructed. A Manager's Villa was constructed. It was a Norwegian house relocated from Sandefjord that had formerly belonged to Christian Christensen, the owner of A/S Oceana whaling company and Larsen's former employer. Heating for it was provided from a stove in the attic. A hydro-electric dynamo provided electric light from around 1906. The buildings were speedily constructed as no one knew how permanent the site would be.<sup>05</sup>

27 November

*Fortuna* harpooned the first whale, a humpback. In total, 91 whales would be caught in the first season to April. Some have claimed the first oil was processed on Christmas Eve but contemporary accounts state January.

<sup>04</sup> Plan in Norwegian means level working place.

<sup>05</sup> Hart, *Pesca*, 52-53.

### Carl Anton Larsen (1860–1924)

Carl Anton Larsen was born in Tjølling, Norway before his family moved to the centre of Norway's whaling industry, Sandefjord. Larsen accompanied his father, who was a ship's captain, on trading and sealing expeditions from a young age and by the age of 21, Larsen was already a senior officer who had learned to speak English and Spanish.

Larsen captained the *Jason* on the 1892–1893 Norwegian Whaling Exploration of the Antarctic. Although he caught no whales, he collected seal oil. He returned the following season, making several discoveries of new parts of Antarctica and also visiting South Georgia. The *Jason* did succeed in harpooning a whale in Moltke Harbour in 1894 but it escaped. Larsen's contribution to Antarctic discovery was recognised the following year by a diploma from the Royal Geographical Society.

From 1895 Larsen was the manager of a whaling station in Finnmark before he returned to the Antarctic as the captain of the *Antarctic* for the Swedish Scientific Antarctic Expedition in 1901. The *Antarctic* was crushed by pack ice in the winter of 1902 and he and his crew spent the winter of 1903 on Paulet Island off the Antarctic Peninsula before being rescued by an Argentinian naval vessel. For a decade he had longed to found a whaling station on South Georgia but had been unable to find any Norwegian backers. In Buenos Aires, however, he succeeded in finding investors.

In 1904 he founded the Compañía Argentina de Pesca and subsequently the whaling station at Grytviken. He remained as Manager until 1914, when his contract ceased. He returned to Norway and started to investigate the potential for whaling in the Ross Sea. Having eventually raised the capital, he led a whaling expedition on the pelagic factory ship *Sir James Clark Ross* accompanied by five whale catchers in 1923/4. During a second expedition the following season, he died aboard the same ship in December 1924.<sup>06</sup>



<sup>06</sup> Hart, *Pesca*; Robert Headland, *The Island of South Georgia*; Naomi Boneham, 'Carl Anton Larsen Collection', <https://archiveshub.jisc.ac.uk/search/archives/7f3fc137-0af4-3ad4-afa3-175e4d7526ca>, accessed 10 May 2018.

### Processing the Whales

Whale catchers would typically catch multiple whales before towing the inflated carcasses to the shore-based station for processing. Initially the processing of the whale was highly wasteful with only the blubber harvested to obtain oil. Within a few years, however, the meat and bone was also processed to extract oil and later guano was produced, at first off-shore and later at Grytviken. With increased mechanisation, the extraction of oil and the production of other products became more efficient. Whilst this was partly driven by profit, within a few years of the establishment of Grytviken the Falkland Island Government required the use of the whole whale, something it could enforce through the licences for whaling.

#### Blubber

A whale carcass would be towed to the foot of the slipway of the flensing plan by a motorboat. It was then winched onto the plan by steel cables attached to the flukes inserted whilst at sea to enable the whale catcher to tow the whale back to the station. The flensers were workers dressed in protective leather suits and spiked boots who used razor sharp flensing knives to cut through the blubber. This was systematically peeled off with the aid of winches.

The strips of blubber were cut up on a separate part of the flensing plan and fed at ground level into the steam driven revolving circular cutter which had four blades that minced the blubber. The hogged (minced) blubber was conveyed by bucket elevators to the top of the open cooker. The oil would be tried out under steam pressure for 12 hours. After that time, the contents of the cooker were left to settle to separate out into oil, glue-water (a liquid emulsion) and grax (an oily solid). Open cooking involved cooking at low temperature and pressure, which produced higher quality oil but required more energy.

#### Meat and Bone

The skrott (flensed carcass) was pulled to one side of the flensing plan by winches and dealt with by workers called lemmers. The meat was removed from the carcass by cutting off the head, severing the ribs from the back bone, cutting out the back muscle and removing the viscera (organs). Steel cables and hooks helped to tear the carcass apart whilst the lemmers cut the meat into manageable sections. The large lumps were dragged away by men with hooks and cut into portions that could be fed into buckets on steam hoists that raised them to the upper deck, where the meat was fed into the meat cookers. The viscera and tongue were tried out in a separate small cooker in the bone cookery as they produced poorer quality oil.

Once the meat had been removed from the carcass, the skeleton was then dismembered and the bones sawn down to fit them into the bone cookers. Initially this work was done manually by gangs of men with saws two to three metres long. The head alone took around an hour to cut down. In 1921, steam driven saws were introduced. Bone produced better oil than meat, which coagulated during cooking and inhibited the steam from passing through the cooker. Perforated metal plates were added to the meat cookers to allow steam to circulate better.

Once a cooker was full, it was screwed down and steam introduced to try out the oil. Oil was run off at intervals during the cooking process, which lasted 12 hours for meat and up to 15 hours for bones. In the early years, oil was stored in tanks and then transferred into barrels for shipment but this compromised the oil quality. From the 1920s, oil was increasingly stored in tanks until it was transferred into oil tanks on the transport ships.

Initially discarded, by the First World War, the bone and meat was dried separately to make meat meal and bone meal, known as guano. This was used as fertiliser and cattle feed. From the 1950s the drying kilns took the form of horizontal, rotating, cylindrical cookers with metal spirals inside to aid drying. The dried meat and bone was milled and bagged.

#### Glue-water and Grax

The residue from the cooking process comprised grax (sludge) and glue-water. In the earlier period of operations, the glue-water was run off into a tank to settle for up to three days and oil would be skimmed off before the remaining liquid was poured into the sea.

In later years, plant was introduced to separate oil from glue water and to extract oil from grax. This residue was concentrated into protein-rich solutions that were added to the guano.

#### Other By-Products

Before the 1920s when corsetry was fashionable, baleen was harvested. It was washed in a stream, scraped, dried and polished before export. Bristles were also sold for an array of uses from brushes, umbrellas, riding crops and walking canes to guardsmen's plumes, telescope covers and surgical appliances. There were other chemical by-products, of which one of the most important was glycerine, used in explosives.

Though unpopular in much of Europe in the early twentieth century, whale meat and, later whale meat extract, were more in demand amidst the rationing of the Second World War and its aftermath. Whale meat and blubber for human consumption have long been popular in Japan.

## 2.0 UNDERSTANDING THE SITE

**1905/06** The number of blubber cookers was doubled to 24 to reduce waste and improve whale oil quality. This had been poor as whales were dead for too long before processing, especially after the arrival of *Rosita*, a second catcher which increased the number of whales for processing.



A very early photograph of the north end of the whaling station showing the original Manager's Villa, reproduced courtesy of the South Georgia Museum

**1906** Larsen erected two Whigham's automatic leading beacons, one on Right Whale Rocks and the other at the entrance to King Edward Cove. Later he erected lights on Larsen Island and Sappho Point. These navigational aids were essential to safe navigation.

A crisis in world supply of fat as there was not enough animal fat to meet demand of soap manufacturers. This led to experiments to harden whale oil through hydrogenation and a patent was registered in 1909. Although hydrogenated whale oil was not widely used until after the First World War, nonetheless from 1906/7 the price of whale oil rose.

**January**  
Visit of HMS Sappho contributed to the establishment of British interest on South Georgia.

**5 October**  
Falkland Island Government (FIG) Ordinance made it illegal to whale without a licence. Royalties also imposed on each whale caught though this method of taxation proved unsuitable and was repealed in 1908.

**1907 February**  
Fire in one of the blubbereries curtailed production.

Two Norwegian companies established whaling stations on South Georgia: Sandefjord Whaling Company at Stromness and the Tonsberg Whaling Company at Husvik.

**1908** By 1908 a social house had been erected (teatersalen) on the south side of the station. It was one of 17 buildings that existed aside from the factory. There was a refectory, a slop chest (where workers could purchase goods), WCs, a washhouse and barracks. To provide fresh meat there was a piggery housing 40–50 animals west of the Manager's Villa whilst pigeons were kept in loft above the bakery. There was also a new quay and a steam driven electric generator. Time not spent working was often spent constructing new buildings or maintenance.<sup>07</sup>

Letters patent formally established British rule on South Georgia.

**August**  
FIG Ordinance imposed a fee on the establishment of any land station or use of factory ship. It also prohibited killing of calves or females with young and sought to reduce the amount of waste in whale processing.

Bryde and Dahls Whaling Company established a shore base where a factory ship was anchored at Godthul.

<sup>07</sup> Hart, Pesca, 181.

**1909** *Nor* arrived in November to become a factory ship for dealing with the skrotts (carcasses stripped of blubber). There was no meat and bone factory at Grytviken at this time.

Three press cookers were added to the blubber cookeries.

Pesca began elephant sealing. It was done sustainably and ensured Grytviken remained open in difficult times.

Pesca took on the lease of Jason Harbour. No whaling station was established there but a hut was built as an animal shelter, which was also used by sailors in bad conditions.

James Innes Wilson was the first appointed Magistrate for South Georgia and was temporarily housed at Grytviken until the construction of the administrative centre at KEP in 1912.

Two further whaling stations were established on South Georgia: Christian Salvesen established Leith and A/S Ocean created Ocean Harbour at New Fortuna Bay. Their licences required them to utilise the whole whale.

**1910 12 December**  
The arrival at Grytviken of a fourth catcher for the fleet, *Don Ernesto*<sup>08</sup> led to substantial rebuilding of the blubber factories including the addition of four new open cookers and six more tanks. All the cookers were raised four feet off the ground to allow for the removal of grax. Two new large horizontal steam boilers were installed to produce energy for rendering. A second mechanical blubber hacker was installed together with more elevators to take blubber to the top of the cookers. A facility was also created with three press cookers to process bad blubber, meat and bone.

<sup>08</sup> The *Karl* had arrived in the 1907/8 season. The *Lille-Carl* was added to the fleet in 1910 but almost immediately converted to a sealer.

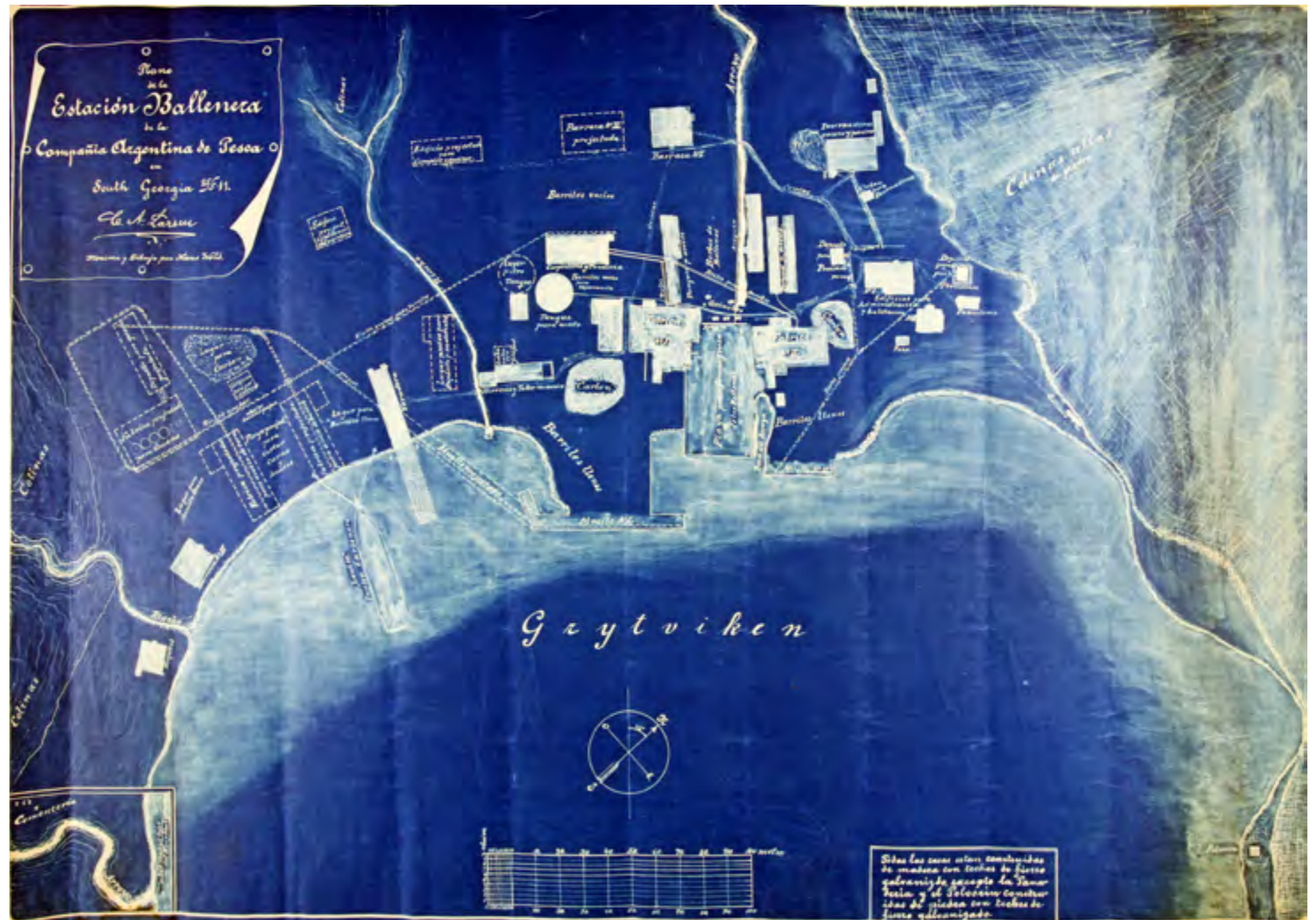
## 2.0 UNDERSTANDING THE SITE

1911

To cope with increased production, a new cooper's shop was erected, the main jetty and catcher slip were both enlarged (the latter to take two vessels at a time) and an additional whale winch and regulators were added.

25 May

A plan of Grytviken was produced by Hans Wold (see below). It showed Larsen's proposals for a modern guano plant and an independent plan for meat and bone processing but these were cancelled by the directors following a poor 1912/3 season.



1911 Plan of Grytviken by Hans Wold showing Larsen's proposals to expand Grytviken. Existing buildings are shown with a solid line and proposed with a dashed line. (MS 1991, item on loan to the Scott Polar Research Institute)

## 2.0 UNDERSTANDING THE SITE

**1912** The Manager's Villa was extended with new first and second floors and a new bathroom on the ground floor. It was used as the office and residence of the Manager and officials.<sup>09</sup>

FIG imposed royalties on whale oil caught and landed at South Georgia. It also imposed a closed season from 31 May to 16 September although this was not enforced until after the First World War.

**1913** Construction of Gull Lake Dam. As early as 1908 it has been realised that steam boilers and the hydro-electric dynamo were not sufficient whilst coal was too expensive to import in greater quantities. The hydro-electric station with two turbo generators (with Estonian Volta generators and Italian A.Riva & Co. turbines) was operational by February 1914. A second dam at Bore Valley provided a water supply and powered a supplementary turbo generator. This was also connected to a fire-fighting pipe system.

Construction of the Church began on 25 November and it was consecrated on 24 December. It was a prefabricated wooden Lutheran chapel made by Strømmen Trævarefabrik in Norway to a design by Adalbert Kielland, an architect and husband of Larsen's daughter, Signe. It cost 10,400 kroner (c.£600). The Church had seating for 200 (it would remain the only church on the island) and had a writing and reading room.<sup>10</sup>



*Construction of the frame of the Church in November 1913, reproduced courtesy of the South Georgia Museum*



*Construction of the spire of the Church, reproduced courtesy of the South Georgia Museum*

**1914** **12 April**  
The Manager's Villa was destroyed by fire in two hours probably because of a stove on the second floor. A replacement villa was shipped from Norway for the next season.

**July**  
Larsen left South Georgia at the expiry of his contract. His nephew, Fridthjof Jacobsen became the new Manager.

**August**  
Outbreak of the First World War. It continued until November 1918.

**5 November**  
The Imperial Trans-Antarctic Expedition's ship *Endurance* arrived led by Sir Ernest Shackleton with Frank Wild as his deputy.

Meridian transit beacons were constructed by the *Endurance* crew, at the request of the whalers, for Grytviken catchers to swing their compasses. The remains of the beacons are still to be seen beyond the Cemetery.<sup>11</sup>

<sup>09</sup> Hart, Pesca, 202.

<sup>10</sup> Hart, Pesca, 190. Workers from all stations came for Christmas

<sup>11</sup> Robert Burton, 'The meridian transit beacons: a Shackleton legacy on South Georgia.' in *Polar Record*, 47 (2011) 374-77.



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1915

February

The export of whale oil, except to the UK, was prohibited by FIG. Whilst whale oil prices soared in wartime, so too did coal and freight and insurance rates.

1916

Pesca suffered a series of losses of its vessels: the *Argos* in May and *Curamalan* in September both with cargoes of oil and on 14 May the original catcher *Fortuna* was lost. The recovered gun was put in front of the Villa where it remains. The steam boiler was salvaged for use in the blubber furnace room. A replacement catcher, *Pelican*, was bought whilst the *Granat* was also leased.

1916

/17

Production of guano (meat or bone meal) on land began with the use of 12 small press cookers and a guano drying plant from the *Ems*, a factory ship previously used for the purpose. War made it difficult to enlarge the plant. Eventually 20 large closed press cookers were acquired from the USA and 12 from South Africa to create a plant of 20 large and 18 small units, installed in a new shed at the head of the plan in 1917/18. The blubber factories had been rationalised to 20 units with six sperm pots for sperm oil. There were 22 storage tanks. This meant that the whole whale could be processed on land, as required by FIG, and the skrott floating factories were no longer required. By 1920 there were blubber cookeries either side of the plan and meat and bone cookeries at the head.

1917

The Southern Whaling and Sealing Company of Cape Town established the last of the South Georgia whaling stations at Prince Olav Harbour.

1921  
/22

Introduction of steam driven bone saws. These were made at Grytviken to a design from a Sandefjord shipyard.



1921

The arrival of *Albatros* and *Foca (I)* as replacement catchers. There was a need to modernise as Pesca had not been doing so despite Larsen's warnings as early as 1909. Despite a terrible season 1920/21, there was a need to invest. Further new vessels arrived through the decade: *Tiburon* and *Don Samuel* in 1924 and 1925, *Don Miles* and *Orca* in 1926, *Skua* in 1927, *Petrel* in 1928 and *Morsa* and *Narval* in 1929. *Foca I* was replaced by *Foca II* in 1930.

1922

Death of Shackleton on the *Quest*, anchored at Grytviken. His funeral was held in the Church and his body interred in the Cemetery at the instruction of his wife. The crew, led by Frank Wild, set up a memorial cross at Hope Point.

1923

A buried cable extended electricity to KEP.

The acquisition of *Harpon (II)* as transport vessel greatly improved transport of cargo and personnel.



1924

8 December

The death of Larsen on board his pelagic factory ship, *Sir James Clark Ross*.

## 2.0 UNDERSTANDING THE SITE



1925

The old meat and bone cookery was demolished and two separate factories were built with a total of 58 large cookers and a Babcock and Wilson steam boiler. The meat factory was built on the old blubber cookery and the blubber cookery was rationalised to a single building. New elevators were installed. This was part of the major modernisation of the station (see 1926).

24 September

RRS Discovery left the UK and arrived in South Georgia in February 1926. For the next year, a series of investigations were undertaken to understand the whale population and its food supply in a bid to understand the future potential of the whaling industry in the region. The expedition was the result of the formation of an Interdepartmental Committee for the Dependencies of the Falkland Islands. Other important scientific studies were undertaken including a hydrographical survey. Discovery House at KEP was built as accommodation for those involved.<sup>12</sup>



1925 Plan of Grytviken prior to redevelopment. (MS 1991, item on loan to the Scott Polar Research Institute)

<sup>12</sup> Headland, *The Island of South Georgia*, 80-87.

## 2.0 UNDERSTANDING THE SITE

1926

The Magistrate, Edward Binnie, produced a report on the whaling stations in South Georgia describing the plant and processes at each and commenting on production output and efficiency with reference to whether licences should be renewed. It was based not only on visits to all the stations but also figures and information supplied by the whaling companies. The report described the South Georgia Company at Leith as the best, followed by the Southern Whaling and Sealing Company at Prince Olav. Pesca's gradual improvements were noted but its reduced output was criticised and ascribed to obsolete methods and lack of plant. The quality of the oil was said to be poor because of the bad stowing of meat in the cookers and the need for a chemist to grade the oils was noted. In January, Pesca had sent Binnie a list of works which had been, were being or would be undertaken to modernise Grytviken:

- **Blubber Cookery:** installation of 10 helical screws in open cookers this season and 10 to follow. Blubber presses to be installed. Six to eight press cookers to be fitted for boiling grax. A cement floor to be added.
- **Meat Cookery:** installation of 10 new press cookers, two tanks for receiving oil and double grooves for the better grading of oil.
- **Bone Cookery:** six new press cookers. Plan on top of the cookery to be extended to 100 feet so the whole whale carcass can be taken up. Two new tanks for oil with double grooves and two tanks for limewater. Another bone crusher and electric lift to be installed.
- **Flensing Plan** to be elongated by 40 feet using iron construction.
- **Guano Factory:** the small drying machine would be extended to the same length as the large one and an additional new drying machine would also be installed. A new store, 120ft by 30ft, to be created.
- **Oil tanks:** construction of two new tanks.
- **Steam boilers:** installation of a new Babcock and Wilcox steam boiler.
- **Slipway:** to be strengthened to take the largest type of whales.
- Two **new whalers** to be purchased for the fleet.
- **Hydro-electric plant** to be investigated regarding enlargement of the dam.<sup>13</sup>



1926 Plan for proposed redevelopment of Grytviken. Not all changes were enacted. (MS 1991, item on loan to the Scott Polar Research Institute)

<sup>13</sup> Edward Binnie, 'Magistrate's Report on South Georgia Whaling Stations 1925-6', Scott Polar Research Institute Archives MS 1228/3/3.

## 2.0 UNDERSTANDING THE SITE

1928

Enlargement of the hydro-electric power station. The wall of Gull Lake dam was raised and a new building was constructed for the plant along with new turbine pipes. A Decauville railway was constructed to take materials up to the dam. An additional turbine (A. Riva & Co. Milano) and generator (Siemens) were added to the existing ones. The three turbo-generators could provide power for the whole station with additional Babcock and Wilson water tube boilers to aid with the creation of high pressure steam. The dam also supplied water via a 40cm pipe whilst the Bore Valley supply ran in a 15cm pipe.

A floating dock was installed together with a modern mechanical workshop. Previously cleaning and repair of boats had been done on the slipways. The dock was 40.6m long and 10.4m wide, taking vessels drawing 4.6m. The floating dock plates were made at Framnæs Mekaniske Værksted, Norway and reassembled and riveted at Grytviken by Framnæs employees.

Acquisition of *Dias*, formerly the *Viola*, to be used as an elephant sealer.



View inside the mechanical workshop, reproduced courtesy of the South Georgia Museum

1928  
/29

Four centrifugal separators made by A/B Baltic (Sweden) were installed to improve the quality and yield of oil. The number of storage tanks had been increased to hold 65,000 barrels.

1929

**April**

Three new Kværner cookers (rotary cookers) installed, one in the bone factory and two in the meat factory.

By 1929, there were five barracks and the Slav contingent was housed in the oldest, the Russebrakka.

The 1927/28 and 1928/29 seasons saw high numbers of whales being caught (1,449 and 1,592) though some have argued this was as much due to plentiful number of whales and good weather as the new catchers.<sup>14</sup>

**October**

The Wall Street Crash caused a worldwide financial crisis.

1930

Film showings had begun at the station in the Teatersalen in 1927. A cinema (Kino) was constructed in 1930. The two storey building had seating for 300 and was heated by stoves. Officials and their wives sat in the first floor gallery.

The guano plant was improved with three dryers that could generate around 1,000 bags of guano in 24 hours.

**April**

The existing grax cookery was supplemented by Hartman apparatus that liquefied solids. Around this time, a method of cooking meat and bone with glacier water at the bottom of the rotary cookers was used, which improved the quality of oil but reduced output.

1931

By September, all the station boilers and catchers were fitted to be oil fuelled, instead of powered by coal. Storage tanks were used for fuel and whale oil, being cleaned in between with caustic soda and steam. *Louise*, which had been used to store coal, became redundant and in the late 1930s ran aground on the beach. She was then used as mooring for whale buoys, pontoons and smallest sealer, *Lille-Carl*.

The League of Nations drew up the International Convention for the Regulation of Whaling, largely based on Norwegian whaling law. Argentina was not among the signatories in June 1932.



Grytviken in the early 1930s viewed from the south. The communal mess is the long building in the foreground. The factory buildings are smaller and so the main track through the site runs closer to the sea adjacent to the oil storage tanks. The Kino projection room is visible on the extreme left, reproduced courtesy of the South Georgia Museum

1932  
/33

Grytviken and Leith had continued to operate after the Wall Street Crash but oil prices were low and bay whaling was old-fashioned compared to the less restricted pelagic whaling. The whaling companies voluntarily agreed a limitation on whale oil output, not as a whale conservation measure but to prevent overproduction that would further weaken the market.<sup>15</sup> Not until 1936/7 did whale oil prices significantly improve as there was a shortage of other oils.

1933

A grax centrifuge was added.

<sup>14</sup> Hart, Pesca, 251.

<sup>15</sup> Hart, Pesca, 278.

## 2.0 UNDERSTANDING THE SITE



Grytviken in the early 1930s with the Manager's Villa in the bottom right corner. The raised tracks along Harpon jetty are clearly visible on the left, reproduced courtesy of the South Georgia Museum



Grytviken in the early 1930s with the whale catcher fleet at anchor and a vessel undergoing repair in the floating dock, reproduced courtesy of the South Georgia Museum

1934

22 December

A fire at the meat factory led to the installation of some equipment from the *Ernesto Tornquist* factory ship, which had been acquired in 1927. The fire started in the meat factory and spread, causing damage to the recently created meat meal plant, the boiler house (26 boilers were damaged) and part of the guano factory. The boiler house was operational again by 5 January 1935 and the meal factory and most of the meat factory by early February.

1934  
/35

New equipment was installed in the meat factory to enable the production of meat meal concentrate to enhance the nutritional value of guano used for animal feed. Equipment came from two Norwegian companies: Husø and A/S Mjølner. Lean meat was cut into chunks and passed through an American diamond hogger (mincer) to produce a minced mass that was then passed along a perforated channel where blood water was discharged. It passed into a screw press and then a drier before being milled. (The system improved after the Second World War with Rose-Downs machines).

1936

December

Old digesters from the *Ems* that were used in the guano factory were replaced with equipment from the *Ernesto Tornquist*. The Hartman cookers from the *Ernesto Tornquist* were installed in the bone factory.

1937

December

Fire destroyed part of the piggery and cowhouse.

1938

March

One of the old South African cookers in the meat factory blew up killing one man and rendering 11 other cookers beyond use. This led to the condemnation and replacement of all the old cookers. Eight large digesters were brought ashore from the *Ernesto Tornquist*.

A press cooker blew up in the guano factory causing damage.

Visit by HMS Exeter, which included the first flights on South Georgia when she launched her Walrus amphibious aircraft.

1939

Establishment of a silver fox farm in pens behind the piggeries. Skins were exported, but the operation ceased in 1947 partly because the reproduction rate was low and partly because the winter was not cold enough on South Georgia to produce the best fur.

With the outbreak of the Second World War in September, Pesca sold all its oil and meat from 1939 until 1945 to the Ministry of Food.

## 2.0 UNDERSTANDING THE SITE



**1939–1945** During the Second World War, most of the British whale catchers and factory ships were either requisitioned or torpedoed by German submarines so Leith ceased operating in 1941. The armed *Queen of Bermuda* was sent to patrol South Georgia's waters and the whalers left on the island were taught to man gun positions that were established by the British Royal Navy to protect the entrances to the bays where the whaling stations were located.

**1944 November** Alfredo Ryan was appointed Chairman of Pesca, ending four decades of Norwegian leadership of the company.

**1945** After the war, the demand for whale oil was high. Leith, inactive since 1941, and Husvik, since 1931, came back into production.

**1946 February** A small experimental meat extract plant was set up behind the bone cookery, but the market price was poor and production soon ceased.

The meat meal plant was reconstructed using Norwegian equipment designed for the herring industry. The capacity would prove inadequate.

**1947**

Ryan commissioned the enormous floating factory ship, *Juan Peron*, which was launched in 1950, only to be sequestered and bought by the Argentinian Government.



1947 Plan of Grytviken prior to the major redevelopment in the later 1950s. (MS 1991, item on loan to the Scott Polar Research Institute)

## 2.0 UNDERSTANDING THE SITE

**1948**  
**/49**  
The floating dock was lengthened by 7m to accommodate most of the modern catchers. A third rail was added and the slipway enlarged so the floating dock could be hauled out for maintenance.

**1949**  
**/50**  
Construction of new barracks – Nybrakka – for the craftsmen, which could house 96 men, the winter complement. The basement contained not only baths and washing facilities but also a darkroom as photography was popular. A large recreation room with gramophone was located on the third floor. A new foreman's house was also built in front of the Villa and later extended.

**1950**  
One new catcher, the *CA Larsen*, was added to the fleet.

**1950**  
**/51**  
Two Hardy diesel aggregates added to supplement the hydro-power station for when there was not enough water.



*Grytviken after the completion of Nybrakka but before the major changes of the late 1950s. KEP can be seen in the distance, reproduced courtesy of the South Georgia Museum*

**1951**  
**October**  
A fire occurred in the projection room of the Kino, which wiped out the cinema equipment and electrical installations.

**1951**  
**/57**  
Duncan Carse led an expedition to map South Georgia's coast using *Albatros*, *Dias* and *Lille-Carl*. Other Antarctic scientific expeditions usually called at South Georgia, especially Grytviken for materials and repairs as well as fresh water. Pesca often supported expeditions with use of vessels, such as *Dias* and *Petrel* for the Bird Island Expedition of 1958. Sir Vivian Fuchs and Sir Edmund Hillary, as leaders of the Commonwealth Trans-Antarctic Expedition called at Grytviken in December 1955.



**1954**  
**/55**  
A new manager, a Briton called KS Pierce-Butler, prepared a report on the future of Grytviken for Ryan. It identified many improvements as the station was essentially operating as it had in the 1930s. New plant and equipment such as conveyors to reduce manual movement of products round the factory; automatic machinery controls; and redesigning the layout and reorganising methods of working were all included. Energy efficiency was recommended to reduce costs, for example by insulating steam lines and using exhaust steam to operate low pressure pumps. The existing processes were criticised as wasteful, especially the blubber cookery that still used the original method of open cookers as they produced high grade oil but they wasted oil and required a lot of energy. Steam sometimes had to be used from the *Petrel* as the boilers could not cope. The open cookers were supplemented in the busiest times by one Hartman and two Kværner cookers but these produced poor quality oil.

**1955**  
**/56**  
Two new oil storage tanks were added. Four further tanks were added over the following two seasons.

**1957**  
*Petrel* converted to a sealer by the removal of the whaling gun, winch, accumulators and flying bridge and modification of the deck as well as alterations to the hold to take seal blubber and a new winch.

In the blubber cookery, 10 large open cookers were replaced with 12 press cookers that were created from 16 existing press cookers. They were arranged so one man could operate the whole plant. The oil from the vertical press cookers was blown into receiving tanks whilst the glue-water and emulsions went to the separator house where they were separated from the sludge by six De Laval type conical desludgers (later increased to eight). The oil was separated in a new separator house that contained five Titan superjectors (flash evaporators) and six De Laval glue-water separators. Three new De Laval oil centrifugal purifiers polished the oil.

The meat plan and meat loft were rebuilt to enable the production of better meat meal using the Rose, Downs & Thompson system. Two twin screw meat expellers (made by Kampen Værksted of Oslo) processed the meat in an hour, produced good quality oil and meat meal with little oil in. (Meal with oil could spontaneously combust whilst being stored.) There were four oil-burning long dryers 12m long (two for meat meal and two for bone meal) to which a shorter automatic dryer was added in March 1958.

The glue-water evaporator plant was enhanced with four double effect evaporators and a Vigand four-stage evaporator. The resultant concentrate was sprayed on the meat before conversion into meal to increase its protein content.

A new conveyor system, meat meal mill and cooker were inserted in the guano factory with two Blackstone AC motors in the turbine plant, where there were already three. These were in a new building to provide power to the oil separators and guano factory. There were seven generators in the diesel generator plant. The meat boiler house had four boilers of 1920s date whilst the three boilers in the blubber cookery included a boiler salvaged from the original catcher, *Fortuna*, when she was lost in 1916.

The one Hartman and two Kværner cookers from the old blubbery cookery were moved to the meat factory to handle burnt meat and other lower quality elements.

The bone cookery was left unaltered and contained one Hartman cooker and 32 press cookers.

## 2.0 UNDERSTANDING THE SITE

1957

A collector was built in the sea at the foot of the Plan to collect the oil lost on the Plan.

The Decauville railway system was replaced by the use of tractors. Previously stores were moved around the site via a Decauville railway (steel wagons were pushed by hand or hauled by winch). An overhead railway had been located on the edge of the sea and its presence over the slipway provided a constraint when hauling whales up the slipway.<sup>16</sup>

Five new whale catchers (RI-5) commissioned from a Dutch company formed a new fleet. In 1958 they were transferred to Ryan's subsidiary company Calpe Shipping Co Ltd under a Gibraltar flag and chartered annually by Pesca.

1960

Grytviken transferred to British company Albion Star (South Georgia) Ltd though Ryan remained Chairman. The move was probably diplomatic as the British did not want Grytviken to be Argentinian when it inevitably ceased production. Albion Star also acquired Husvik and used it for frozen meat production and oil. It was then decided to concentrate operations in 1961/62 at Grytviken.

Meat extract had become sought after for flavouring foodstuffs so in 1959 it was decided to establish a plant for meat extract (in preference to trying to produce frozen whale meat, which was not popular in Europe). To ensure no contamination, a separate meat plant and meat plant equipment was needed, (e.g. Strømmen cutter and Kampen expeller). It was built on the seaward side of blubber factory where there had been an oil separator. It consisted of 10 mild steel tanks and a stainless steel tank for storing meat juice, two Johnston frame filters (filter presses), a two-stage evaporator and a last stage evaporator made by A/S Limvann.

<sup>16</sup> Hart, Pesca 245

1961

Meat freezing plant transferred from Husvik to Grytviken. Only the freezing plant and one half of the cold store, which had come new from Norway, were completed by the end of the 1961/62 season though meat was still exported.



Grytviken in the early 1960s, reproduced courtesy of the South Georgia Museum

1962

Grytviken was laid up with no whaling occurring.

/63

1963

Grytviken was leased to the International Fishery Company (IFC), a Japanese consortium. It only used the head, back blubber and bone for oil so produced a high quality oil. The main focus, however, was the production of meat and blubber for human consumption. The first season was poor, reflecting declining whale stocks.

1964

IFC operated at Grytviken for only two and a half months because it was unprofitable.

/65

1965

Grytviken was effectively abandoned. The Japanese company paid FIG for the lease for the season but did not use it. Ryan hoped to sell Grytviken to the Japanese but they would not buy it.

The pelagic fleet in the Antarctic had also ceased to be profitable and by the end of the 1960s only Japanese and Soviet factory ships remained. The International Whaling Commission had reduced the quota to a mere 2,700 Blue Whale Units and commercial whaling was banned in 1986.



1971

Ragnar Thorsen, the station caretaker reluctantly left Grytviken. *Petrel*, *Albatros* and *Dias* remained in serviceable condition at Grytviken but the rest of the fleet had been sold off by the late 1960s. Through the 1960s and 1970s, the possibility of Grytviken becoming a refuelling and repair base for a fishing fleet was considered.

1976

**Winter**

*Dias* and *Albatros* capsized at their moorings under the weight of heavy snow, having already been stripped and vandalised. The station too had been looted by visiting yachts and ships.

1978

British Antarctic Survey retrieved files and correspondence from the Villa and took them to Scott Polar Research Institute (though some were damaged in transit and subsequently destroyed).

1979

**January**

A major fire burnt out the powerhouse and adjoining buildings.

**August**

Grytviken was sold to Christian Salvesen.

**September**

Christian Salvesen signed a deal with Argentine scrap metal merchant, Constantino Sergio Davidoff, to allow him to collect scrap metal from the whaling stations at Leith, Stromness and Husvik (excluding *Karrakatta*) as well as all whaling or sealing vessels at Grytviken.



## 2.0 UNDERSTANDING THE SITE

1981

**December**

Davidoff visited Leith to inspect the station but did not get permission to land from the magistrate before doing so.

1982

**March**

Forty Argentinian employees on board an Argentinian naval vessel sailed in Leith. On 31 March British marines landed on South Georgia from HMS *Endurance*.

**April**

Capture of South Georgia by Argentina. BAS staff retreated to Grytviken church until they were taken prisoner, as were the Royal Marines. On 25 April, British forces recaptured South Georgia and KEP became a base for military personnel.

1987

*Louise* was burnt to the waterline reportedly after live ammunition from a practice manoeuvre ricocheted off the rock into the hold.



Grytviken viewed from the south in 1989. In the foreground, the roof of the hydro-electric power station had already collapsed whilst *Petrel* can be seen sunk at her moorings. Reproduced courtesy of the South Georgia Museum

1991

The oil was removed from the Grytviken tanks to a minimal level and previous oil spills were covered. Oil was also removed from *Petrel*.

1992

The Museum opened at the Manager's Villa following a volunteer-led cleaning programme 1989–1991.

1995–  
2000

Restoration of the Church. Works included repairs to the steeple; the reinforcement and repair of the timber roof trusses with the insertion of steel plates; the replacement of the roof timbers and recovering with felt; repairs to the porch and vestry ceiling; the rebuilding of the bell frame; the repair of the windows and doors; and the repainting of the Church.

2001

The last military unit left South Georgia.



Grytviken viewed from the north in 1989. The foremen's barracks and the barracks and bath house north-west of Russebrakka had already disappeared whilst other buildings were in a poor condition. *Albatros* and *Dias* had sunk at their moorings. Reproduced courtesy of the South Georgia Museum

2003  
/04

A remediation removal project was undertaken to remove asbestos, oil and dangerous structures at Grytviken. Fuel oil was also removed from *Dias* and *Albatros* before they were refloated and beached.

The Museum and Drukken Villa were reroofed.

2005  
/06

Construction of the Carr Maritime Gallery on the location of an earlier Provisions Store.

2009

Opening of the new hydro-electric power station by HRH the Princess Royal.

2010  
/11

Refurbishment of Drukken Villa

2011

**November**

Interment of Frank Wild's ashes in the Cemetery.

External works to Nybrakka.

2014  
/15

Internal works to Nybrakka including floor repairs and ceiling removal.

Refurbishment of the Slop Chest as the Post Office and temporary exhibition gallery.

Renewal of the roofs of the Potato Store and Provisions Store including rebuilding the rotten roof structure of the Potato Store.

Artefacts in the Engineering Workshop were catalogued and moved to the Main Store.

2017  
/18

Replacement of the Main Store roof (excluding the lean-to).

More detail on recent changes can be found in [Appendix B](#).

## 2.0 UNDERSTANDING THE SITE

### 2.2.3 Historical Development Plan

This plan illustrates the approximate age of the surviving structures at Grytviken. It is based on archival sources from the Scott Polar Research Institute and secondary publications as well as site observations and anecdotal evidence. It may be subject to revision as more information becomes available.



PLAN SHOWING THE AGE OF SURVIVING BUILT FABRIC AT GRYTVIKEN

- 19th Century
- 20th Century
- 1904–1914
- 1914–1925
- 1926–1929
- 1929–1947
- 1947–1950
- 1954–1959
- 1960–1962
- 21st Century

- A** Fence around the Cemetery has been subject to replacement and repair.
- B** Plant transferred from Husvik so is slightly earlier in date.
- C** Appears to contain earlier bakery.
- D** Carr Maritime Gallery building replaced a building from 1914–1925.
- E** A tank is shown in approximately this location by 1925 although the extant tank is almost certainly a later replacement.
- F** The shape of the Flensing Plan has changed with the footprints of the surrounding buildings, but its essential shape seems to have been established in this period.
- G** Piggeries and stables partly rebuilt after fire in 1937.
- H** Replaced after 1904 villa destroyed by fire in 1914.
- J** Guano factory plant mostly late 1950s configuration, having been altered after an explosion in 1938 and post war alterations. A building has been here since 1914–1925 period.

- K** The Meat Factory was created in the mid-1920s and repeatedly altered in the 1930s culminating in the rebuilding of the meat plan and loft in the late 1950s. The equipment arrangement is largely from this period but included older individual pieces of plant.
- L** The Bone Cookery was not altered in the 1950s and therefore is assumed to be predominantly mid-1920s with 1930s alterations.
- M** The Blubber Cookery is partially located on the site of one of Larsen's two blubber cookeries. It was enlarged by the mid 1920s. The plant was replaced in the mid-1950s. The meat extract plant was added in 1960.
- N** The plant in the Glue-water Separator was enhanced in the mid- to late 1950s.
- O** The number of turbines were increased and housed in a new building in the 1950s.
- P** Tijuca jetty existed on the 1911 plan but was probably repaired. Part of it was recently rebuilt.
- R** The barque *Louise* has been at Grytviken since 1904 though not always in this location. She ran aground in the late 1930s.
- S** The pre-war Hospital was relocated here from the south side of the station.

## 2.0 UNDERSTANDING THE SITE

### 2.3 WIDER HERITAGE CONTEXT

#### 2.3.1 South Georgia's Other Whaling Stations

There are five other shore-based whaling stations on South Georgia together with the shore station at Godthul, which supported floating factory ships (ships on which the whales were processed rather than bringing them to a shore-based station for processing).

After Larsen's establishment of the whaling station at Grytviken, other companies arrived in quick succession. The Sandefjord Whaling Company established itself at Stromness and the Tonsberg Company at Husvik within days of one another in December 1907. Initially these were simply sites for floating factories but shore-based stations were established at Husvik in 1910 and at Stromness in 1912. A lease was granted to the Ocean Whaling Company of Larvik, Norway for a station at Ocean Harbour in October 1909. This was the first lease that insisted on the utilisation of the whole whale carcass. The practice prior to this being to take only the blubber and discarding the rest of the carcass. In November 1909 Christian Salvesen, a British company based in Leith, Scotland, was granted a lease and formed a station at Leith Harbour. The last lease to be granted for a shore-based station was in July 1911 to the Southern Whaling and Sealing Company, who had offices in South Africa and in the United Kingdom and established Prince Olav station.

The heyday of whaling in South Georgia followed. The demand for whale oil and other products, especially glycerine, increased during the First World War (1914–1918). In the mid-1920s, the Falkland Island Government required whaling companies to demonstrate efficiency both in terms of use of the whales and their equipment. The Wall Street Crash of 1929 caused a fall in whale oil prices. In the early 1930s, Stromness and Prince Olav closed as whaling stations whilst Husvik ceased production until after the Second World War (1939–1945). This left only Leith as the main shore-based competitor to Grytviken on South Georgia and Leith ceased production for much of the Second World War as its boats were requisitioned. Like Grytviken, Leith was operated for its final seasons by a Japanese consortium. With 59 whaling seasons to Leith's 45,<sup>17</sup> Grytviken operated more whaling seasons than any other whaling station on the island.

Unlike Grytviken, the other stations have not been subject to extensive asbestos removal so more of the buildings remain. However, with limited exceptions, works have not been carried out to preserve the buildings and most are in a state of collapse or near collapse. The asbestos exclusion zone around each whaling station means they are not open to the public, with the exception of Godthul and Ocean Harbour, where cruise passengers can land.

The table overleaf provides a summary comparison of the whaling stations.



Map showing the location of the six whaling stations on South Georgia (2018 British Antarctic Survey)



Flensing Plan and factory buildings at Leith Harbour Whaling Station



Stromness, which was converted from a whaling station into a ship repair yard to serve Leith

<sup>17</sup> Bjørn L. Basberg, *The Shore Whaling Stations at South Georgia*, (2004: Novis Press, Oslo) p33.

## 2.0 UNDERSTANDING THE SITE

### SUMMARY OF OTHER SOUTH GEORGIA WHALING STATIONS:<sup>18</sup>

WHALING STATION	DATES OF OPERATION	MAIN COMPANY TO OPERATE IT	LATER CONVERSION	OTHER NOTABLE ASSOCIATIONS	SUMMARY OF SURVIVAL
<b>Leith</b>	1909–1966 (excluding the following seasons: 1932/33, 1940/41, 1942/43, 1943/44, 1944/45, 1961/62, 1962/63)	Christian Salvesen Ltd (South Georgia Company) (Scottish)			The largest of the whaling stations, it is also the one where the buildings illustrating the processing of whales best survive though in a deteriorating condition. The timber-framed associated buildings are in a poorer condition than the steel-framed industrial ones. As well as buildings and plant, many smaller artefacts and records survive here.
<b>Stromness</b>	1912–1931	Sandefjord Whaling Company (Norwegian); the Southern Whaling and Sealing Company (South African); and the Vestfold Whaling Company (Norwegian)	Converted in 1931 to a ship repair yard by South Georgia Company, who operated Leith.	Shackleton arrived at the Manager's Villa at Stromness after his trek across the island.	Much of the whaling factory was removed when it was converted. Some buildings were constructed with steel frames after 1931 and are, comparatively, in better condition than those at other whaling stations though the condition of the buildings is nonetheless poor and deteriorating.
<b>Husvik</b>	1910–1961 (excluding the following seasons: 1931/32 – 1944/45, 1957/58)	Tonsberg Hvalfangeri (Norwegian)	Bought by Albion Star in 1960.		Restoration works have been undertaken on the Manager's Villa, which is used as a GSGSSI field hut. The remaining buildings, apart from the Radio House, are in varying states of collapse, hastened by the fact that the stream now runs through several of the buildings and across the Flensing Plan. The <i>Karrakatta</i> is a former catcher that was used to provide power at the whaling station so stands out of the water.
<b>Prince Olav</b>	1912–1932	Southern Whaling and Sealing Company (South African)	Bought by the South Georgia Company and operations were transferred to Leith.		Almost all the buildings have collapsed though the plant remains <i>in situ</i> , including part of the elevated railway. The tanks were all removed. The flensing plan is the most intact of all the whaling stations.
<b>Ocean Harbour</b>	1909–1920	Ocean Whaling Company (Norwegian)	Bought by Sandefjord Whaling Company and operations were transferred to Stromness	Oldest known grave, that of the sealer Frank Cabrial who died in 1820, is located here.  Manager was CA Larsen's brother, Lauritz E Larsen.	Very sparse survival of the station with only one small brick building and several building bases remaining. Of particular interest is the surviving steam locomotive.
<b>Godthul</b>	1908–1929	Bryde and Dahls Whaling Company (Norwegian)			Few standing structures (wooden sheds) but an important assemblage of remains including boats, barrels and storage tanks.

<sup>18</sup> Information compiled from Basberg, Headland and Purcell (2011).

## 2.0 UNDERSTANDING THE SITE

### 2.3.2 Other Southern Hemisphere Whaling Stations

Whilst nineteenth century whaling was dominated by the United States of America, particularly New England, with whalers undertaking voyages of years, the Norwegians pioneered a new era of “modern” whaling in the 1860s and 1870s. Svend Foyn is regarded as the father of modern whaling, as he developed a system of using explosive harpoon cannon on steam whale catcher boats to catch large rorquals (such as the blue and humpback whales), which were processed on shore-based whaling stations. With the northern whaling grounds rapidly depleted, the Norwegians began exploring the Antarctic as an alternative as early as the 1890s. Carl Anton Larsen captained the first expedition, instigated by Christen Christensen. The lack of the preferred species, the right whale, meant that there was little support for the establishment of a whaling industry in the Southern Ocean. The prohibition of whaling along the Finnmark coast, the centre of Norwegian whaling, in 1904 encouraged Norwegian whalers to look south again.

Larsen had not only captained two whaling expeditions on the *Jason* in the 1890s but also the Swedish Scientific Antarctic Expedition's ship the *Antarctic* in 1901-3. He was eventually successful in gaining investment to establish a shore-based whaling station in South Georgia as a result of what he had seen during those earlier expeditions. Whilst other shore-based stations were also established at South Georgia, there was another method of whaling using floating factory ships that was being developed. This method was used in the South Shetland Islands with sheltered harbours being established on Deception Island and King George Island.

Whaling had been carried out in South Africa and Australia from the late eighteenth century but in the late nineteenth century, Norwegians would establish whaling stations using Foyn's method of modern whaling. There were six whaling stations in the South African state of Natal by 1912<sup>19</sup> and six in Australia by the mid 1950s<sup>20</sup>. These whaling stations were used not only to catch whales off South Africa and Australia but also in the Antarctic. Overfishing and the rise of the environmental conservation movement led to bans on whaling in both countries in the late 1970s.

The Japanese adopted modern whaling methods at the very end of the nineteenth century and began using pelagic or floating factory ships in the 1930s when they started to look to the Antarctic for whales due to overfishing in Japanese waters. Japan's first modern shore-based whaling station at Ayukawa, established in the 1920s, remained in use until it was badly damaged by the 2011 tsunami.<sup>21</sup> Like the Japanese, the Soviet Union, which undertook considerable whaling activities in the Southern Ocean, principally employed pelagic methods.<sup>22</sup>

Basberg identifies several shore whaling stations around the world that had been the subject of studies<sup>23</sup>.

- Deception Island Whaling Station in the South Shetland Islands. This was abandoned as a whaling station in 1930 and as a scientific research station after volcanic activity in 1967 though new research stations have since been established by the Spanish and Argentinians. Of the whaling station, rusting plant and storage tanks are still standing, although severely deteriorated. Deception Island is visited as part of cruises to the Antarctic.
- Port-Jeanne d'Arc, Iles Kerguelen in the Southern Indian Ocean operated between 1908 and 1925. The abandoned whaling station has a similar character to the whaling stations on South Georgia, comprising timber and tin clad buildings, the remnants of a raised railway and rusting detritus such as barrels. Some of the accommodation buildings have been restored whilst the plant of the factory is exposed and rusting.<sup>24</sup>
- Cheynes Beach Whaling Station, Albany, southern Australia was built in 1951 (so comparable to the reorganisation phase at Grytviken) and operated until 1978. It is listed and has become a museum. The *Cheyne IV* is a beached Norwegian whale catcher from 1948 that can be explored whilst one of the storage tanks has been converted into a film theatre.<sup>25</sup>

- Norwegian Bay whaling station in Western Australia operated from 1915 until 1957. By the early 1980s, few buildings were still standing. It is now far from clear that it was a station at all: boilers, winches, random pieces of machinery and the remains of timber posts lie amidst a sandy beach.<sup>26</sup>
- Kaipipi Shipyard, Stewart Island, New Zealand was a repair station from 1923 until 1933. The concrete base of the manager's house survives alongside the foundations of the slipway and floor of the workshop and some metal elements, such as a boiler and propellers.<sup>27</sup>
- Union Whaling station, Durban, South Africa operated until the 1970s and was for a substantial period, the world's largest shore-based whaling station. Whilst the concrete and brick of the buildings has largely survived, the interiors have been stripped. The mid-twentieth century modern design of the buildings is very different from the historic structures at Grytviken.<sup>28</sup>
- Admiralty Bay, King George Island in the South Shetland Islands was an anchorage for factory ships and whilst there was no shore-based whaling station here, remains of whaling activities, such as whale bones and metal artefacts continue to be collected.<sup>29</sup>

There may be other surviving whaling stations but the brief review of these listed by Basberg indicates the relative rarity of substantially surviving whaling stations. Those in more accessible places such as Australia, New Zealand and South Africa, were generally stripped of useful materials and/or redeveloped. Those on remote islands have been left at the mercy of the natural environment or, in some cases, repurposed. Grytviken is rare in combining regular (if infrequent) access with a relatively good level of survival. Husvik, Prince Olav and Stromness Stations represent some of the best survivals in the world.

<sup>19</sup> De Jong, C. 'A Short History of Whaling in South Africa' (16 October 2017): <http://www.theheritageportal.co.za/article/short-history-whaling-industry-south-africa>, accessed 5 May 2018.  
<sup>20</sup> 'Whaling in Australia': [https://en.wikipedia.org/wiki/Whaling\\_in\\_Australia#cite\\_note-44](https://en.wikipedia.org/wiki/Whaling_in_Australia#cite_note-44), accessed 5 May 2018.

<sup>21</sup> Fackler, Martin, 'Japanese Town Mulls Future Without Whaling Industry' in *New York Times* (24 March 2011), <https://www.nytimes.com/2011/03/25/world/asia/25whale.html>, accessed 26 April 2018.  
<sup>22</sup> Homans, Homans, 'The Most Senseless Environmental Crime of the Twentieth Century' in *Pacific Standard* (12 November 2013), <https://psmag.com/social-justice/the-senseless-environment-crime-of-the-20th-century-russia-whaling-67774>, accessed 26 April 2018.  
<sup>23</sup> Basberg, *Shore Whaling Stations*, 24-25.  
<sup>24</sup> Ultima Thule, 'Kerguelen, remote but magnificent sub-antarctic islands' [sic] <http://ultima0thule.blogspot.co.uk/2013/03/kerguelen-remote-but-magnificent-sub.html>, accessed 26 April 2018.; Sound of Jura, 'Kerguelen Islands', <http://glennmci.brinkster.net/ki/ki.html>, accessed 26 April 2018.  
<sup>25</sup> Albany's Historic Whaling Station, <http://www.discoverybay.com.au/historic-whaling-station>, accessed 26 April 2018.

<sup>26</sup> Norwegian Bay Whaling station, [http://seeingoz.com.au/?attachment\\_id=5305](http://seeingoz.com.au/?attachment_id=5305); <http://www.seakayakwa.org.au/TripReplimages/Ning05.html>, accessed 26 April 2018.  
<sup>27</sup> Watt, Jim, The (Norwegian) Whaler's Base, <http://home.clearnet.nz/pages/greatplaces/rosshavet.htm>, accessed 26 April 2018.  
<sup>28</sup> KZN – a Photographic and Historical Record: Durban - Bluff Whaling Station, <https://kznpr.co.za/durban-bluff-whaling-station/>, accessed 26 April 2018.  
<sup>29</sup> Kittel, Kittel, 'Inventory of whaling objects on the Admiralty Bay shores (King George Island, South Shetland Islands) in the years 1996-1998' in *Polish Polar Research* 22(1):45-70 (January 2001): [https://www.researchgate.net/publication/258837413\\_Inventory\\_of\\_whaling\\_objects\\_on\\_the\\_Admiralty\\_Bay\\_shores\\_King\\_George\\_Island\\_South\\_Shethland\\_Islands\\_in\\_the\\_years\\_1996-1998](https://www.researchgate.net/publication/258837413_Inventory_of_whaling_objects_on_the_Admiralty_Bay_shores_King_George_Island_South_Shethland_Islands_in_the_years_1996-1998), accessed 26 April 2018.

## 2.0 UNDERSTANDING THE SITE

### 2.3.3 Museums of Whaling

The South Georgia Museum began as a museum of whaling although its displays have diversified considerably since and it is now a more rounded portrayal of the history, flora and fauna of the island.

There are two notable museums of whaling. The first is at Sandefjord in Norway, which is particularly significant for Grytviken as it was from this area that Larsen sought to obtain much of what he required to establish the whaling station at Grytviken and it was at Sandefjord that he had his whale catchers built. Hvalfangstmuseet or the Commander Christen Christensen's Whaling Museum opened in 1917 to display the flora and fauna of the Antarctic and to tell the story of the whaling industry. It has continued to expand and its exhibitions now explore issues around the conservation of whales and their habitat alongside the history of whaling. One of its prime exhibits is a restored 1950 whale catcher, *Southern Actor*.<sup>30</sup>

The second whaling museum is the New Bedford Whaling Museum in Massachusetts, USA. Describing itself as located in the former whaling capital of the world and as being the world's largest whaling museum, it explores man's interaction with the whale through time as well as the science and art associated with whales.

There are other museums which include displays or references to whaling but it remains a relatively rare subject for museums to explore.

### 2.4 SETTING

#### 2.4.1 Landscape Setting

Grytviken Whaling Station lies on the gently rising but generally flat shore at the end of a sheltered natural harbour in Cumberland Bay. Its setting is of fundamental importance to its existence: the topography made it an ideal location for a shore-based whaling station and Larsen, as an experienced whaler and the pioneer of shore-based whaling in South Georgia, deliberately selected Grytviken as the optimal site for his whaling station.

The Whaling Station is surrounded on three sides by low mountains with more dramatic, permanently snow-capped mountains rising beyond. This landscape, similar to that of Norway, enabled the creation of a whaling station that would have been familiar to the predominantly Norwegian whalers who made up most of the early workers at Grytviken. In particular, it allowed for the creation of dams both for water supply and hydro-electric power from the early years of the station's creation. Thus, despite being in a remote location, the Whaling Station had a good water supply and electricity.

Grytviken Whaling Station is connected via a track around the bay to King Edward Point (KEP), which is the Government's administrative centre for the island and where the Government Officers are based. It is also where the Government research station operated by the British Antarctic Survey (BAS) and other scientific monitoring stations are located. Today the proximity to KEP, where all visiting vessels have to clear Customs, gives Grytviken a greater visibility to the visiting public. It was also the closeness to KEP that necessitated the asbestos removal and consequent loss of many of the structures at Grytviken. Historically, it was KEP that was more dependent on Grytviken with Pesca employees constructing the early buildings for the Falklands Island Government representatives and providing power and water as well as the vessels for the postal deliveries. It was also Pesca that established the first meteorological station at KEP.



The mountainous backdrop of the Whaling Station



The hills and mountains around Cumberland Bay from the path from Grytviken to KEP



King Edward Point viewed from Hope Point with Grytviken in the background

<sup>30</sup> Hvalfangstmuseet, <http://www.hvalfangstmuseet.no/en/>, accessed 26 April 2018.

## 2.0 UNDERSTANDING THE SITE

### 2.4.2 Key Views

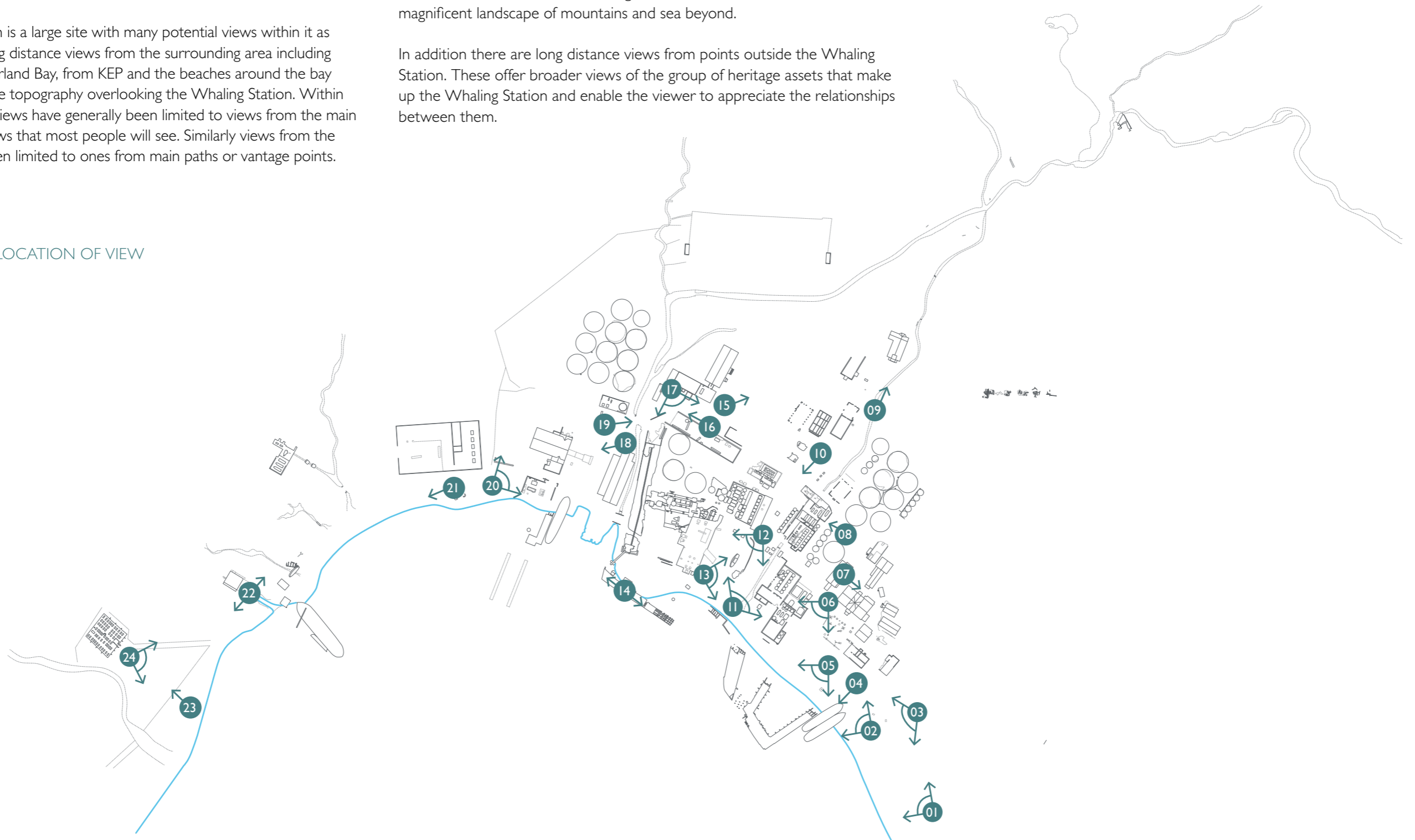
An analysis of key views is an important part of understanding the setting, context and overall character and value of the site. They can also help to establish any potential threat to significance of the site due to change within or close to the site.

Grytviken Whaling Station is a large site with many potential views within it as well as many potential long distance views from the surrounding area including from the water in Cumberland Bay, from KEP and the beaches around the bay and from high points in the topography overlooking the Whaling Station. Within the Whaling Station, key views have generally been limited to views from the main paths as these are the views that most people will see. Similarly views from the surrounding area have been limited to ones from main paths or vantage points.

The views within the Whaling Station fall into two groups. The first are views that are primarily views of the built heritage assets, such as the view towards the Church or the view towards the buildings next to the Museum, which has an intimate quality unique amongst the views at Grytviken. The second group of views are those in which the heritage can be seen but it is almost a foil for the magnificent landscape of mountains and sea beyond.

In addition there are long distance views from points outside the Whaling Station. These offer broader views of the group of heritage assets that make up the Whaling Station and enable the viewer to appreciate the relationships between them.

PLAN SHOWING THE LOCATION OF VIEW POINTS IN GRYTVIKEN



## 2.0 UNDERSTANDING THE SITE

### View 1

From the path from KEP. This is the point of arrival at the Whaling Station for visitors approaching from KEP. The Cemetery can be seen in the distance whilst representatives of all the elements of the Whaling Station can be seen: the jetty, the boats, the factory plant, the accommodation and the storage tanks.



### View 2

From the landing area. It represents the first view of many cruise passengers when they arrive onshore at Grytviken. The Museum, Drukken Villa and nearby buildings represent a well-kept contrast to the decaying factory plant and the vessels. The patching on *Albatros* is unfortunately prominent.





## 2.0 UNDERSTANDING THE SITE

### View 3

From the track adjacent to where cruise passengers land. It therefore represents their last view of the bay with the buildings of KEP visible in the middle distance with the mountains beyond on the left, the dominant forms of the *Dias* and *Albatros* in the foreground and the Whaling Station to the right. What is striking is the encirclement by mountains emphasising the protection of the harbour.



### View 4

A short range view of *Albatros* with *Dias* glimpsed also. As with *Petrel*, there are many arresting views of the vessels against the mountains and sea.



## 2.0 UNDERSTANDING THE SITE

### View 5

From the interpretation board by Harpon Jetty. There is an arresting view of the bay with the jetty and *Albatros* in the foreground.



### View 6

From the track by the Museum. This is the point at which the sense of enclosure of the cluster of buildings around the Museum is replaced by the open expanse of the view over the jetty to the sea and mountains beyond. It is a view experienced by many visitors as they return from the Post Office towards the landing ground.



## 2.0 UNDERSTANDING THE SITE

### View 7

The back of the Museum and the small buildings around it. It is a strong contrast with most of the views within site because it has an intimate and domestic feel derived from the small scale buildings. The steps up the Slop Chest are a prominent change to how this view would have been historically.



### View 8

From the path north of the factory. The white façade and gable of Nybrakka echo the snow capped mountain in the far distance, whilst, in contrast, the rusting plant and storage tanks together with the dark hill sweep round Nybrakka. This is not a historical view as the lost accommodation buildings would have created a more densely built view.



## 2.0 UNDERSTANDING THE SITE

### View 9

From the main track westwards, there is a dynamic view of the Church, captured here approximately halfway along the path. The Church is the focal point of the view.



### View 10

Looking east along the track towards KEP framed by factory plant.



## 2.0 UNDERSTANDING THE SITE

### View 11

A panoramic view looking west up the Flensing Plan looking at the centre of the factory. The three cookeries define the view with the hills rising behind. The heap of chain and motor boat mar an understanding of the historic processes that occurred within this view.



### View 12

Looking east down the Flensing Plan bounded by the plant of the three cookeries with the winches prominent in the foreground. The motor boat and chains mar the view.



## 2.0 UNDERSTANDING THE SITE

### View 13

From the south-east corner of the Flensing Plan. The combination of whale catcher, jetty, Flensing Plan and Blubber Cookery captures the elements of the early whaling station albeit in their later incarnations.



### View 14

From Tijuca Jetty there is a 360° view that takes in the bay and KEP to the east framed between the whale catchers, *Petrel* and *Albatros*, and to the west a view of the Guano Factory with the blubber and meat cookeries visible round the Flensing Plan to the right. Beyond the Museum can be seen whilst on the left side of the factory, the Repair Yard can be glimpsed through the only piece of equipment that indicates goods were moved around at high level.



## 2.0 UNDERSTANDING THE SITE

### View 15

The Church seen against the hills beyond, its cluster of gables and spire forming a set of triangles that echo the scree slopes behind. Although it predominates, the Church is not the only structure in the view with the remains of the ski-jump and hints at the lost accommodation buildings visible amidst the grass.



### View 16

The storage tanks from a dramatic focal point for the view in certain lights. The massed storage tanks have a monumental quality that seems to match the surrounding landscape.



## 2.0 UNDERSTANDING THE SITE

### View 17

The pair to View 16, this view is of the north-west storage tanks seen against the mountainous background but with the context of the factory.



### View 18

The Repair Yard is bounded by the Main Store and Engineering Workshop with the eye drawn to the sea and mountains beyond and to the *Petrel*. The vessel is particularly photogenic and there are many fine views of it from around the Repair Yard.





## 2.0 UNDERSTANDING THE SITE

### View 19

Across the bridge towards the accommodation area with Nybrakka and the Church prominent against the mountainous backdrop.



### View 20

From the path leading from the Cemetery, from the point at which the unattractive Refrigeration Store is out of sight. The view is principally of the Repair Yard with the historic buildings of the Main Store and Engineering Workshop together with the *Petrel* creating the impression of a historic scene, albeit one in which there has been change as evidenced by the remains of the Foundry and Plating Workshop.



## 2.0 UNDERSTANDING THE SITE

### View 21

The remains of the *Louise* with the sea and mountains surrounding her. The modern Hydro-electric Power Station stands out because of its colour yet does not dominate the view. The view evolves walking south-eastwards and KEP adds a further element in the background. There is a change in character from the built up Whaling Station to the open and relatively unbuilt upon area of the shore.



### View 22

From the area in front of the Hydro-electric Power Station, which is a natural place to pause to admire the view. The *Louise* is prominent at the end of the stone-lined channel. The white elevations of the Church and Museum mean they stand out despite being in the background of the Whaling Station viewed from this point. On the right of the view, KEP is visible in the distance although unusually the green building of the boat shed is the most prominent element.



## 2.0 UNDERSTANDING THE SITE

### View 23

Looking up to the Cemetery, the gates of which are off axis with the path. The Cemetery's white fence and grave markers make it prominent in summertime views where it contrasts with the green landscape.



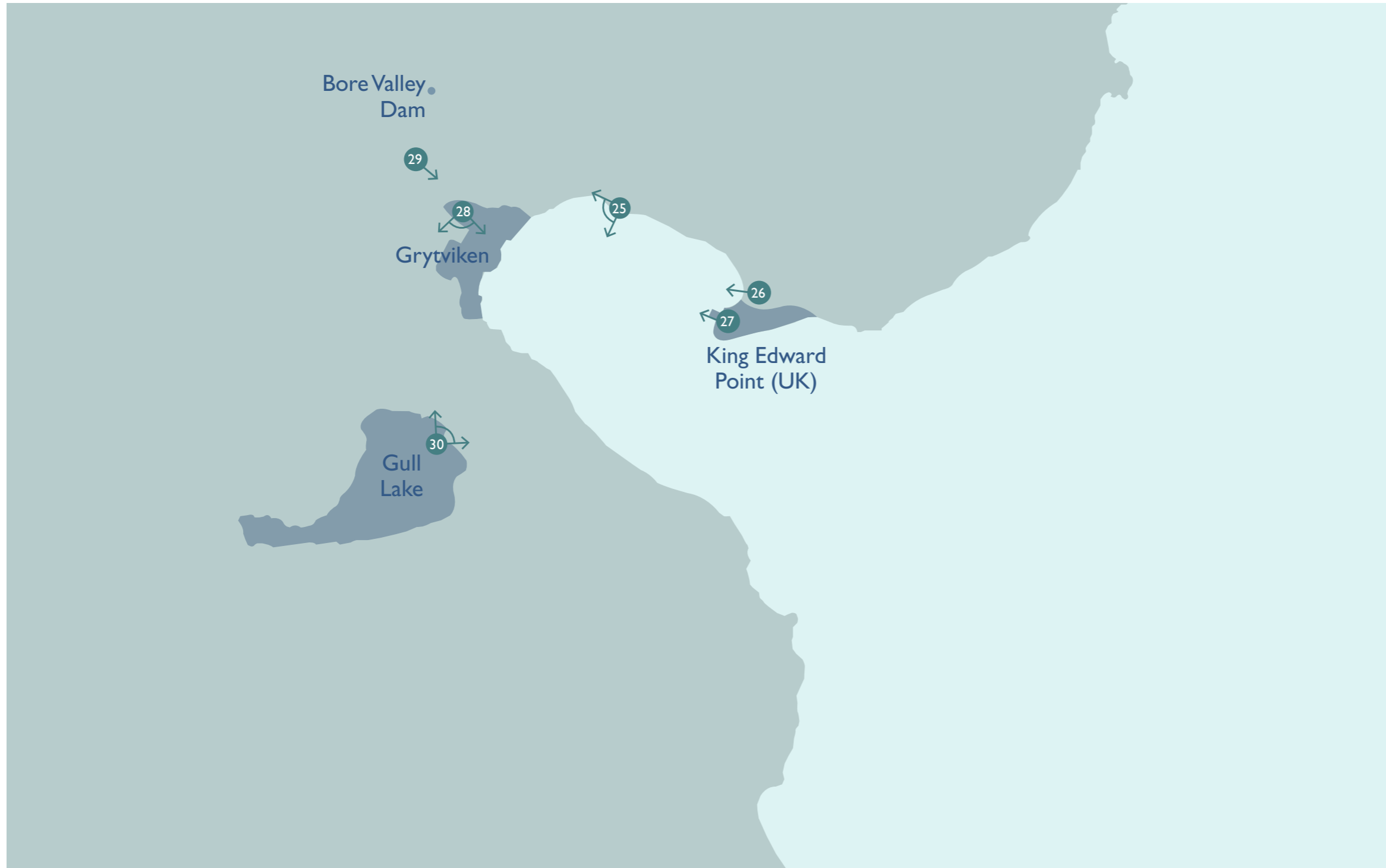
### View 24

From outside the Cemetery towards the Whaling Station. The slightly raised position gives a view over the Whaling Station which will be seen by most visitors. It is not, however, a particularly good view as it is dominated by the modern power station, although this at least conceals the storage of materials on the Refrigeration Plant.



## 2.0 UNDERSTANDING THE SITE

PLAN SHOWING THE LOCATION OF LONGER DISTANCE VIEW POINTS



## 2.0 UNDERSTANDING THE SITE

### View 25

A representative of the dynamic view of Grytviken from the path from KEP. At certain points the curve of the path or slight rises in the ground provide natural places to pause. Though dwarfed by the mountainous setting, the scale of the Whaling Station becomes increasingly apparent. The white buildings and Cemetery stand out particularly during the summer and emphasise the spread of the station around the end of the bay.



### View 26

From the path near KEP provides a view of the Whaling Station in its mountainous setting with the gabled roofs echoing the shape of the mountains above.



## 2.0 UNDERSTANDING THE SITE

### View 27

Grytviken from the KEP jetty. The view is dominated by the natural elements of the mountains and the sea but the white buildings stand out against the brown hills. In the winter, the plant is more visible.



### View 28

From the ski-jump there is a view over the factory and the west accommodation buildings with the Church and Nybrakka featuring prominently. The Whaling Station's relationship to the surrounding landscape can be appreciated and, with the storage tanks so close to the rise of the land, there is a sense of the Whaling Station having expanded to fill all the flat area of the shore.



## 2.0 UNDERSTANDING THE SITE

### View 29

From the path to Bore Valley this view is similar to various historic views over the Whaling Station. It enables a sense of the relationship of the different areas of the station to each other and the relationship with the wider setting.



### View 30

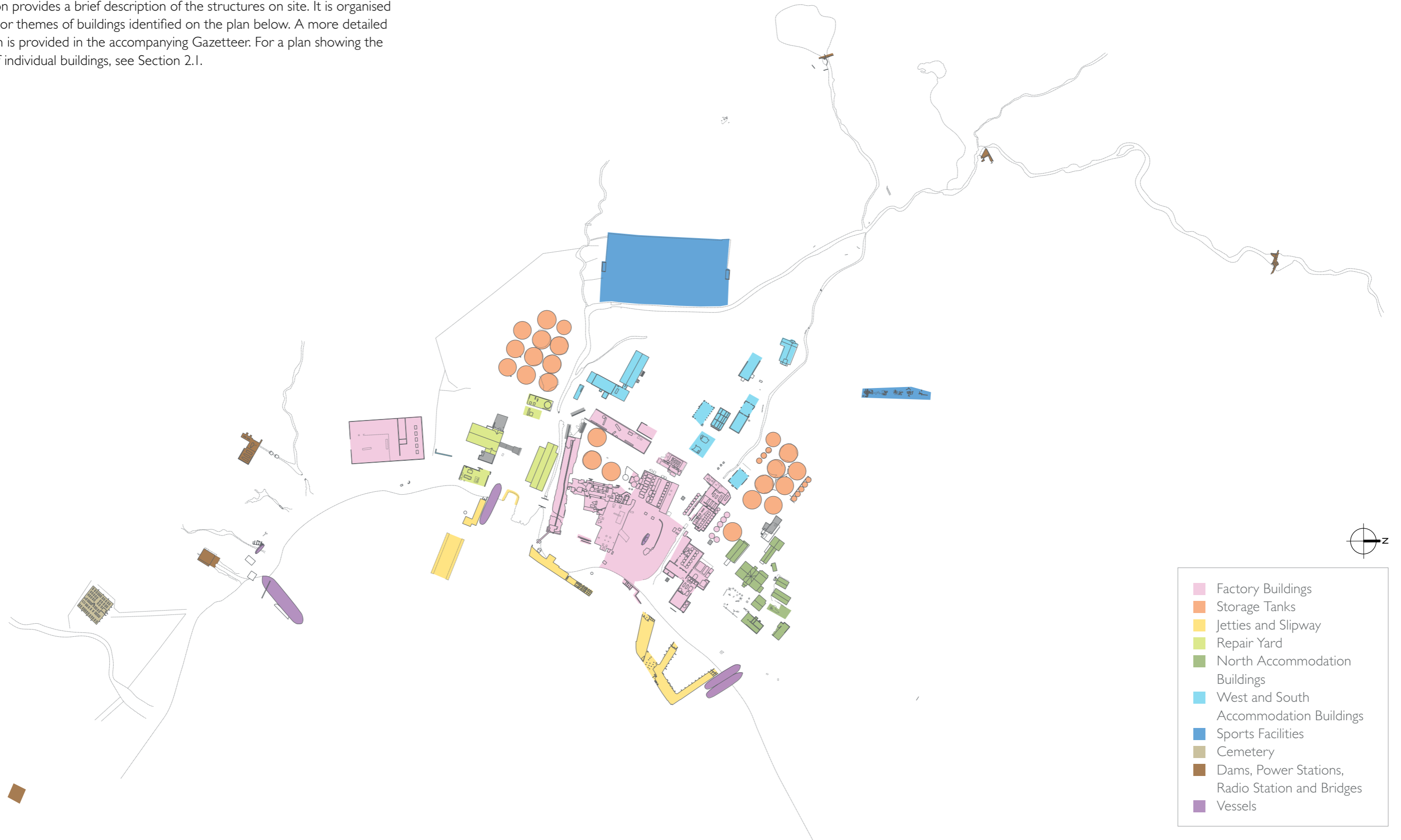
From the hillock by Gull Lake Dam the whole Whaling Station can be viewed from the south. The vessels, jetties and floating dock are prominent as transitions between the sea and the manmade edifices of the station.



## 2.0 UNDERSTANDING THE SITE

### 2.5 SITE DESCRIPTION

This section provides a brief description of the structures on site. It is organised by groups or themes of buildings identified on the plan below. A more detailed description is provided in the accompanying Gazetteer. For a plan showing the location of individual buildings, see Section 2.1.





## 2.0 UNDERSTANDING THE SITE

### 2.5.1 Factory Structures

There is little physical fabric surviving of the Flensing Plan, which forms the centre of the factory area at the heart of the Whaling Station and it is strewn with chains and cluttered by a misleadingly placed motor boat. There are, however, some timber boards surviving near the Blubber Cookery to the north, where there was a separate area for cutting up the blubber. Many of the winches used to manoeuvre the whales on the Plan also survive *in situ*, as does part of the metal edging of the Plan.

The Flensing Plan is flanked on three sides by the concrete bases and surviving plant of the whale processing buildings. To the north is the Blubber Cookery together with its boiler house and the meat extract plant. To the west, at the head of the plan, is the Bone Cookery, the massive cookers of which are enclosed by a modern barrier and several have been taken down and laid on their side. To the south is the Meat Factory, of which part of the steel frame and the ramp to the meat loft survive. Alongside the Meat Factory is its boiler house and separator as well as the Guano Factory and Store, which snakes round to the west.

To the west of the Bone Cookery is the concrete base and plant of the Glue-Water Plant. To the north is the base and plant of the Separator and the boiler house with six turbine engines.

Set apart from the main factory buildings is the concrete base of the Refrigeration Store and the associated refrigeration plant, which was relocated here from Husvik. This was the last element added to the station and was not fully completed before the station was abandoned. Its separation from the rest of the factory reflects its late addition to the site.



Flensing Plan



Meat extract plant to the east of the Blubber Cookery



Blubber Cookery



Meat Cookery

## 2.0 UNDERSTANDING THE SITE



*Guano Factory with the floor of the Guano Store in the foreground*



*Bone Loft*



*Refrigeration Store*



*Glue-Water Plant*



*Bone Cookery*



*Boiler House*



*Separator House*

## 2.0 UNDERSTANDING THE SITE

### 2.5.2 Storage Tanks

There are three rivetted steel sheet, cylindrical tanks located amid the Guano Factory and Store on the site of the earliest tanks on the station. A fourth tank is located to the north of the Separator and Boiler House.

Two large groups of tanks are located to the north-west and south-west of the factory buildings. These are rivetted steel, cylindrical tanks of various sizes that were used for both whale oil and fuel oil storage. The groups were amassed from the mid-1920s onwards with more tanks being added until the end of the 1950s. Raised on concrete or rendered brick plinths, some of the tanks have started to distort and their shallow domed roofs to collapse inwards. Some of the damage to the southern group behind the Pump House is thought to be the result of the Falklands conflict.<sup>31</sup>



North-west storage tanks



South-west storage tanks



Three of the storage tanks adjacent to the factory

<sup>31</sup> Lyle Craigie-Halkett, pers. comm. July 2018

## 2.0 UNDERSTANDING THE SITE

### 2.5.3 Jetties and Slipway

The largest jetty, Harpon Jetty, is located at the north end of the station. It originally had three points of connection with land but, with the deterioration of the jetty, the landward sections were removed to prevent access to the jetty. This means it is no longer connected to the shore at any point.

To the south is the remains of Tijuca Jetty, which was approximately an inverse 'T' shape. Like Harpon, its timbers are deteriorating but part of it has been made structurally sound and reboarded to enable boats to moor there.

Further south still is the site of the catcher slipway. The sloping ground is evident adjacent to where the *Petrel* is beached but the slipway itself has been removed. There are, however, timbers just below the gravel surface.

South of the *Petrel* is the remains of a third jetty, which served the repair yard, and the half-sunken floating dock.

Along the shoreline, especially in the vicinity of the Repair Yard and the north-east corner of the station, there is the remains of old, ballast-filled boilers and other detritus that was used to build up the shoreline and create sea defences.



*Tijuca Jetty*



*Harpon Jetty*



*Remains of the catcher slipway*



*Jetty with floating dock beyond*

## 2.0 UNDERSTANDING THE SITE

### 2.5.4 Repair Yard

To create a self-sufficient factory and community, the Whaling Station had its own repair yard. Defining its north side is the large two-storey building of the Main Store. Predominantly timber-framed, apart from the steel-framed west extension, it is clad in corrugated iron sheets. The walls were historically painted ochre whilst its black roof was replaced with new tin in 2017/18, apart from the southern lean-to section. The windows and doors are painted timber. Internally it retains historic shelving in the main section on both floors. Offices are located in the north-east corner on both floors with the upper office retaining its Cardex system. The lean-to section is currently being used for storing items from the Engineering Workshop.

To the south, across an area recently built up and laid with historic metal sheeting to form a helipad, is the Engineering Workshop. This is a two-storey building with a recently replaced black tin roof and ochre painted corrugated sheet clad walls. Although timber-framed like the Main Store, it has a very different character deriving from its large expanses of metal windows. Internally, some of the historic workbenches and machinery, including overhead systems, survive on the ground floor and some of the historic storage on the first floor. The layout of the building has been somewhat altered by the addition of new partitions.

Immediately west of the Engineering Workshop is the partially buried remains of the base of the Blacksmith and Tinsmith Workshops that were attached to the Engineering Workshop. Some of the plant survives here as it does on the base of the Foundry that was located immediately east of the Engineering Workshop.

East of the Engineering Workshop on the shoreline are the decaying base and considerable surviving plant of the Plating Shop.

At the west end of the repair yard are the concrete bases and upstand walls of two smaller buildings, the Winch House and the Pump House. Both also contain associated plant.



Repair Yard



Engineering Workshop and remains of the Blacksmith and Tinsmith Workshops



Foundry



Main Store



Plating Store



Winch House plant with Pump House plant behind. The traction winch in the foreground was originally on an early steam whale catcher and was converted for use on the slipway

## 2.0 UNDERSTANDING THE SITE

### 2.5.5 North Accommodation Buildings

North of the Factory Buildings are a group of buildings that were used as accommodation and offices for the manager and foremen, as well as associated store buildings. The standing buildings are maintained and in use and therefore form a distinctive group that contrast with the rusting remains of the Factory Buildings.

The focal point of this group is the Manager's Villa, currently used as the South Georgia Museum with permanent exhibition spaces on the ground floor together with a staff room. Offices, workshops and stores are located on the first floor. There is a small basement under part of the building which is accessible from the entrance hall and is not in use. The Villa was built in 1914 having been imported as a kit of parts from Norway. The two-storey building is of a traditional Norwegian design with long sloping roofs. The walls are predominantly white painted timber cladding though some of the single storey outshots are clad in tin. The roof has been replaced with red coated tin. The painted timber windows are modern replacements.

Internally the ground floor appears to have retained much of its historic layout except in the shop. Many of the doors have been removed with the notable exception of the decorative panelled inner entrance doors. The vinyl flooring throughout the exhibition space creates a modern impression but some historic timber boarding and battening to ceilings and walls survives. The first floor has a much more historic character with the historic timber floorboards visible in most areas together with historic doors and architraves. The balustrade of the main stair has been altered to create an access to a workshop created by the partitioning of a larger room. Evidence of the flues for the original hot water/heating system survive in some of the ceilings. (The attic was not inspected.)

To the north-east of the Villa is the smaller Drukken Villa, which is slightly older. It was built for the Magistrate in 1909/10. The base of the walls is rendered whilst the upper parts are white painted timber clad. The roof has been replaced with the same material at the Villa. Internally, it has been comprehensively refurbished with no evident historic features. Comparison of the current layout with the 1992 survey drawing ([Appendix A](#)) shows that there have been alterations and additions to the layout since 1992.

To the north of the Villa are three small historic buildings used as ancillary accommodation by the Museum. The Coffee Roasting House is a waste store, the Provisions Store is a fuel store and the Potato Store is a general store. The Coffee Roasting House is partially brick with the end third clad in tin. Unlike the other buildings, it has retained its historic tin roof. The other two buildings are two storey and are partially banked around with earth. They retain their historic doors.

To the west of the Villa is the Slop Chest, which was converted in 2016/17 into the Post Office and a temporary exhibition space with stores for the Museum and Post Office above. It has modern painted tin clad walls and roof. Although retaining some historic timber panelling internally as well as the historic timber framing, the overall impression of the interior is contemporary.

To the south of the Museum is the Carr Maritime Gallery with a workshop and public toilets at the west end. The building replaced in the 2005/6 season an earlier historic structure. The profile of the tin cladding makes it evidently a new building. A raised timber walkway runs along the north and west sides whilst a concrete ramp provides access to the double doors of the gallery at the east end.

The remains of concrete bases and upstand walls of three further buildings are located to the north-east of the Villa. The former bakery retains two pieces of machinery.



*Museum in the Manager's Villa*



*Drukken Villa*

## 2.0 UNDERSTANDING THE SITE



Carr Maritime Gallery



Potato Store



Provisions Store (Fuel Store)



Coffee Roasting House



Slop Chest (Post Office)



Base of the Foremen's Barracks with the machinery of the Bakery and the upstand wall of the Cold Store visible beyond

## 2.0 UNDERSTANDING THE SITE

### 2.5.6 West and South Accommodation Buildings

To the west of the Factory Buildings are the remains of the workers' barracks and communal buildings as well as the maintained buildings of the Nybrakka and Church.

The Church is a well-maintained timber building that is typical in its design of Norwegian churches. Though much repaired, it retains its historic character inside and out. The timber panelled walls contain painted timber windows with a hood detail whilst the roof is clad in felt. The small spire is augmented with a painted cross. Internally the structure has been strengthened but the original building is legible. The historic pews, pulpit and altar have been retained. There is also a small library lined with bookshelves that still contain the historic books in English, Norwegian and other languages.

The Nybrakka was refurbished externally in 2014/15 and has timber clad walls and a red painted modern tin roof. The historic windows were repaired. Internally the layout seems to have been largely preserved but the walls are scarred with bullet damage and graffiti from the post-1982 military presence on the island. Some of the original bunk dividers, shelves and cupboards have been retained along with the historic panelling, newspapering of some walls and staircase. It has been converted to an emergency shelter with modern toilets and kitchen fitted in some rooms. The basement, which contained the toilet and shower facilities and darkrooms, is the best preserved area with many of the original shower partitions, fittings and sanitaryware surviving although in a poor condition due to flooding.

The concrete bases and some upstanding walls survive of the Kino, Russebrakka, bath house, two barracks, communal mess, slaughterhouse and hospital. Apart from bedrooms, the Russebrakka contained the laundry and two, relatively modern pieces of laundry machinery survive. The rendered sinks of the slaughterhouse and some plant also survive as do the cookers and tile flooring of the kitchen attached to the communal mess.

Separate from the rest of the accommodation to the south of the Engineering Workshop is the stone retaining wall of the piggeries, which were a later replacement for the original piggeries behind the Manager's Villa.



Church



Nybrakka



Kino base



Remains of the Hospital



The bases of the Russebrakka (with laundry equipment) and two other barracks with the bath house between



## 2.0 UNDERSTANDING THE SITE

### 2.5.7 Sports Facilities

To the west of the Nybrakka, across the stream, the level ground of the football field survives complete with goalposts. On the slope to the north-west of the station, various fallen timbers survive from the ski-jump.



Football field



Ski-jump

### 2.5.8 Cemetery

The Cemetery is located on higher ground to the south of the station. Most of the graves are marked with white painted concrete surrounds and angled grave markers, some of which may have been replaced with marble or other stones. Some of the graves have sunken with the subsidence of the ground. There are a small number of different gravestones and at the centre of the graveyard is a painted metal cross. The dominant feature is the stone monolith that marks the grave of Sir Ernest Shackleton.

The Cemetery is enclosed with a white painted three-bar timber fence installed in the 1990s. The design is slightly different to that shown in a historic photograph.

There are memorial crosses relating to more recent deaths. These are not assessed as part of the CMP.



Cemetery

## 2.0 UNDERSTANDING THE SITE

### 2.5.9 Dams, Power Stations, Radio Station and Bridges

The two principal dams are the Gull Lake dam to the south-east of the Whaling station, which serves the hydro-electric power station that currently powers KEP and Grytviken, and the Bore Valley dam to the north-east of the Whaling Station, which provides the water supply. Gull Lake dam is a modern concrete structure with no visible evidence of the earlier dam although the earlier dam was encased within the new. Also a straight concrete line may indicate the line of an earlier reservoir. The original penstock/sluice mechanism for the dam is near Nybrakka.<sup>32</sup> The Bore Valley dam is a late twentieth century structure with evidence of concrete repairs. It is surmounted by a small tin hut.

A water supply was required from the Whaling Station's outset and hydro-electric power was used within two years of the station's establishment. There are consequently the remains of earlier dams in the vicinity of the Whaling Station: one below the Bore Valley dam, another above KEP and there is also the timber remains of what may have been a sluice to the west of the church. Both sets of remains in the Bore Valley are timber with some roughly hewn stone. The dam above KEP could not be accessed for close inspection due to biosecurity restrictions but could be seen from the path to be a concrete structure.

There is a modern hydro-electric power station between the main Whaling Station and the Cemetery. This corrugated tin structure was built in 2009 on the site of the earlier radio station. The concrete base and plant from the historic power station are located on higher ground closer to the Whaling Station.

Whilst there is no trace of the radio station replaced by the power station, there are the concrete base and collapsed timber remains of a mid-twentieth century radio workshop east of the Cemetery. There are also the anchoring points for various masts as well as one surviving mast.

Many of the historic bridges have disappeared, sometimes without trace as with the one to the football field, others leaving a rough hewn stone or two protruding from the stream bank. A short distance west of the Church are the painted white timber remains of a short bridge. Other bridges that carry the main tracks through the site appear mostly to be iron pipes or arches to enable the stream to pass through with compacted stone, earth and industrial refuse over the top.



Historic Hydro-electric Power Station



Hydro-electric Power Station



Bore Valley dam and hut



Gull Lake dam

<sup>32</sup> Pat Lurcock, pers. comm. July 2018.

## 2.0 UNDERSTANDING THE SITE



*Remains of dam above KEP*



*Radio Station*



*Remains of a bridge near the Church*



*Bridge near the Main Store*

## 2.0 UNDERSTANDING THE SITE

### 2.5.10 Vessels

At the north end of the Whaling Station are the two beached vessels, *Albatros* and *Dias*, both in poor condition. The *Albatros* was brought to Grytviken in 1921 as a whaling catcher whilst the *Dias* was acquired in 1928, having previously been known as the *Viola*, and was principally used as a sealer. The vessels were left after the closure of the station and sank at their moorings in 1974. They were refloated and beached.

Beached at the south end of the Whaling Station, close to the former slipway, is the *Petrel*. This whaling catcher also arrived in Grytviken in 1928 and was subsequently converted to a sealer in 1957. She too was left at the station after its closure.

Further round the bay are the remains of the barque *Louise*. This has been at Grytviken since the establishment of the Whaling Station. She was a fine surviving example of a 'down-easter' before she was inadvertently burnt to the shoreline during a military training exercise.

Two motor boats of unknown date also survive on shore at Grytviken: one near the *Louise* and the other located in the middle of the Flensing Plan. The supports for both have failed and they lie on their sides. The timber boats are deteriorating.

There are three rusted metal rafts or pontoons, one alongside the *Louise* and two on the shore nearby. These may have been installed by the British military.



Albatros



Dias



Petrel



Louise



Motor boat near the Cemetery



Motor boat on Flensing Plan

## 2.0 UNDERSTANDING THE SITE

### 2.6 CURRENT OWNERSHIP AND MANAGEMENT

#### 2.6.1 Ownership

Grytviken Whaling Station, including all the structures, plant and artefacts, belong to the Government of South Georgia & the South Sandwich Islands (GSGSSI).

#### 2.6.2 Management

The GSGSSI is based in Stanley, Falkland Islands and is represented on South Georgia by Government Officers, usually two in number. There are three Government Officers who work in rotation with six months on the island, based at KEP, followed by three months of leave. The Government Officers keep an eye on the Whaling Station and report any issues to the Operations Director in Stanley. They also provide a weekly report to the Government and FCO, which, although covering a range of subjects, would include issues with the Whaling Station if there are any.

GSGSSI contracts the South Georgia Heritage Trust (SGHT, based in Dundee, Scotland) to manage the Museum and its collection. The SGHT's responsibilities extend to the Carr Maritime Gallery and other small buildings near the Villa as well as opening up the Church. The SGHT also undertakes tasks such as cutting the grass at the Cemetery. The SGHT sends a team to run the Museum for the summer season, led by a Museum Director. During the winter season, if the Museum requires opening for visitors, this is done by the Government Officers.

The temporary exhibition in the Slop Chest is a separate arrangement and is not necessarily the responsibility of the SGHT. At the time of visiting, the GSGSSI had negotiated a visiting exhibition from the Royal Geographic Society (UK).

GSGSSI subcontracts the running of the Post Office at Grytviken (and at KEP) to the Falkland Island Post Office during the summer. The Government Officers or other over-wintering personnel will open the Post Office as required during the winter season.

The Government Officers provide an induction and briefing for visitors. The exception is if visitors arrive on a cruise ship, in which case the Government Officers brief the tour leader, who in turn briefs the passengers. The Government Officers also brief staff (BAS, building team, etc) when they arrive. SGHT gives talks to visitors on South Georgia and on board cruise vessels.

Any works to the Whaling Station or the removal of any item requires a permit from the GSGSSI. This includes works carried out by its building team. An Environmental Impact Assessment is carried out prior to the granting of a permit.

GSGSSI refers queries and proposals for works to Grytviken to its appointed Heritage Advisory Panel. (HAP). The HAP currently comprises four experts on the heritage of South Georgia, including one conservation architect, and the CEO and the Operations Director of GSGSSI.

Grytviken is uninhabited except during the summer season when the SGHT museum staff live on site. The SGHT rents the Drukken Villa from the GSGSSI to provide accommodation for its staff.

#### 2.6.3 Maintenance

GSGSSI is responsible for the maintenance of all the buildings including the Museum. This is carried out by a building team appointed by the Government on a fixed term contract of six months every summer. The team carries out general maintenance works and planned project works as determined by the Operations Director based in Stanley.

The composition of the building team varies depending on the project works proposed for that season but typically includes at least one electrician, plumber, carpenter and decorator. The number of people in the building team similarly varies but is usually five or six people.

There are a few maintenance items that are undertaken by the engineers from BAS. These include the maintenance of the dams, the fire extinguishers at the Museum and Church and the winterising of the Museum buildings.

Maintenance works are planned for the season ahead based on two factors. The first is a set of cyclical maintenance tasks which includes a rolling programme of repainting standing buildings every five years as well as annual tasks such as repainting the asbestos gaskets. The second is a list of tasks that is collected during the previous season through observation and discussions with the Museum Director and Government Officers. The list of planned works for the season is prepared by the Building Team Manager and sent to the Operations Director for approval. The required materials and equipment are then be ordered for the following season. Most of the materials are sourced from the UK and sent via Stanley, generally in a single, bio-secured shipping container. The building team will also be appointed on the basis of the works (projects and maintenance) that are planned.

During the season, the Building Team Manager sends a weekly report of works carried out to the Operations Director. At the end of each season, the Building Team Manager submits an Annual Report providing an overview of the works carried out. A new system of vehicle maintenance sheets has recently been introduced. Test certificates are saved locally at KEP.

For further information on the maintenance of the site, see Section 5.3.

## 2.0 UNDERSTANDING THE SITE

### 2.7 CONDITION

The general condition of the remaining structures at the Whaling Station is satisfactory and no immediate major safety issues were noted.

#### 2.7.1 Buildings

The two principal materials present on site are timber and steel. The steel framed buildings were largely associated with the processing plant and such steel as remains is now external and exposed to the weather. The remaining steel structures are rusted to a considerable degree. Some repair work has been carried out on the bases of some of the steel columns and more work including repainting is going to be necessary to extend the life of the remaining structures.

The timber structures are the more domestic scale buildings, which are typically clad in either timber boarding or corrugated sheet to the walls and all have corrugated sheet roofing. Most of the timber boarded buildings have been repaired and redecorated over the last few years and are currently in reasonable condition.

The maintenance regime has been good for the last few seasons and the buildings look well cared for. All the buildings have corrugated steel sheet roofs, the majority of these have been replaced over the last two decades. A variety of different sheets have been used over the period. The condition of the roof material is satisfactory in terms of its weathertightness but the change has been slightly detrimental to the legibility of the buildings on the site. The original sheeting came in two different gauges which distinguished the different build periods. The original “corrugated iron” was substantially thicker than the modern sheet material, which meant that it could be fixed at wider centres. It is probably unrealistic to think that sheet material can be rolled specially for the buildings at Grytviken (this was considered but proved to be excessively expensive and requiring a very large order of sheeting) and so standard modern material will continue to be used. However, decisions should be taken about the standard colours and finishes to be used and the detailing should follow the traditional detailing avoiding modern corner and gable details.

#### 2.7.2 Machinery

The processing machinery, exposed since 2003, when the asbestos removal necessitated the demolition of the buildings, is considerably corroded on its surface and it is likely that all the moving parts of the winches, saws, engines, generators and so on are now entirely seized up internally. Full restoration of any of these pieces of machinery would be expensive specialist conservation work. The machinery is, on the whole, robust and will stand in its present location for many years to come before it disintegrates but as this is a key feature of the significance of the station its long-term conservation needs to be considered. The most evident deterioration is in the support structures to the exposed machinery. The bases to the boilers of the Bone Cookery and the brickwork surrounding the main boiler plant being the most obvious areas of risk.

#### 2.7.3 Visitor Safety

At present the structures do not generally pose a hazard to visitors; the main paths are clear from hazards and most of the machinery is fenced off to prohibit access. If visitors do walk amidst the building remains or away from the main tracks, there are partially buried items or low walls that represent a trip hazard but this is a relatively minor concern as it is very obvious that the area is a site of demolished structures and therefore inevitably slightly hazardous.

Some of the large oil tanks have moved from their concrete bases. There is some doubt over whether this is caused by wind or whether it is the result of mechanical damage caused when gaining access to clean out the solidified oil. There is now a programme of monitoring in place to determine if the tanks are, at present, stable. The roofs of some tanks have collapsed (and this is likely to happen to others unless remedial work is undertaken). The roof does provide a degree of stiffness to the top edge of the tank and once it has collapsed, the rest of the tank is likely to collapse in on itself. Access to the area between the tanks should be prohibited to visitors.

#### 2.7.4 Vessels and Jetties

The vessels and the jetties are highly significant features of Grytviken but they are all now in poor condition. The catchers *Albatros* and *Dias* in particular are in a poor way. They have been beached but the stern of each ship remains in the sea and water flows in and out of the hull with each tide. If these ships are to have a long-term future then some major and very expensive conservation work is going to be needed.

The jetties are also a very significant feature of the site. Everything that was done at Grytviken relied on ships bringing material in and out and the jetties make this easily legible. Their current condition is very poor; they are no longer accessible and loose material coming away from the structure is a hazard to small boats. Minor work to make the jetties safe is needed in the short-term but major repair work here is desirable in the longer term to ensure that these features are not lost.

For further information about the condition of each building and structure, refer to the Gazetteer.

## SECTION 3.0

### SIGNIFICANCE

#### 3.1 CRITERIA FOR ASSESSMENT

Significance can be defined as the sum of the cultural values which make a building or site important to society. When making an assessment of significance numerous aspects are considered including: architectural interest, historic interest, group value, social value, former uses and local distinctiveness. These aspects can be grouped under a series of five values as outlined in the *Heritage Framework and Strategy* (2017). A description of each value is given under the headings below.

- **Evidential value:** *what can be or could potentially be learned about the heritage asset or the economic or social forces that created it or the people or organisations who used it. Built or below ground archaeological evidence may be concealed.*
- **Illustrative value:** *the understanding of the use and development of a heritage asset from what is visible.*
- **Associative value:** *the importance of a heritage asset as a result of a connection or connections with particular people, organisations or historical events.*
- **Aesthetic value:** *the quality of its appearance, whether this reflects an intentional design or fortuitous beauty.*
- **Communal value:** *the way in which people now or in the past have appreciated a heritage asset. This may be as an educational tool, a place of spiritual experience, a contributor to a wider landscape, or a representation of a particular place, amongst other reasons.<sup>01</sup>*

The significance of the elements of Grytviken Whaling Station is assessed using a scale of significance ratings ranging from High down to Detrimental:

- **High:** The most valuable themes, features, fabric or characteristics of the site. These elements are considered essential to the understanding and appreciation of the site, and as being key contributors to its overall character. They may be of international importance as well as being of local or territorial significance.
- **Medium:** Themes, features, buildings or spaces which have some cultural importance and make some contribution towards the character and appearance of the site and its setting. They may be of territorial as well as local importance.
- **Low:** Themes, features, buildings or spaces which are usually of local value only but possibly of territorial significance for their group value. Minor cultural importance and contribution to the character or appearance of the site and its setting.
- **Very Low:** Themes, features, buildings or spaces which are of local value only. Very minor cultural importance and contribution to the character or appearance of the site and its setting.
- **Neutral:** These themes, spaces, buildings or features have little or no cultural value but do not detract from the character or appearance of the site and its setting.
- **Detrimental:** Themes, features, buildings or spaces which detract from the values of the site, its setting, character and appearance. Efforts should be made to remove or enhance these features.

The subsequent sections set out an overarching summary of the significance of Grytviken Whaling Station followed by a more detailed assessment of the heritage values of the site as a whole. A summary of the assessment of key elements of the built fabric is provided in a table on pages 65–74. A plan illustrating the overall significance of each element is also included on page 75.

#### 3.2 SUMMARY STATEMENT OF SIGNIFICANCE

Grytviken Whaling Station is of high significance at an international level as the first shore-based whaling station to be constructed for the modern era of Antarctic whaling. It is also the first and longest operating whaling station of the six that existed on South Georgia as it ran from 1904 for 59 seasons out of 60 until 1964. At times during its operation, it was also the highest oil and meal producing station on South Georgia, alternating with Leith Whaling Station.

Grytviken Whaling Station is strongly associated with the Norwegian-born pioneer of modern Antarctic whaling, Carl Anton Larsen, who founded and managed the Whaling Station from 1904 until 1914. The strongest connection with the surviving built fabric is arguably the Church, which he instigated and in which he is commemorated. Grytviken is also strongly associated with Sir Ernest Shackleton, the Anglo-Irish Antarctic explorer, who spent time at what he called 'the gateway to the Antarctic' and is buried in the Cemetery.

Despite the loss of many of the buildings and much of the character of the Whaling Station in the asbestos clearance works, many important elements survive of the layout of Grytviken Whaling Station in its last incarnation. These include the factory bases and plant around the Flensing Plan outline, the jetties and the beached vessels as well as the repair yard and accommodation structures. The distinction between the different areas remains discernible.

The surviving historic buildings are illustrative in their design and appearance of the strong connection with Norway, something deliberately fostered by Larsen in the procurement of everything from structures and provisions to vessels and men from his home country. Although the buildings were prefabricated and have been much repaired subsequently, they are distinctively Scandinavian in their appearance. Whilst the factory plant and massive storage tanks were designed to be functional, there is a certain Romantic aesthetic quality to the rusting structures today.

Of lesser importance, but nonetheless contributing to its interest, is Grytviken's place in the enduring issue of the island's sovereignty, from the Argentinian registration of the company that originally operated Grytviken under British licence to the bullet-riddled buildings evidencing the military presence on the island in the 1980s and 1990s.

The setting of the Whaling Station is fundamental to its existence and makes an important contribution to the significance of the Whaling Station. The relatively flat land in the safe, deep natural harbour made it the ideal location for a shore-based whaling station. The dramatic mountains not only created a setting appropriate for the Norwegian buildings but offered protection to the station from winds as well as, with the numerous streams, enabling the provision of water and power through the creation of dams.

<sup>01</sup> Purcell, *South Georgia & the South Sandwich Islands: Heritage Framework and Strategy*, 2017, 9.

## 3.0 SIGNIFICANCE

### 3.3 ASSESSMENT OF HERITAGE VALUES

#### 3.3.1 Evidential Value

The buildings at Grytviken were generally of simple construction: timber or, later, steel, framed structures clad in timber boarding or tin sheeting that were delivered as prefabricated structures from Norway and were erected on brick, stone or concrete bases. As such, they have relatively little evidential potential to provide further information about their construction. Many of the buildings were removed in the asbestos clearance works and therefore the evidential potential has been further diminished. The more detailed study and analysis of the surviving buildings could yield additional information on details such as the age and origin of the timber, the colours and composition of the original and historic paint schemes used and the changes made to some structures over time. The evidential value of the Whaling Station as a whole is deemed to be low.

There has been much burying of material both historically and recently. The ground levels have also been changed in certain areas. These factors, together with the incorporation of various waste industrial materials into the reclaimed shoreline, means there is medium potential for below ground archaeological discoveries relating to the Whaling Station. Grytviken was also used as a sealing site prior to its use as a whaling station so there is very low potential for the discovery of buried archaeology relating to the sealing era. This is likely to have been destroyed by the creation of the Whaling Station.



The eroding shoreline is revealing the industrial detritus used to reclaim land for the station



Soldiers' graffiti from the late 1980s and early 1990s in Nybrakka



Bullet holes in the Main Store wall



The scars of military presence: bullet and bayonet damage to a cupboard in Nybrakka



The different major areas of the Whaling Station are reasonably discernible

#### 3.3.2 Illustrative Value

Despite the loss of many of the buildings, Grytviken remains highly illustrative of the whaling station it had become by the early 1960s. The different areas of the station, the factory, the repair yard, the senior accommodation and the general accommodation, remain reasonably discernible although this could be enhanced. With interpretation or prior knowledge, the surviving plant can be read to understand the different areas of the factory and how the whale processing was carried out at this station. What is not clear, because of a combination of deterioration amongst some buildings/plant fabric and renewal of others, is the extent to which the Whaling Station had developed in phases such that the surviving buildings relate to different periods in the Whaling Station's history.

Some of the buildings and the burnt-out wreck of the *Louise* are illustrative of the late twentieth century history of the Whaling Station. Many of the buildings, from the Main Store to the Provisions Store, have bullet holes in their tin walls whilst internally Nybrakka has numerous bullet holes and some bayonet damage as well as soldiers' graffiti.

Although much has been lost and changes have been made in the last 15 years, the significance of the built fabric of Grytviken Whaling Station lies in its illustrative value, showing its layout as it existed in its last years of operation and, with the aid of documentary sources, the development of the Whaling Station over time. The principal significance of the Whaling Station, however, lies in its historical value as the first whaling station of the modern Antarctic whaling era and the first whaling station on South Georgia, which is less clearly illustrated by the built fabric that survives today.



## 3.0 SIGNIFICANCE

### 3.3.3 Associative Value

Grytviken Whaling Station is strongly associated with the Norwegian-born pioneer of modern Antarctic whaling, Carl Anton Larsen, who founded and managed the Whaling Station from 1904 until 1914, as well as raising the capital from investors to do so. There is, however, relatively little of the Grytviken that Larsen would have known surviving: the church, which now contains a bust of Larsen, Drukken Villa and some of the stores nearby as well as the *Louise*.

Grytviken is also strongly associated with Sir Ernest Shackleton, the Anglo-Irish Antarctic explorer, who spent a month here before the Imperial Trans-Antarctic expedition in 1914. However, it is for his death on board the *Quest* in January 1922 and subsequent burial in the Cemetery that Grytviken is now more commonly associated with Shackleton.

The Compañía Argentina de Pesca was the Argentinian registered company that Larsen created to found Grytviken. It remained the owner of the Whaling Station until 1960 when it was transferred to a British registered company, Albion Star (South Georgia) Ltd, albeit under the same chairman. This contrasts with most of the whaling stations on South Georgia (excepting Leith), which changed hands more frequently. The company's name can still be seen painted on some of the plant in the Meat Factory.

There are many other individuals associated with the running of the Whaling Station including various Norwegian managers such as Larsen's nephew, Fridthjof Jacobsen; Alfredo Ryan, the Chairman of Pesca and Albion Star from 1944; and British manager KS Pierce-Butler, who oversaw the redevelopment of the Whaling Station after the Second World War and is therefore responsible for creating most of the Whaling Station that has survived to the present.

There are many others who are also associated with the Antarctic expeditions and surveys of South Georgia, who used Grytviken as a place to refuel and collect provisions. They include other key members of the Imperial Trans-Antarctic team: Frank Wild, Frank Worsley and Tom Crean as well as photographer Frank Hurley. Wild and Worsley were also part of the Shackleton-Rowett expedition in 1921-22. Sir Edmund Hillary, most famous for climbing Mount Everest, and Sir Vivian Fuchs also called at Grytviken as part of the Commonwealth Trans-Antarctic Expedition in 1955. Other notable people to visit include Otto Nordenskjöld, Wilhelm Filchner and HRH Prince Philip. Also in the 1950s, Duncan Carse used *Albatros* and *Dias* to map South Georgia as part of the South Georgia Surveys.

The many connections with individuals, scientific expeditions and the political events that have shaped the island's history in the twentieth century, some of which are reflected in the fabric surviving at the station, give the Whaling Station high associative value.



Shackleton's grave in Grytviken Cemetery



CAP, the initials of the Compañía Argentina de Pesca on a cooker in the Meat Factory



The bust of Larsen in the Church



Frank Wild's headstone at Grytviken Cemetery

## 3.0 SIGNIFICANCE

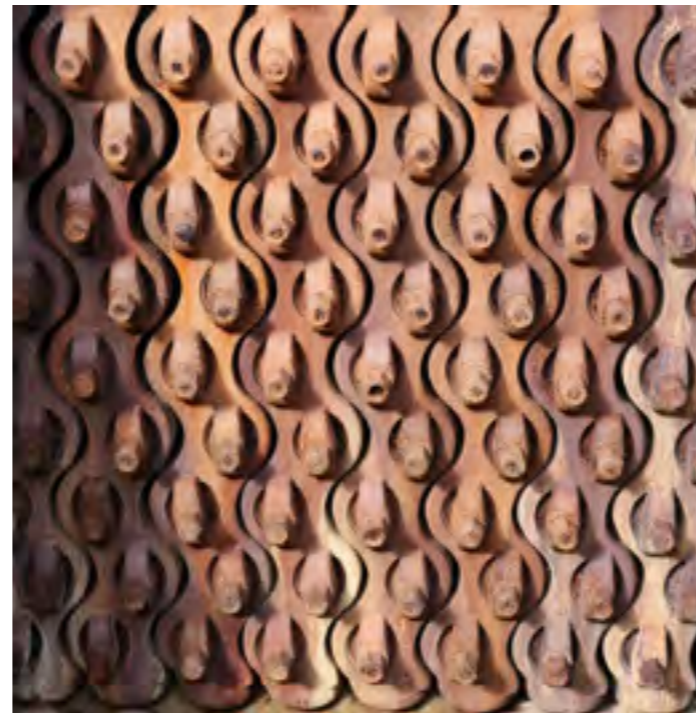
### 3.3.4 Aesthetic Value

The aesthetic value of Grytviken Whaling Station is three-fold. Firstly it has design value as a planned factory and settlement. Furthermore, whilst the machines were not designed primarily for beauty, they have a designed quality to them, some of which have an incidental beauty, such as the pattern created on the back of the boilers of the Blubber Cookery.

The Whaling Station also has aesthetic value in its Norwegian-designed buildings. This character derives from the massing, scale and details of the design such as the long sloping roofs and restrained timber detailing both externally and internally as seen in, for example the hood mouldings over the church windows and the historic architraves in the Manager's Villa. It also derives from the materials used, namely the predominance of timber boarding and tin sheeting, as well as the colours used. The Church, the Manager's Villa and Drukken Villa are perhaps the most consciously designed buildings left on the site but the simpler surviving buildings share the materials and some of the design details.

Thirdly there is a fortuitous aesthetic quality to the Whaling Station, which changes with the light. The rusting remains of the factory structures take on a dramatic quality in sunlight against a blue sky whilst the massing of the massive storage tanks echoes the massing of the brown and snow-capped mountains behind them.

Overall the aesthetic value of the Whaling Station is deemed to make a medium contribution to its significance.



*Detail of the boiler in the Blubber Cookery*



*The Church was ordered as prefabricated parts from Norway and contains typical Norwegian details.*



*The original door of the Potato Store*



*Light on the storage tanks with the brown mountains beyond*

## 3.0 SIGNIFICANCE

### 3.3.5 Communal Value

Grytviken is the only one of the remaining whaling stations that tourists can visit. The other substantially surviving stations (Leith, Husvik and Stromness) have 200m exclusion zones around them. With the requirement to clear customs at KEP, visitors to South Georgia visit Grytviken during their visit. Visitors have the opportunity not only to visit the Whaling Station but also to learn about the whaling process, the stories of exploration connected with South Georgia and other elements relating to the island's past and present at the Museum.

The Whaling Station is also valued by those who once worked there in the whaling industry and, more recently, the tourism industry. It is a place of interest and the subject of study by a few in Europe and elsewhere.

The Cemetery has a particular value to the descendants of those men buried in it. It is also highly valued by those with an interest in the history of polar exploration as it contains the graves of Sir Ernest Shackleton and his 'right hand man',<sup>02</sup> Frank Wild.

Grytviken is popular with staff at the BAS base as a place for photography. The Church is also decorated at Christmas and hosts a popular Christmas Carol service.

Despite its remote location, the communal value of the Whaling Station is deemed high.

### 3.3.6 Summary Table of Heritage Values

The table on the following pages provides a summary statement of significance and heritage values for different elements of the Whaling Station. The heritage values have been assessed in terms of the importance of each element to Grytviken Whaling Station (i.e. the local level). It should be noted that the overall value is not an average of the other heritage values. An element may be of high heritage value for a single reason, such as its contribution to the understanding of the Whaling Station (illustrative value), rather than multiple reasons.

<sup>02</sup> Inscription on Frank Wild's headstone

### 3.0 SIGNIFICANCE

STRUCTURE	EVIDENTIAL VALUE	ILLUSTRATIVE VALUE	ASSOCIATIVE VALUE	AESTHETIC VALUE	COMMUNAL VALUE	OVERALL VALUE	BRIEF SIGNIFICANCE STATEMENT
<b>FACTORY</b>							
<b>Flensing Plan</b>	Medium	High	Low	Low	High	<b>High</b>	The heart of the whale processing factory, the Flensing Plan was very important part of the Whaling Station. Although the timber deck has been lost and the foreshore is being eroded, the outline of the plan is just discernible. Its legibility is marred by the chains, different surfaces and the motor boat.
<b>Blubber Cookery</b>	Medium	High	Low	Low	Low	<b>High</b>	Located approximately on the site of one of Larsen's original blubber cookeries, the Blubber Cookery is the only part of the processing factory in which the same process took place throughout the existence of the whaling operations. Although only the base and plant survives, this has value in showing the layout and use of this part of the factory as well as in defining the Flensing Plan.
<b>Meat Cookery</b>	Medium	High	Low	Low	Low	<b>High</b>	Positioned approximately on the site of the second of Larsen's original blubber cookeries, a meat factory was first created on this site (replacing one at the head of the plan) in 1925 as part of the extensive improvements to the factory. The meat factory that exists is a later postwar rebuilding that reflects the ongoing improvements to the Whaling Station and the whaling industry more widely. In its reuse of some earlier plant, however, it also shows the frugality of the whaling company and the practical realities of business in a remote part of the world. Although only the base and plant survives, this has value in showing the layout and use of this part of the factory as well as in defining the Flensing Plan.
<b>Guano Plant and Store</b>	Medium	High	Low	Low	Low	<b>High</b>	The production of guano was part of the second phase of the development of the station's outputs reflecting the requirement by the Government to utilise all the whale and of the company to increase profits. The scale of the surviving plant and store footprint reflects the postwar redevelopment of the factory and the fact that Grytviken was the largest producer of guano on the island in the 1950s.
<b>Bone Cookery</b>	Medium	High	Low	Low	Low	<b>High</b>	The existing remains of the Bone Cookery are amongst the oldest part of the factory, having not been altered in the 1950s and therefore being substantially as they were in the 1930s. The Bone Cookery replaced an earlier meat and bone cookery that had been built prior to 1920. The legibility of the Bone Cookery has been somewhat compromised by the lying of some of the cookers on their sides for safety reasons.

### 3.0 SIGNIFICANCE

STRUCTURE	EVIDENTIAL VALUE	ILLUSTRATIVE VALUE	ASSOCIATIVE VALUE	AESTHETIC VALUE	COMMUNAL VALUE	OVERALL VALUE	BRIEF SIGNIFICANCE STATEMENT
<b>FACTORY CONTINUED</b>							
Separator Plant	Low	Medium	Low	Low	Low	Medium	The Separator Plant was added in the 1930s and extended and the plant replaced postwar so the surviving remains illustrate the ongoing development of the Whaling Station. The Separator Plant particularly demonstrates the improvement in technology from the unsophisticated early settling tanks.
Glue-Water Plant	Low	Medium	Low	Low	Low	Medium	One of the additions to the Factory in the 1930s, the plant in the Glue-Water Plant is from the postwar improvements to the Whaling Station. It reflects the ongoing development of the station and how the requirement to get the most oil from the whale grew.
Refrigeration Plant	Very Low	Low	Neutral	Neutral	Neutral	Very Low	Added at the very end of the Whaling Station's period of operation and never completed, the scale and location of the Refrigeration Plant makes it harder to comprehend within the site. It is evidence of the continuing development of the site. There is, however, no indication that the plant was brought from Husvik on the machines themselves. The incorporation of a small piece of blue and white china visible in the concrete base is a strangely tangible reminder of the fact that the Whaling Station was an inhabited place.
<b>STORAGE TANKS</b>							
Storage Tanks adjacent to Factory	Low	High	Low	Low	Low	Medium	Whilst the extant tanks are probably from the 1930s or the 1950s, there have been tanks in approximately these locations since the second decade of the station. The tanks reflect the development of the process away from storage in barrels as had been the case originally as well as the enlargement of the factory and the station with concomitant rising requirements for fuel oil.
Storage Tanks to NW and SW of Whaling Station	Low	Medium	Low	Medium	Medium	Medium	The number and size of the storage tanks mean they form an important part of the Whaling Station that survives today and they illustrate the scale of production that occurred.

## 3.0 SIGNIFICANCE

STRUCTURE	EVIDENTIAL VALUE	ILLUSTRATIVE VALUE	ASSOCIATIVE VALUE	AESTHETIC VALUE	COMMUNAL VALUE	OVERALL VALUE	BRIEF SIGNIFICANCE STATEMENT
<b>JETTIES</b>							
Harpon Jetty	Medium	High	Low	Low	Medium	High	Harpon Jetty has existed since the second decade of the Whaling Station's existence. It was fundamental to the operations of the station for loading cargoes of oil and other products as well as receiving supplies and moving personnel. The jetty was named after the <i>Harpon</i> and <i>Harpon II</i> , two of the early transport ships owned by Pesca. It remains one of the most important surviving elements of the Whaling Station though it is in poor condition.
Tijuca Jetty	Medium	High	Low	Low	Medium	High	Tijuca Jetty was the first jetty to be built and some of the original fabric may still be incorporated in the surviving jetty, part of which was rebuilt recently. Essential to the operations of the Whaling Station, it remains a legible and significant part of the site. It is also used by visiting yachts and some cruise operators. The jetty was named after <i>Tijuca</i> , a three-masted barque that transported cargoes and supplies for Pesca for 35 years from 1907.
Jetty and Floating Dock	Medium	High	Low	Low	Low	Medium	The jetty and floating dock principally served the Repair Yard, providing a place for catchers and other vessels to moor and undergo repairs. They were added in the late 1920s and later altered. The floating dock is partially submerged, which diminishes its illustrative value.
<b>REPAIR YARD</b>							
Main Store	Low	High	Neutral	Medium	Low	High	The main range of the Main Store is one of the largest and oldest buildings to survive on the site. Moreover, its internal fixtures, fittings and artefacts survive <i>in situ</i> , giving it a unique character amongst the remaining buildings at Grytviken. Its phases of extension are legible from the surviving fabric. The replacement of its roof has slightly diminished the aesthetic value of its exterior.
Engineering Workshop	Low	High	Neutral	Medium	Low	Medium	Much of the Engineering Workshop that survives is from its later postwar incarnation. This is evident in the style of its windows. Moreover, it retains evidence of its use in terms of surviving equipment at ground and ceiling level. Though there has been some insertion of partitions, these are reversible and the overall layout and character has been preserved. The historic signage contributes to this character. Its current use, which is a form of continuation of the original use, is beneficial.
Foundry	Medium	Medium	Neutral	Neutral	Low	Medium	The survival of the base is clearly legible whilst the survival of the old furnace and metal base plates are an indication of the original use though there are also a lot of random pieces of metal.

### 3.0 SIGNIFICANCE

STRUCTURE	EVIDENTIAL VALUE	ILLUSTRATIVE VALUE	ASSOCIATIVE VALUE	AESTHETIC VALUE	COMMUNAL VALUE	OVERALL VALUE	BRIEF SIGNIFICANCE STATEMENT
<b>REPAIR YARD CONTINUED</b>							
Blacksmith/Tinsmith Workshops	Medium	Medium	Neutral	Neutral	Low	Low	The base has been partially obscured but a sense of the proportions of the lost workshops is possible. The survival of the plant and machinery is an indication of the original use.
Winch House	Low	Low	Neutral	Neutral	Low	Low	Although the building is gone, the winch and pneumatic air compressor are still in place. Their location at the end of the catcher slipway is important in aiding the legibility of the Repair Yard.
Pump House	Low	Low	Neutral	Neutral	Low	Low	The building base is of illustrative value in showing the layout of the Whaling Station whilst the surviving plant provides an indication of the building's function.
Plating Store	Low	Medium	Neutral	Neutral	Low	Low	The survival of machinery clearly indicates the use of the building as a workshop. Its shoreline location means the base is rapidly deteriorating and the full footprint of the building has already been lost. Nonetheless it contributes to an understanding of the layout of the Whaling Station.
<b>NORTH ACCOMMODATION BUILDINGS</b>							
Manager's Villa	Medium	High	Low	Medium	High	High	As the replacement Manager's Villa following the destruction of the original by fire, it was not occupied by the Larsen family. Nonetheless, it is one of the oldest surviving buildings and, as it was built on the same site as the original, contributes to an understanding of the layout of the Whaling Station from its inception. The replacement materials affect its appearance externally but it still has aesthetic value for its Norwegian design and the survival of historic features internally. Its current use as the Museum gives it its high communal value.
Drukken Villa	Low	Medium	Low	Medium	Low	Medium	One of the few surviving buildings that Larsen would have known, Drukken Villa was constructed as a temporary residence for the British Magistrate, James Wilson, before being used as the Foremen's Barracks. The refurbishment of the interior has removed or concealed any historic features, which diminishes its aesthetic and illustrative values. Externally, however, the design shows it was a Norwegian building.
Provisions Store	Low	High	Neutral	Medium	Low	Medium	One of the oldest surviving buildings on the site, the Provisions Store forms part of the historic group of small buildings around the two villas. Although reroofed recently, much of the original fabric survives and its historic character has been preserved.

## 3.0 SIGNIFICANCE

STRUCTURE	EVIDENTIAL VALUE	ILLUSTRATIVE VALUE	ASSOCIATIVE VALUE	AESTHETIC VALUE	COMMUNAL VALUE	OVERALL VALUE	BRIEF SIGNIFICANCE STATEMENT
<b>NORTH ACCOMMODATION BUILDINGS CONTINUED</b>							
<b>Potato Store</b>	Low	Medium	Low	Medium	Low	<b>Medium</b>	One of the oldest buildings on the site and although extended, part of it is probably a building that Larsen would have known. It forms part of the historic group of small buildings around the two villas. It is unusual amongst buildings at the station in having walls of shuttered concrete. Whilst a fine historic timber panelled door enhances it, the appearance of the Potato Store was diminished by the loss of a second opening in its gable during a recent refurbishment project.
<b>Coffee Roasting House</b>	Low	High	Low	Medium	Low	<b>Medium</b>	The Coffee Roasting House is one of a group of historic buildings forming an important group around the two villas and is arguably the one that has best retained its historic character. The simple structure's original purpose is indicated by the surviving metal chimney at one end. Grytviken is the only Whaling Station with a known coffee roasting house.
<b>Slop Chest</b>	Low	Medium	Neutral	Low	High	<b>Medium</b>	The Slop Chest was highly valued as the place where goods could be purchased by those working at the station and now as the Post Office. Although its appearance was altered during recent renovation works, historic fabric survives internally and externally. The historic extension of the Slop Chest is indicated by the change in materials used for its base at the front and the back.
<b>Carr Maritime Gallery</b>	Neutral	Low	Neutral	Neutral	Medium	<b>Low</b>	The Carr Maritime Gallery occupies the site of an earlier historic provision store. Although the design of the building takes cues from the original in its size proportions and some features, it is clearly a modern building. Its communal value derives from its use as an exhibition space.
<b>Foremen's Barracks</b>	Very Low	Low	Neutral	Neutral	Neutral	<b>Very Low</b>	The significance of the surviving base of the Foremen's Barracks lies in its illustrative value as indicating the layout and development of the Whaling Station.
<b>Bakery</b>	Low	Low	Neutral	Neutral	Neutral	<b>Low</b>	The bakery was located on this site for most of the Whaling Station's history and the retention of two pieces of baking machinery help to distinguish the purpose of this concrete base from others. Small parts of the brick and stone base indicate it was one of the early buildings that formed a group with the other small provisions buildings near the villas.
<b>Cold Store</b>	Low	Low	Neutral	Neutral	Neutral	<b>Low</b>	The surviving elements of brick indicate a pre-Second World War building, whilst a level change in the surviving floor screeds indicate the area of the postwar extension. The significance lies in its illustrative value as part of the domestic buildings at the Whaling Station.



### 3.0 SIGNIFICANCE

STRUCTURE	EVIDENTIAL VALUE	ILLUSTRATIVE VALUE	ASSOCIATIVE VALUE	AESTHETIC VALUE	COMMUNAL VALUE	OVERALL VALUE	BRIEF SIGNIFICANCE STATEMENT
<b>NORTH ACCOMMODATION BUILDINGS CONTINUED</b>							
New Bakery	Very Low	Low	Neutral	Neutral	Neutral	Very Low	An addition to the Whaling Station in the late 1950s, the new bakery reflects the ongoing development of the Whaling Station. The concrete base gives no indication of its use.
<b>WEST AND SOUTH ACCOMMODATION BUILDINGS</b>							
Church	Medium	High	High	High	High	High	The Church is one of the oldest buildings on the site, dating from 1913, and constructed at Larsen's instigation. The connection with him is reinforced by the bust installed in 1988. The Church has been repaired over the years but is substantially as it would have originally been. The library is also well preserved and illustrative of life at the Whaling Station. Services are still held at the Church augmenting its communal value, which is also derived from its being open to the public.
Nybrakka	Low	High	Low	Medium	Low	Medium	Nybrakka was the last barracks to be constructed at Grytviken and now the only one surviving. Almost all the internal layout is preserved together with a considerable number of fixtures and fittings from cupboards and bunk units to the considerable survival of the wash facilities and darkrooms in the basement. It is overlain with evidence of the military presence on the island in the form of bullet and bayonet holes and graffiti. Externally it has been refurbished, which has somewhat compromised its appearance through the loss of historic details.
Hospital	Low	Medium	Neutral	Neutral	Neutral	Low	The concrete base of the Hospital has nothing to indicate its original use. The brick footings of the outer wall and overlying timbers illustrate it was amongst the oldest surviving buildings on the site, having been relocated in the 1910s.
Russebrakka	Very Low	Low	Neutral	Neutral	Low	Low	Very little survives of the base of the Russebrakka, which was the oldest surviving barracks when the station closed (the original barracks had been demolished). Two pieces of laundry machinery, one of which looks postwar, are evidence of the fact that the Russebrakka contained the station laundry. The value of the base lies in being illustrative of the layout of the Whaling Station.
Barracks (North)	Low	Low	Neutral	Neutral	Neutral	Low	The concrete base is of illustrative value in showing the layout of the Whaling Station. The survival of concrete upstand walls in the older eastern half but not the western extension shows the phasing of the building.

## 3.0 SIGNIFICANCE

STRUCTURE	EVIDENTIAL VALUE	ILLUSTRATIVE VALUE	ASSOCIATIVE VALUE	AESTHETIC VALUE	COMMUNAL VALUE	OVERALL VALUE	BRIEF SIGNIFICANCE STATEMENT
<b>WEST AND SOUTH ACCOMMODATION BUILDINGS CONTINUED</b>							
<b>Barracks (South)</b>	Low	Low	Neutral	Neutral	Neutral	Low	The concrete base is of illustrative value in showing the layout of the Whaling Station. It is also of interest in illustrating construction methods as the concrete piers were evidently cast in barrels. The bricks in the surviving wall base indicates its interwar date.
<b>Bath House</b>	Low	Low	Neutral	Neutral	Neutral	Low	The concrete base is of illustrative value in showing the layout of the Whaling Station. The density of the concrete foundation walls reflects its use as a bath house.
<b>Kino</b>	Low	Low	Neutral	Neutral	Low	Low	The concrete base is of illustrative value in showing the layout of the Whaling Station. The layout of the Kino with the porch and projection room are reflected in the base. All the whaling stations (apart from Ocean Harbour) had cinemas, which provided entertainment and a connection with the outside world. This is reflected in the communal value of the Kino. Historic photographs survive of the exterior and interior whilst the sign is on display in the Museum.
<b>Communal Mess</b>	Low	Medium	Neutral	Low	Low	Low	The Communal Mess was one of the older surviving buildings on the Whaling Station. Its function is still indicated by the survival of the Norwegian cooking ranges. The floor tiles also survive though these are almost certainly postwar. The survival of the plant helps make this one of the more legible ruins on the site. Internal historic photographs survive.
<b>Slaughterhouse</b>	Low	Low	Neutral	Neutral	Neutral	Low	One of the later buildings to be erected on the site, the Slaughterhouse reflects improving conditions. The survival of the rinsing tanks in the butcher's room and some of the mincing machinery from the sausage making room reflect its original use. Evidence of the pen to the south has been lost.
<b>Piggeries</b>	Low	Low	Neutral	Very Low	Neutral	Low	Only part of the stone retaining wall of the piggeries survives, the material indicating an early structure. The value of the surviving fabric is principally its illustrative value in showing the layout of the Whaling Station.
<b>SPORTS FACILITIES</b>							
<b>Football Field</b>	Neutral	Medium	Neutral	Neutral	High	Low	The football field is evidenced by the large area of flat grass and the surviving goalposts. It is illustrative of the layout of the Whaling Station and the social and recreational side of whaling station life.
<b>Ski-Jump</b>	Very Low	Low	Neutral	Neutral	High	Low	The ski-jump is a further example of the recreation of Norwegian life at Grytviken. The structure has collapsed but the arrangement is still just discernible. The presence of the ski-jump is illustrative of the layout of the Whaling Station and the social and recreational side of whaling station life.

### 3.0 SIGNIFICANCE

STRUCTURE	EVIDENTIAL VALUE	ILLUSTRATIVE VALUE	ASSOCIATIVE VALUE	AESTHETIC VALUE	COMMUNAL VALUE	OVERALL VALUE	BRIEF SIGNIFICANCE STATEMENT
<b>CEMETERY</b>							
Cemetery	Low	High	High	Medium	High	High	The site of an earlier sealers' cemetery, the Cemetery is a tangible link with the individuals who lived, worked and died at Grytviken. The personalisation of the memorials demonstrate that Grytviken was a community connected with the outside world despite its remote location. It continues to be a place of pilgrimage for descendants. Whilst all the whaling stations have cemeteries, Grytviken's is internationally famous as the resting place of the Anglo-Irish explorer, Sir Ernest Shackleton and consequently is much visited. It is also connected by association with the commemorative cross at Hope Point, which was erected by Shackleton's comrades.
<b>DAMS, POWER STATIONS, RADIO STATION AND BRIDGES</b>							
Hydro-electric Power Station (historic)	Low	Medium	Neutral	Low	Low	Medium	The base of the power station survives together with fragments of pipes and turbines that together make its function one of the most obvious of the surviving ruins on the site. Evidence of the use of hydro-electric power reinforces the Norwegian character of the Whaling Station. The remains that survive are from the original 1913/14 hydro-electric power station added by Larsen together with the 1928 extension.
Hydro-electric Power Station (modern)	Neutral	Neutral	Low	Neutral	Low	Neutral	A modern building in the location of the historic radio station, the hydro-electric power station is designed and built so that it is in-keeping with the other buildings in the station. It has communal value for its practical function of providing power to the people living on the island whilst the associative value derives from the connection with HRH The Princess Royal, who opened it in 2009, as commemorated by a plaque.
Gull Lake Dam	Very Low	Low	Neutral	Neutral	Low	Low	The location of Larsen's original dam for generating hydro-electric power, the existing dam is a twenty-first century structure. There is a line of concrete to the east of the reservoir which may be an earlier historic structure though not an original one. The continuous use for the same function adds to its significance.
Bore Valley Dam	Low	Low	Neutral	Neutral	Low	Low	The existing dam is thought to be a replacement for the original dam. The continuous use for the same function adds to its significance.
Bore Valley Dam Hut	Low	Low	Neutral	Low	Neutral	Low	The hut has been repaired but is historic. Its significance lies in its illustrative value as an ancillary structure built to enable the functioning of the Whaling Station.
Bore Valley Timber Dam	Low	Low	Neutral	Neutral	Neutral	Low	This may be the remains of the original dam constructed by Larsen to provide the initial water supply for the Whaling Station in 1904. Its significance lies in its historic value.

### 3.0 SIGNIFICANCE

STRUCTURE	EVIDENTIAL VALUE	ILLUSTRATIVE VALUE	ASSOCIATIVE VALUE	AESTHETIC VALUE	COMMUNAL VALUE	OVERALL VALUE	BRIEF SIGNIFICANCE STATEMENT
<b>DAMS, POWER STATIONS, RADIO STATION AND BRIDGES CONTINUED</b>							
<b>Bore Valley Sluice/Building Remains</b>	Low	Low	Neutral	Neutral	Neutral	Low	The purpose of the timber and stone remains is not clear but it may have been a sluice associated with the Bore Valley dam or related to the secondary hydro-electric dynamo that Larsen had on this side of the station.
<b>KEP Dam</b>	Low	Low	Neutral	Neutral	Neutral	Very Low	Little is known about this dam and access is restricted. It was probably created to service KEP rather than Grytviken.
<b>Radio Workshop (including mast)</b>	Low	Low	Neutral	Neutral	Neutral	Low	The Radio Workshop was a modern building in its design originally but no sense of this is evident in the concrete and timber remains of the building. The one surviving mast illustrates the use of the building. It is generally not visited by the public, as it is beyond the Cemetery.
<b>Bridges</b>	Medium	Medium	Neutral	Neutral	Low	Medium	The bridges survive in varying states: some have entirely disappeared, some appear to have been rebuilt, others survive as broken timbers or indicated by roughly hewn stones in the banks. They are of significance where they survive in indicating routes around the Whaling Station historically.
<b>VESSELS</b>							
<b>Albatros</b>	Medium	High	Low	Medium	High	High	The earlier of the two whaling catchers to be brought to Grytviken, <i>Albatros</i> is an important illustration of the type of vessel used for whaling in the early twentieth century. There is potential to learn more about the vessel from its surviving fabric although this is rapidly deteriorating and elements have been removed. Though too fragile to board, the vessel nevertheless is highly valued for its contribution to Grytviken's character. The associative value derives from the long connection with the Pesca company.
<b>Dias</b>	Medium	High	Low	Medium	High	High	The <i>Dias</i> is valued by a wider maritime community as the oldest surviving Hull steam trawler in the world. She was constructed in Beverley, England, as the <i>Viola</i> . At Grytviken, the <i>Dias</i> is illustrative of the transport vessels that were also needed as part of the Whaling Station's operations and connections with the outside world. She was predominantly used as a sealer, illustrating how this trade was carried out alongside whaling. There is potential to learn more about the vessel from her surviving fabric although this is rapidly deteriorating and elements have been removed. Though too fragile to board, the vessel nevertheless is highly valued for her contribution to Grytviken's character. The associative value derives from the long connection with the Pesca company.

### 3.0 SIGNIFICANCE

STRUCTURE	EVIDENTIAL VALUE	ILLUSTRATIVE VALUE	ASSOCIATIVE VALUE	AESTHETIC VALUE	COMMUNAL VALUE	OVERALL VALUE	BRIEF SIGNIFICANCE STATEMENT
<b>VESSELS CONTINUED</b>							
<i>Petrel</i>	Medium	High	Low	High	High	<b>High</b>	The later of the two whaling catchers to be brought to Grytviken, <i>Petrel</i> is an important illustration of the type of vessel used for whaling in the early twentieth century. She is in slightly better condition than <i>Albatros</i> . There is potential to learn more about the vessel from its surviving fabric although this is rapidly deteriorating and elements have been removed. Though too fragile to board, the vessel nevertheless is highly valued for its contribution to Grytviken's character. The associative value derives from the long connection with the Pesca company.
<i>Louise</i>	Low	Medium	Medium	Low	Low	<b>High</b>	The condition of the <i>Louise</i> and the considerable loss of historic fabric lessens the significance of the barque. However, she is deemed of high significance for its historical value regardless of the survival of her fabric. She was selected by Larsen as the original transport vessel and she carried all the original factory plant to create the Whaling Station from Sandefjord in Norway to Grytviken.
<b>Motor Boat – Flensing Plan</b>	Low	Medium	Neutral	Low	Low	<b>Medium</b>	Although small boats were essential for moving things and people between larger boats in the bay and the station, they are less prominent in the narratives of the Whaling Station than the larger vessels. The motor boat is an example of the later type of boat to fulfil this function. Its location on the Flensing Plan does not enhance the legibility of either.
<b>Motor Boat – by <i>Louise</i></b>	Low	Medium	Neutral	Low	Low	<b>Medium</b>	Although small boats were essential for the functioning of the Whaling Station, they are less prominent in the narratives of the Whaling Station than the larger vessels. The motor boat, which is a different design to the other motor boat on the Flensing Plan, was used to tow whales from the catchers to the shore. This appears to be the older of the two at Grytviken and its engine is in the Museum.



## SECTION 4.0

# CONSERVATION FRAMEWORK

### 4.1 INTRODUCTION

This section provides the long-term framework for future decision-making regarding Grytviken. It sets out an overarching Conservation Philosophy that describes the approach that will inform how the site is conserved and managed. Deriving from this is a set of Conservation Policies that will be adopted and used as the basis of decision-making whether for small maintenance works or major projects.

The Conservation Philosophy emphasises the legibility of the site. This refers to how readable the built fabric of the site is and at Grytviken there are several elements that are or could be readable for people to understand what they are looking at:

- the layout of the site in terms of where buildings and other built and manmade landscape features existed;
- the pattern of uses across the site (i.e. the factory area, the accommodation area, the Repair Yard, etc.);
- the way different buildings were used or the processes that occurred in them; and
- the layers of change that occurred during the development of the Whaling Station and later layers of change including evidence of lost features.

There has been a loss of legibility over time since the closure of the Whaling Station and it is not suggested that this could be entirely recovered. However, there is potential to enhance the legibility of the site, either through change to the built fabric or interpretation. The recommendations associated with Conservation Policy CP2 indicate the types of works that could achieve this. The legibility of the site should relate back to how the Whaling Station existed in the early 1960s, rather than a previous iteration of the site that was lost through historically significant processes of redevelopment and rebuilding. The legibility of the site also relates to subsequent changes, which should be readable as later changes.

### 4.2 CONSERVATION PHILOSOPHY

Grytviken Whaling Station was the first shore-based station of the modern whaling era not only in South Georgia but in the Antarctic. It was also the longest operating and to achieve this, it required frequent alteration, modernisation, additions and rebuilding. This makes it a more complex and layered site than its age might suggest. Any repairs, renewals or change must be based on a sound understanding of the station's historic development and significance and that of individual elements of the Whaling Station. The extent of change during its period of use as a whaling station should not be regarded as precedent for frequent or extensive change now.

The conservation of the site, including maintenance and repair works, will be undertaken to enhance the legibility of the site. Opportunities will be taken to enhance the significance of the site by making clearer the different areas of the site, the historic layout, the use and processes undertaken, and the layers of change.

Great weight will be given to the preservation of the historic character of the surviving elements and the whole site as well as to the preservation of the historic fabric. Where change is required to meet safety or environmental needs, change will be kept to a minimum. For all works, including maintenance, repair and renewal, methods and materials will be employed that do not compromise, or at least minimise the impact on, the historic character and legibility of the structures and the Whaling Station. Where possible, works, apart from exact like-for-like repairs, should be reversible or not prevent alternative future solutions. Works to existing historic buildings and structures will be undertaken using materials that match the historic ones in terms of material, quality, profile, colour and finish as far as possible with available materials. Works involving the addition of new structures will match the scale, massing and shape of the relevant historic structures using materials and design details of a high quality. All works will be undertaken mindful of the prevailing weather of Grytviken and the need to ensure the durability and sustainability of both works and structures. Generally change will be concentrated in areas of very low or neutral significance.

Grytviken Whaling Station is part of the story of the exploitation of the natural environment on and in the waters around South Georgia. It is also part of the narrative of humankind's engagement with and exploration of the Antarctic as well as the story of South Georgia's sovereignty and defence. These broad themes, as well as the specific history of the development and use of the Whaling Station over its six decades of operation, will be shared with visitors to Grytviken. Wherever possible, opportunities will also be taken to make them known to the wider world.

### 4.3 CONSERVATION POLICIES

Conservation is at the heart of the management of any heritage site, especially one as significant as Grytviken Whaling Station. The table on the following pages sets out a concise series of Conservation Policies with associated actions that should govern and pervade all decisions and works made about the site. They should act as guiding principles within the context of the Conservation Philosophy and inform all conservation actions.

## 4.0 CONSERVATION FRAMEWORK

POLICY NUMBER	POLICY	REASON	RECOMMENDATIONS
CPI	Ensure all decisions affecting the built fabric and setting of Grytviken are based on a sound understanding of the significance of the site and/or individual elements potentially affected.	<p>To preserve the significance of the site.</p> <p>To give the value of the heritage assets due consideration in decision-making.</p> <p>To ensure that there is a coherent basis for decision-making.</p>	<ul style="list-style-type: none"> <li>Use the CMP to inform decisions.</li> <li>Undertake additional research or analysis of the built fabric to further understanding of a particular element if required.</li> </ul>
CP2	Enhance the legibility of the site.	To enhance the significance and understanding of the site.	<ul style="list-style-type: none"> <li>Relocate plant, equipment or boats that are misleadingly located.</li> <li>Maintain and where possible improve distinctions that existed historically between different parts of the site.</li> <li>Use interpretation to make the uses of buildings or processes undertaken in the factory clearer.</li> <li>Make the differences in age of different structures clearer when the opportunity arises.</li> <li>Ensure future change is readable as a phase of change. This can be achieved through the incorporation of a date when works took place rather than the use of contemporary materials.</li> </ul>
CP3	Ensure all staff at Grytviken and KEP understand the significance of the site and the approach to its conservation.	<p>To encourage staff to contribute to its conservation.</p> <p>To enable staff to explain its significance to visitors.</p>	<ul style="list-style-type: none"> <li>Provide a base level of conservation training to all staff.</li> <li>Ensure all staff have access to the CMP and are encouraged to read it.</li> <li>Incorporate an understanding of the significance of the site into all staff inductions.</li> <li>In addition, GSGSSI staff based in Stanley, UK-based BAS staff and relevant FCO staff should also be provided with training to understand the significance of Grytviken and the approach to its conservation.</li> </ul>
CP4	Maintain a good relationship between relevant key stakeholders.	<p>To facilitate a co-ordinated approach to the conservation of the site.</p> <p>To encourage the development of a collective approach to the conservation and presentation of the site.</p> <p>To utilise the knowledge, skills and resources of stakeholders to protect and enhance the significance of the site.</p>	<ul style="list-style-type: none"> <li>Continue the annual stakeholder meeting.</li> <li>Maintain regular communications between GSGSSI and other stakeholders.</li> </ul>
CP5	Facilitate safe access to and understanding of the site without detriment to its character.	<p>To enable people to visit the site without risk of injury to themselves or harm to the heritage assets.</p> <p>To share the knowledge of the site's history and use with visitors so that they understand it and its heritage value.</p>	<ul style="list-style-type: none"> <li>Maintain the site as far as is reasonably possible to be safe for all visitors. (It is noted that responsibility for safety of visitors does not lie with the GSGSSI when a visitor permit has been agreed.)</li> <li>Provide interpretation and information about the site's history and significance as well as the process of whaling.</li> </ul>



## 4.0 CONSERVATION FRAMEWORK

POLICY NUMBER	POLICY	REASON	RECOMMENDATIONS
CP6	Encourage and facilitate education about the history and significance of the site to a wider audience.	<p>To make Grytviken and the associated narratives of whaling, exploration and defence are more widely known and appreciated.</p> <p>To encourage support for the conservation of the site amongst people who have not and may never visit the site.</p>	<ul style="list-style-type: none"> <li>• Make the CMP publicly available online.</li> <li>• Update the information on the GSGSSI website about Grytviken in light of this CMP.</li> <li>• Continue to develop the interactive map of heritage assets being prepared by BAS and ensure that pertinent information from the CMP is included regarding Grytviken.</li> <li>• Encourage lectures and exhibitions overseas that share information about the history and significance of Grytviken.</li> </ul>
CP7	Maintain the recordings of the site in a usable format and make accessible where possible.	To ensure that the value of undertaking conservation through recording is maintained.	<ul style="list-style-type: none"> <li>• Ensure that the digital format of the 3D laser scans, aerial photography and other surveys are updated to a format that is accessible by current technology.</li> <li>• Ensure that this data is safely stored and backed up.</li> <li>• Incorporate this information into exhibitions and displays at the site and elsewhere.</li> </ul>
CP8	Maintain an ongoing record of maintenance and project works.	<p>To facilitate a transfer of knowledge about works undertaken on the site.</p> <p>To provide a record for future study of works and changes carried out.</p>	<ul style="list-style-type: none"> <li>• Develop a maintenance and works log that is updated throughout the summer season by the Buildings Team and by the Government Officers in the winter.</li> <li>• Ensure the log is centrally saved so it can be accessed by relevant parties and so that it can be passed on from one Building Team Manager to the next.</li> <li>• If possible, create a retrospective record of works done based on the disparate records that exist.</li> </ul>
CP9	Where historic fabric is in its original location, retain <i>in situ</i> where possible.	To preserve the built fabric that provides a tangible link with the past as well as containing potential evidence for the detail of its origin, development and use.	<ul style="list-style-type: none"> <li>• Plant and equipment should be positioned where they aid the legibility of the site.</li> </ul>
CPI0	Ensure timely maintenance repairs and renewals.	<p>To preserve the historic fabric for as long as possible.</p> <p>To ensure the safety and appearance of the site.</p>	<ul style="list-style-type: none"> <li>• Use the MMP to plan routine maintenance.</li> <li>• Address defects resulting from major weather events immediately.</li> <li>• Evaluate the need for renewals and undertake when fabric is at the end of its life.</li> </ul>
CPII	Use appropriate materials and design details that preserve the character of the buildings and site.	<p>To avoid incremental harm to the character of the site.</p> <p>To reverse any unsympathetic changes undertaken in the past.</p>	<ul style="list-style-type: none"> <li>• Where historic materials survive, these should be used to carry out like-for-like replacements.</li> <li>• Where materials or design details have already been replaced by materials or details that did not exist historically and there is sufficient information regarding what was there historically, materials or design details should be reinstated to match the historic ones.</li> <li>• Surviving historic design details should be preserved when repairs or renewals are carried out.</li> </ul>

## 4.0 CONSERVATION FRAMEWORK

POLICY NUMBER	POLICY	REASON	RECOMMENDATIONS
CPI2	Ensure that the condition and appearance of the site is maintained to a high standard in the long-term.	<p>To preserve the significance of the site and individual elements in it.</p> <p>To take a long-term view regarding works that are undertaken to ensure that works are durable.</p>	<ul style="list-style-type: none"> <li>Consider the long-term durability and presentation of materials in the prevailing climatic conditions.</li> <li>Source materials that have been tried and tested in the same or similar environment.</li> <li>Ensure that modern machinery and stores are concealed as far as possible.</li> </ul>
CPI3	All proposed works should be subject to a heritage impact assessment prior to implementation.	To ensure works have been designed and will be carried out to minimise their impact on the significance of the site and where possible enhance the significance.	<ul style="list-style-type: none"> <li>In accordance with the <i>Heritage Framework and Strategy</i> develop legislation and guidance for the management of change in the historic environment on South Georgia. In the meantime, use the guidance in the <i>Framework</i> and the advice of the HAP to determine the suitability of proposed changes. For larger repairs, renewals or major projects, there should be a written impact assessment, which should be archived as part of the record of such works.</li> <li>A written heritage impact assessment should be prepared by someone suitably qualified proportional to the scale of change proposed.</li> </ul>
CPI4	Adopt the CMP and ensure its implementation and dissemination.	<p>To make use of the information and advice contained within this document.</p> <p>To ensure the appropriate and co-ordinated conservation of the site.</p>	<ul style="list-style-type: none"> <li>Facilitate the completion and adoption of the CMP.</li> <li>Use the CMP when planning maintenance works, change or interpretation proposals.</li> <li>Make the CMP available online.</li> <li>Ensure a hard copy of the CMP is kept at Grytviken and at KEP for use by staff.</li> </ul>
CPI5	Review and update the CMP regularly.	<p>To ensure that new information is incorporated into the CMP and the advice is amended accordingly.</p> <p>To ensure the ongoing relevance of the CMP.</p>	<ul style="list-style-type: none"> <li>Commission a consultant to review the CMP every five years or after any major change is undertaken.</li> </ul>

# SECTION 5.0

## ISSUES AND OPPORTUNITIES

### 5.1 ASSESSING ISSUES AND OPPORTUNITIES

Grytviken Whaling Station presents a complex conservation challenge. There are significant factors, such as the weather, climate change and icebergs, that are beyond human control but the impacts of which need to be addressed and minimised proactively and reactively. The remote location of the island presents a range of issues including provision of internet access, ease of communications between staff based at Stanley and KEP and time taken to move personnel and materials to and from the island. Other key issues are the delivery of materials; the use of appropriate materials and design details; the need for a continuous log of maintenance and project works and materials used; the procurement of materials; and the need to ensure the safety of staff and visitors to the site. There are opportunities to enhance conservation at Grytviken through staff training as well as the maintenance and development of relationships with stakeholders. There are also opportunities to enhance the significance of the site through improving its legibility.

This section sets out the issues and opportunities related to the heritage values of Grytviken. It also provides a series of associated actions, which are summarised in a list in Section 5.10. The issues and opportunities described are based on site observations and discussions with James Jansen and Steve Brown of GSGSSI in Stanley; Steve Waugh and Emma Jones, the Government Officers in KEP; Adrian Fail and Thies Matzen of the GSGSSI Building Team; and Alison Neil and Sarah Lurcock of SGHT. It also reflects issues and opportunities identified by consultees during the public consultation period.

### 5.2 SITE MANAGEMENT

#### 5.2.1 Location and Communications

South Georgia is a remote island that takes at least three days to reach from the Falkland Islands, which as an island territory itself has limited resources. Consequently there are significant challenges in terms of managing the site. The Government is based on the Falklands and the Operations Director, who is responsible for South Georgia's heritage, visits approximately twice a year. Communication via email can be problematic as the internet capacity on South Georgia is very limited and can sometimes cease altogether. For general discussions, this can be overcome by using the telephone. However, it can be difficult to share photographs of a situation in South Georgia with staff in the Falklands. This is compounded by the fact that there is not a shared server for the Government staff on the Falklands and those on South Georgia so photographs and information cannot be shared in this way.

The principal method of transport between the Falklands and South Georgia is via the GSGSSI's fisheries vessel *MV Pharos SG*. In the summer season, *MV Pharos SG* travels regularly between the two. Other vessels, such as *HMS Clyde*, also help transport people and deliveries to South Georgia. However, the resources, such as building materials, equipment, machine parts and paints, on the Falklands are limited so items often need to be ordered and transported to the Falklands before being sent on to South Georgia. This means that it takes time and planning to get materials and equipment to South Georgia. On South Georgia, the only source of building materials and fittings beyond what is held in the stores at Grytviken are the dilapidated whaling stations at Leith, Husvik and Stromness.

In terms of access on the island, during the winter the weather is harsh with significant snowfall and the potential risk of avalanches along the path between KEP, where all overwintering staff live and work, and Grytviken. For this reason, most maintenance works at Grytviken take place during the summer months, with only minor or essential tasks being undertaken during the winter.

#### Actions

- CA1** Continue to investigate improvement to internet connections on South Georgia periodically and implement improvements where possible.
- CA2** If communications can be substantially improved, investigate the potential for a shared server system for Government staff on South Georgia and the Falklands.



MV Pharos SG at KEP

## 5.0 ISSUES AND OPPORTUNITIES

### 5.2.2 Stakeholders

There are a number of organisations that are interested in the heritage of South Georgia, its conservation and celebration. There is an Annual Stakeholders Meeting held at the FCO which provides an opportunity for representatives of these organisations and others interested in other aspects of South Georgia to meet with the Government of South Georgia. This provides the opportunity for updates on works undertaken and proposed to the heritage assets.

The SGHT provides the visitor experience and run the Museum on behalf of the GSGSSI, as well as carrying out significant fundraising. There is frequent communication between the GSGSSI staff and the SGHT staff at all levels. There is an opportunity for greater liaison regarding the messages given to visitors. It is also important to maintain dialogue between the GSGSSI, HAP and stakeholders regarding any project works or works that affect the built fabric of the heritage assets.

There are strong cultural links with Norway because of the historic connections between South Georgia and Norway. The contemporary links are reflected in the funding provided recently by the Norwegian Government and by the fundraising activities of the friends group, Øyas Venner. Maintaining strong links with both is important. There is also an agreement of cooperation between the South Georgia Museum and the Whaling Museum in Sandefjord.

There are other organisations that champion and support research and conservation on the island. American visitors represent around a quarter of cruise ship passengers to visit South Georgia each year and some join the American organisation, the Friends of South Georgia Island (FOSGI). Similarly, a British-based organisation, the South Georgia Association (SGA), exists to promote South Georgia and encourage its conservation. Both are groups with whom it is important to maintain a good relationship.

The International Association of Antarctica Tour Operators (IAATO) is a member organisation that promotes responsible tourism in the Antarctic. All the cruise ships that visit South Georgia are members of IAATO and therefore IAATO is a good conduit for the dissemination of information and required or preferred practices on the island.

There are strong links with the British Armed Forces, particularly the Royal Navy as its ships call at South Georgia but also with the other services from the use of the RAF Airbridge between the UK and the Falklands to the connections with veterans of the Falklands Conflict. The naval patrol vessel *HMS Clyde* regularly patrols South Georgia waters and provides an additional means of transport of personnel and deliveries to and from South Georgia. Its crew sometimes provides support for various projects works.

The BAS is a key stakeholder. It runs the station at KEP and its staff help with the maintenance of the buildings at Grytviken, mainly in winter, as well as providing accommodation where needed for those working at Grytviken. BAS vessels contribute to the movement of personnel and materials. The Government Officers at KEP provide a link between the GSGSSI and the BAS station leader.

#### Actions

- CA3** Continue to hold the Annual Stakeholders Meeting.
- CA4** Continue to maintain a good relationship with the existing stakeholders and share information about the heritage works carried out.
- CA5** Enhance the existing communications between the GSGSSI, HAP and SGHT.



One of the main plaques recording the co-funding of conservation work by GSGSSI and the Norwegian Government.

### 5.2.3 Staff Training

There is considerable opportunity to enhance the conservation of the heritage assets at Grytviken through the provision of staff training. For GSGSSI and onsite SGHT staff at all levels, it would be beneficial for training to be provided as part of an induction to ensure an awareness of general conservation principles and best practice as well as the specific Conservation Philosophies, Principles and Policies set out in the *Heritage Framework and Strategy* and the CMP. For the Government Officers, Building Team and SGHT staff carrying out maintenance works, this training should extend to heritage management and decision-making, the importance and methodologies of recording change and the responsibilities of different roles with regard to heritage at Grytviken.

Further specific training would be beneficial for the Building Team to learn the practical skills of conservation of the types of buildings and structures found on South Georgia as well as general skills that will enable them to carry out their work, such as scaffolding training.

As part of the training for the Building Team, an exchange of knowledge or personnel with the UK Antarctic Heritage Trust (UKAHT) may be beneficial.

It is imperative for the conservation of Grytviken that information is passed on when there is a change of staff personnel. Part of this is making incoming staff aware of what documentation and procedures exist, where documentation is stored and how and where works are recorded. The other part is establishing the methods of recording information, such as works carried out, paint type and colour used and sources of materials, that can be passed on.

#### Actions

- CA6** Develop and implement a conservation training session that forms part of the staff induction process.
- CA7** Identify individual staff training needs and ensure that the appropriate training is received.

Actions regarding the recording of works can be found in Section 5.3.

## 5.0 ISSUES AND OPPORTUNITIES

### 5.2.4 Visitors

The 2017/18 season saw the highest recorded number of visitors at 10,060, which reflects a mostly upward trend in visitor numbers. Generally visitors pose relatively little threat to the heritage assets. Cruise ship passengers are led by an expedition leader who has been briefed with requirements such as for visitors not to climb on structures or to avoid walking between the storage tanks in high winds. Each cruise ship provides staff to monitor and regulate visitors though the way in which visits are managed varies between cruise ships. Whether on guided tours or wandering freely, visitors typically stay on the tracks and breaches of instructions with regards to the heritage are rarely observed. There are two regularly used landing sites at Grytviken, one to the north of *Dias* and one near the Cemetery, and the crews of the cruise ship zodiacs ensure that these are the ones used. The capacity of the zodiacs means passengers do not usually arrive as a group of 100 and therefore disperse around the site by the time the next group are landed. Occasionally larger tenders than zodiacs are used.

The number of cruise ship passengers at Grytviken is limited by the GSGSSI to 300 on the basis that the Cemetery, Museum and Church each represent a site and the visitor limit to any site is 100. The largest number of passengers to visit from one ship in the 2017/18 season was 483 and very occasionally in previous seasons ships with 800 passengers have visited. In such cases, landings are staggered to ensure compliance with the 300 limit. Many of the cruise ships have fewer than 100 passengers. The footfall from most visits is therefore relatively light. However, two or even three cruise ships may visit in one day and this puts strain on the Government and SGHT staff. Three cruise ships landing in a single day generally means that staff do not have capacity to be monitoring visitors and expedition leaders to ensure compliance with the requirements set out in the Permit. Generally, however, expedition leaders operate in a compliant way and ensure that their passengers do also.

If Government Officers observe a breach of requirements, they will speak to the expedition leader before they leave and also write a follow-up letter to discourage it from happening either at another site being visited on South Georgia as part of the same cruise or if the same ship returns to Grytviken.

The number of visitors from private or chartered yachts each year is negligible. As any visitor has to pay a visitor fee based on length of stay to land and all visitors receive a briefing on arrival, yacht visitors are also made aware of the restrictions and risks regarding the heritage.

#### Actions

- CA8** Continue to provide visitor briefings for all visitors either directly or via expedition leaders.
- CA9** Encourage cruise ships to visit on days that avoid more than two cruise ships calling in a day.
- CA10** Continue to disseminate information regarding the conservation of the heritage via IAATO.

### 5.3 CONSERVATION MAINTENANCE AND WORKS

#### 5.3.1 Planning and Delivery

There is an existing Management and Maintenance Plan (MMP, 2012) for Grytviken that sets out the tasks that need to be done on a daily, weekly, monthly, seasonal and long-term cyclical basis. It is being updated alongside the preparation of this CMP. The existing MMP has not been used recently due to a change in staff personnel. Whilst many of the tasks have been undertaken, following the lists set out in the MMP will ensure that the ongoing maintenance of the site.

The Building Team is responsible for maintaining all the built structures on the island including those at KEP though BAS also undertakes maintenance work on the KEP buildings as part of their contract with GSGSSI. The building team are not necessarily conservation specialists and, as noted above, would welcome some conservation training. It would be beneficial to also create a manual or series of method statements that set out how to carry out common repairs to the historic structures at Grytviken and the materials to use. The manual might also set out the procedures for liaison between the Building Team and GSGSSI staff in the Falklands, particularly when works are being proposed.

There is an urgent need for the development of a system for logging maintenance works and project works in a continuous manner that provides an ongoing and easily accessible record. The current system of an annual report is not sufficient. Photographs are taken of works that are done but these are not stored centrally. The maintenance log should record, as a minimum, what has been done and when for each task. In the same log or in a separate record, the materials used, including the supplier and details such as the exact colour, should be recorded to facilitate future reordering. The basic maintenance log could be created by extending the MMP spreadsheet and noting what has been done each season. This could be done electronically and a tablet for the Building Team could help facilitate them to maintain this record. The maintenance log should be stored on a server and ideally be accessible or at least frequently shared with staff in Stanley. As SGHT also carried out some minor maintenance works to the Museum and associated buildings, a system needs to be developed to integrate a log of the works they have carried out also.

The Building Team visually monitors the buildings during the summer season and the Government Officers may carry out periodic checks in the winter. There is currently no regular monitoring of the factory plant. This is a concern as the factory plant is vulnerable to failure and could cause harm to people or to other historic fabric.

## 5.0 ISSUES AND OPPORTUNITIES

### 5.3.2 Materials and Equipment

South Georgia is remote and, apart from stone, all buildings materials need to be imported although some can be salvaged from the other whaling stations if necessary. Works for the season are planned and the bulk of building materials are ordered in advance so that they are available at the start of the season. Some materials are ordered by GSGSSI whilst others are ordered by BAS, who are subsequently reimbursed. The stores at Grytviken also hold supplies of some materials and fittings, which have been left since the closure of the whaling station, have been bulk ordered previously or which have been salvaged. There are a number of potential issues relating to materials that are compounded by the remoteness of the island:

- materials are damaged in transit;
- incorrect materials are either ordered or delivered;
- insufficient quantities of materials are ordered or delivered; and
- materials are of inadequate quality or unsuited to the climate.

The delivery of insufficient, inappropriate or damaged materials causes delays to projects, as occurred last year with the Main Store roof. It can also lead to inappropriate materials being used that compromise the appearance of the heritage assets, such as the use of water-based paint on the windows of the Church in the past (which are now being repaired and repainted with oil-based paint). Furthermore, it is difficult for GSGSSI, due to procurement systems, to purchase materials from outside the UK or the Falklands. This means that the GSGSSI does not always have access to the optimal products, such as those developed for similar environments like Scandinavia. It also means that when gifts of materials are sent by Øyas Venner, more of the same materials cannot be ordered.

The island's remoteness also means that equipment and tools have to be ordered in. Currently there is insufficient attention given to the maintenance of tools, which will prolong their life, and the cycle of tool replacement has got behind. Whilst seasonal workers from Stanley can bring their own tools with them, those from the UK cannot because of the weight limitations on the Airbridge and therefore it is important that tools are available for staff to use at Grytviken. In addition, many of the larger pieces of equipment are those purchased during the 2003/4 asbestos removal works and are coming to the end of their life. In particular, a new transport vehicle is needed and a new cherrypicker that is of sufficient size to help facilitate the maintenance of the church spire. In the Engineering Workshop, there is a need for better lighting and dust extraction to facilitate works.

As with the training of personnel, it may be beneficial to exchange experience and practices with UKAHT and understand their partnerships for the transport of cargo and staff to the Antarctic.

### 5.3.3 Current Issues

There are a number of specific issues that are affecting the appearance and conservation of the site. These include but are not limited to:

- the ground around Shackleton's grave is very worn and the level needs to be built back up. The headstone requires stabilisation and the kerb levelled.
- the pipe from the Bore Valley dam is leaking near the Church;
- approximately two thirds of the Church windows have been repaired and repainted over the past two seasons. The remaining windows should be repaired to the same high standard;
- further works required to the Church are the repair of the steps and the repainting of the spire battens;
- the Museum plinth requires repair;
- the metal door of the plant in the Foundry is swinging on a single hinge and should be secured;
- some storage tanks have been blown adrift on their footings and the roofs of some have collapsed;
- the brick bases of some of the boilers and cookers are failing;
- there is evidence that some of the boilers have moved on their bases;
- the Cemetery fence design (which is not original) allows seal pups to get into the Cemetery;
- heavy vehicles are being driven across the base of the Blacksmith's workshop;
- vegetation is growing on some of the historic plant; and
- the helipad in the Repair Yard is inappropriate and should be removed. (The steel plates are, however, artefacts and should be retained and stored.)
- The perforated metal plates from the meat cookers could be beneficially retrieved from their reuse in the roads at KEP and their perilous position on Harpon Jetty.

#### Actions

- CA11** Develop a Conservation Maintenance and Works Manual including method statements for common repairs. This should be specific to the structures, materials and conditions at Grytviken.
- CA12** Implement a continuous system of logging maintenance and project works, ideally including works done by SGHT staff also.
- CA13** Implement a system of recording materials used in maintenance and project works.
- CA14** Continue to monitor the condition of buildings and structures.
- CA15** Carry out regular monitoring of the factory plant and bases.
- CA16** Continue to plan works and pre-ordering materials in advance of each works season.
- CA17** Investigate the potential for procurement of materials from Norway.
- CA18** Implement a system of checking materials in Stanley to identify incorrect, damaged or insufficient materials prior to transportation to South Georgia and to reduce the time taken to get the correct materials delivered to Grytviken.
- CA19** Identify procedures and allocate time for the maintenance of tools.
- CA20** Replace tools and equipment in a timely manner.
- CA21** Ensure the Engineering Workshop provides a suitable space for carrying out conservation repairs.

## 5.0 ISSUES AND OPPORTUNITIES

### 5.4 VISITOR EXPERIENCE

#### 5.4.1 Access

Access to Grytviken is generally via boat, either by zodiacs from cruise ships or yachts that moor at Tijuca Jetty. The beach landings can be tricky for some passengers, who are often older, especially in windy weather. Some visitors arrive from KEP on foot using the path around the bay (the land around it is out of bounds due to invasive weeds).

Most visitors at Grytviken will stay on the tracks through the site. Some may follow the paths to Gull Lake or Maiviken (though the path to Maiviken is not clear at all points along its route). Some expedition leaders impose greater control over visitors' movements, for example lining the paths with staff to encourage their passengers to follow a certain route, in order to ensure passenger safety and compliance with GSGSSI regulations. For those wandering freely round the site, the paths are not always easy to find, particularly between the Hydro-Electric Power Station to the bottom of the path up to the Cemetery.

Visitors who rely on wheelchairs are extremely rare. Typically there might be one or two wheelchair users in a season and, provided arrangements are made in advance, they will be given dispensation to disembark at KEP. There are ramped entrances (though not necessarily the main entrances) to the Museum, Carr Maritime Gallery and the Slop Chest. There is, however, no accessible WC.



Ramped access to Carr Maritime Gallery but only steps to the public WCs at the rear of the building

#### 5.4.2 Presentation

The removal of many of the buildings in 2003/4 fundamentally changed the experience of visiting Grytviken with the loss of the sense of walking in the footsteps of the whalers through a ghost town, although the site is now much safer for visitors and staff to access. The only part of the site that still retains something of the sense of the abandoned whaling station is the Main Store interior, which is currently not open to visitors.

The appearance of the Whaling Station now is very fragmented with some buildings removed apart from the bases and plant, others overhauled and looking new, others combining new elements with the old and perhaps two appearing as maintained historic buildings. The site is difficult to read, particularly with key elements such as the Flensing Plan being cluttered with irrelevant items. The loss of the bridges means it is not possible to travel through the site as the whalers would have done whilst one of the most often walked routes passes in front of the Main Store and across to the Flensing Plan, a route that would not have been possible with the building of the Guano Store in the way.

The appearance of the Refrigeration Store, where building materials (some in shipping containers) are stored detracts from the overall appearance of the Whaling Station. The presence of the Building Team and the works being carried out to buildings also impact on the sense of the Whaling Station as being abandoned. The Building Team are only on the island for the summer so necessarily have to do their work in the tourist season. The vehicles, burning of rubbish and the waste pit all are intrusive.



The Refrigeration Store from the path walking towards the whaling station

The historic legacies of the whaling industry can also detract from the site, notably the heavy fuel oil that leaches out of the ground. Some visitors do not like the smell near the meat factory that is the result of the burial of blubber in this area but ironically, it is probably one element that provides a connection with the past as the Whaling Station would have been a smelly place.

Visitors' experience of the site varies depending on a number of factors, including the uncontrollable factor of the weather, which makes a considerable difference to how the site looks. In sunshine it appears dramatic and attractive whereas in grey or wet weather it looks miserable and underwhelming. The experience is also culturally dependent. Some cultures value age and deterioration whilst others, such as many Asian cultures, do not. Attitudes towards the environment and specifically whaling can impact on visitors' views of the site whilst cultural attitudes towards death affect how the Cemetery is perceived.



Pit for burying waste near the Engineering Workshop

## 5.0 ISSUES AND OPPORTUNITIES

### 5.4.3 Interpretation

During the summer season, interpretation panels located around the Whaling Station provide information about the history of the site and what particular buildings were used for. SGHT staff also provide guided tours that are themed around either the history of the Whaling Station or Shackleton. The interpretation panels are removed before the SGHT staff depart in March to avoid winter damage. This means visitors in April do not have the opportunity to read them nor to experience the tours provided by SGHT staff. The Museum can be opened by the Government Officers in April and there is some history of the Whaling Station and information about the whaling process on display. It might also be possible in future for the Building Team to remove the interpretation panels at the end of April (if the Building Team stay longer than the SGHT staff) or for some SGHT staff to remain longer so the panels can be seen by visitors that month. In addition to the interpretation on the island, SGHT staff and the Government Officers sometimes do lectures on the cruise ships.



An empty interpretation panel

There is an opportunity to improve understanding of the Whaling Station, especially in April, if a plan or model with an explanation of the history of the Whaling Station or alternatively leaflets were provided. It would be helpful if there was an explanation and historic photographs of the different areas of the Whaling Station.

The potential for additional displays, such as the opening of the Main Store to visitors is currently being considered. Essentially the IAATO scheduling system and the number of operators wanting to visit during a certain period determine the length of time visitors are at Grytviken and most visitors in the future are unlikely to have substantially more time at the Whaling Station. Additional experiences would therefore be providing visitors with options of things to do whilst at Grytviken rather than encouraging them to stay for longer.

The Museum includes displays not only on the history of the Whaling Station but also on other aspects of South Georgia including exploration, flora and fauna and the Falklands Conflict. It is recognised that the interests of visitors are changing with younger people being less interested in whaling and more interested in climate change and scientific research. Many visitors are also interested in the people who currently live and work on South Georgia. Whilst the Museum needs to cater for different interests, it is important in terms of making the history and significance of the Whaling Station known, that there is a core display that explains these.

#### Actions

- CA22** Create an accessible WC.
- CA23** Improve the appearance of the Refrigeration Plant area.
- CA24** Minimise the impact of the Building Team's activities on the visitor experience, particularly by minimising vehicular use and concealing vehicles on days when cruise ships are visiting.
- CA25** Reuse and recycle waste materials as much as possible and cease the burning or burying of waste.
- CA26** Provide interpretation relating to any major projects for visitors.
- CA27** Improve the interpretation available for visitors in April.
- CA28** Consider the installation of a display that is specifically intended to make clear the historical development and significance of the Whaling Station.

## 5.5 MUSEUM

### 5.5.1 Management

The South Georgia Museum is generally well run and the collections are cared for. Although the Museum is not eligible for Museums Association accreditation as it is not based in the UK, since around 2010, it has been run to meet accreditation standards.

The Museum cares for objects that are part of the accessioned collection (which is owned by the GSGSSI) and also for other objects that belong to either the GSGSSI or the SGHT. As with many museums, it has a backlog of items that are waiting to be accessioned to the collection. The Museum does have a Collections Policy and is selective about accessioning objects to the collection.

The Museum is an integral part of the strategy for caring for South Georgia's heritage as it is seen as the repository for found or donated objects. There is sufficient storage space currently to take the objects that it is required to take however, these objects are not necessarily accessioned. Some of the Museum's staff have training in the conservation of objects and therefore they also get involved with cataloguing and advising on objects not in their care, as seen on a significant scale with the cataloguing of the objects moved from the Engineering Workshop to the Main Store.

The Museum began a limited programme of digitising its collections so that people outside South Georgia can see them online via the Museum's website.

### 5.5.2 Facilities and Staffing

The Museum has sufficient storage space with spare capacity although the access to the large object store in the Slop Chest is challenging when trying to move large objects. The Museum has workshop space in the Museum and in the Carr Maritime Gallery which is sufficient for its needs. If more exhibition space were available, the Museum would be able to use it.

Whilst the Museum can buy display cases to exhibit objects in controlled environmental conditions, it does not have environmentally controlled stores so if an object were to require specialist storage conditions, it would have to be sent to the UK.



## 5.0 ISSUES AND OPPORTUNITIES

Caring for the Museum collection and other historic objects is vital for the preservation of South Georgia's cultural heritage and knowledge associated with it. Familiarity with a collection and the environmental conditions can facilitate better, more bespoke care and therefore it can be beneficial if the same staff return for multiple seasons. Also important is providing access to the collection through opening the Museum to the public and providing interpretation about the Whaling Station through displays and tours. Currently the core staff are the director, a curatorial intern, two museum assistants and a fundraising assistant. The SGHT aspires to appoint a full time curator. There is already insufficient staffing to carry out the core conservation work and, with growing visitor numbers, staff time is increasingly being diverted to this. Staff numbers will need to continue to grow to deliver the key services of conserving the collection, advising on objects elsewhere on the island and providing information and access for visitors. However, the potential to increase staff will be determined by the future direction of tourism and management of the Grytviken site.

A limitation on recruitment currently is the amount and type of accommodation available. Five members of staff currently share the modest three bedroom Drukken Villa, which is leased from the GSGSSI, for six months. In recent seasons, further accommodation has been rented from BAS at KEP. The accommodation needs to be improved to attract long-term staff who will return to the Museum for multiple seasons.

Although there are occasional volunteers, the lack of people on South Georgia makes the establishment of a full volunteer programme challenging and the amount that UK-based volunteers can achieve is limited.

### 5.5.3 Museum Building

The Museum is housed in the former Manager's Villa. Externally it has been reclad with pre-painted corrugated sheeting, which displays the same excessive use of fixings and patchy appearance as a result of paint flaking as other buildings. The building appears, however, to be water tight and sound although there is apparently a stream that runs beneath the Museum and its small basement shows clear evidence of having been flooded.

The ground floor of the Museum is almost entirely floored with vinyl, which is practical but has a considerable impact on the historic character of the building. Most of the ground floor doors have also been removed to aid the flow of visitors. The concealed blue lighting in the Fullerton Room also changes the character of the room. Whilst the historic character of the ground floor is comparatively concealed, the historic features are much more evident on the first floor with exposed timber boards on the floors, original battenwork on the walls and ceilings, historic doors and architraves and some historic timber match boarding to the walls.

#### Actions

**CA29** Consider the relocation of the large object store if the opportunity arises.

**CA30** Improve accommodation provision for Museum staff.



Fullerton Room with modern concealed lighting and vinyl flooring



A view of the comparatively characterful first floor of the Museum

## 5.6 EDUCATION

The dissemination of information about the heritage of South Georgia is one of the key principles in the *Heritage Framework and Strategy* (2017). The interactive map of the island's heritage currently being prepared by BAS is one step towards this. GSGSSI and the Norwegian Government are co-funding an interactive kiosk for the Historic Dockyard Museum in Stanley with a flythrough of the whaling stations so that they can be seen virtually. Further links with the museum in Stanley, the whaling museums in Sandefjord, Norway and New Bedford, USA as well as with museums in the UK could help to widen awareness of South Georgia's heritage generally and Grytviken in particular.

The Government's website<sup>01</sup> has a Heritage section which includes an overview of each of the whaling stations. The entry on Grytviken could be updated using the information in this CMP. The CMP itself will be made available online.

Further opportunities exist in encouraging talks and exhibitions about Grytviken in the UK and elsewhere to make a wider audience aware of its history and significance.

#### Actions

**CA31** Maintain and develop links with museums and institutions where there may be the potential for exhibitions on Grytviken.

**CA32** Encourage talks and lectures on Grytviken.

**CA33** Update the information about Grytviken on the GSGSSI website.

<sup>01</sup> GSGSSI, 'Heritage', <http://www.gov.gs/heritage-2/heritage/>, accessed 29 March 2018.

## 5.0 ISSUES AND OPPORTUNITIES

### 5.7 SAFETY AND SECURITY

The nature of the abandoned Whaling Station means that there are potential safety hazards. These include upstanding pieces of metal in the ground and low walls that are potential trip hazards. Where culverts over the streams fail, holes open up which are a potential hazard. The failing brick bases of some of the boilers and the movement of boilers and tanks on their bases are potential risks as are the chimneys of the Guano Factory that are currently secured with stays. Barriers have been erected around the Bone Cookery and part of the boilers of the Boiler House to keep people away from these areas. Strong winds can make opening doors both difficult and dangerous for staff and visitors. Very strong winds can cause corrugated sheeting or other elements to come loose and become a potential hazard. It is consequently imperative that the Whaling Station is inspected after major weather events in accordance with the checklist in the MMP.

People are told not to climb on the structures or board the vessels and whilst visitors from cruise ships, who make up the majority of visitors, abide by this, there are visitors and staff members who do not. The dilapidated vessels present both a high risk from the asbestos in them and the risk of falling through the failing surfaces and whilst there are no aids to getting on the vessels, people do occasionally go on them. Similarly, although there are bars across the ladders in the factory areas, particularly the meat factory, people do climb up. The permits for visiting the island state that in signing the permit, visitors acknowledge the GSGSSI does not take responsibility for injuries incurred. The implications of serious injuries are increased by the limited medical facilities on the island<sup>02</sup> and the time taken to evacuate anyone from the island.

Whilst most of the asbestos was removed from the Whaling Station in 2003/4, there is still some present. Asbestos gaskets on oil tanks and other small asbestos elements are painted annually to ensure they remain encapsulated. The asbestos in the engine rooms of the vessels should be inspected annually if safe access is possible.

BAS is responsible for checking fire extinguishers in the Museum and the Church as the GSGSSI does not employ anyone with the certification to do this. Currently no one inspects the fire extinguishers in the Engineering Workshop, possibly because this was brought back into use after the agreement with BAS was drawn up.

There are local smoke alarms in the Museum buildings but these are not connected through to KEP, so in winter an alarm is unlikely to be heard by anyone. The facility for fighting fires is very limited and any response time from KEP is limited by the time taken to get around the cove and, in winter, by the weather. The general policy is to evacuate buildings and only fight fires if safe to do so.

<sup>02</sup> Cruise ship passengers are served by medical facilities on the cruise ships.

The Museum has a salvage policy for key items of the collections if staff are present to implement it. The smoke alarm at the Hydro-electric Power Station is connected through to the BAS base at KEP and a similar system could be installed at the Museum.

Security is not a particular issue at Grytviken with little evidence that people take any objects from the Whaling Station, although this did happen in the past. This will need to be monitored if the Main Store is opened to the public and the artefacts displayed in such a way as to prevent their removal by visitors.

#### Actions

CA34 Connect the Museum fire alarm system to KEP.



Metal sticking up out of the ground



Exposed culvert near the Separator House



Hole over the culvert in the Guano Store



The chimneys of the Guano Factory are secured with ties



Boiler that has shifted on its base



Barrier in front of the boilers with failing brickwork in the Boiler House

## 5.0 ISSUES AND OPPORTUNITIES

### 5.8 NATURAL ENVIRONMENT

South Georgia has a maritime climate so it does not experience the extreme temperatures of continental Antarctica. It does, however, experience heavy snowfall. The weight of snow is a potential risk to fragile structures whilst the ice also pulls the paint off the edges of roofs. When temperatures fluctuate around 0°C, there is also the risk of damage caused by freeze-thaw weathering, which results from the expansion of frozen water in cracks and joints. Grytviken is also buffeted by very strong winds throughout the year, both strong southerly gales and katabatic winds from the mountains. These winds can wrench open doors, move the storage tanks and potentially cause the failure of some of the taller factory structures.

Grytviken Whaling Station is located on low-lying ground that is threaded through by streams. Anecdotal evidence suggests that South Georgia is experiencing increasingly wet weather. At the time of visiting, the Gull Lake Dam was overflowing as a result of two weeks of heavy rain and much of the ground was waterlogged or very damp. This poses a number of potential risks to the heritage assets including subsidence from waterlogged ground, increased erosion of ground surfaces, increased corrosion of metal elements, increased rotting of timber elements and an increased risk of flooding, particularly to the basements of the Museum and Nybrakka, which display evidence of past flooding. Flooding of the Main Store has occurred on three occasions since 2000 but improvements to the stream channel since has prevented a recurrence.



Evidence of past flooding in the Nybrakka basement

Grytviken's location on the shore means that it is exposed to coastal erosion caused by the sea. Much of the immediate shoreline was reclaimed during the whaling period and this is, in turn being reclaimed by the sea. This is not only exposing the industrial archaeology of the material used to make up the ground but also changing the shape and size of the Whaling Station. There are some pieces of equipment, such as a winch at the south-east corner of the Flensing Plan and a piece of equipment in the Plating Store, whose bases are starting to break up and which are at risk of falling into the sea. The impact of the sea is compounded by icebergs, which can reach as far as Grytviken, mainly from the local glaciers in Cumberland Bay. In 2017, considerable damage was done to the jetties by icebergs being blown against the shore. The sea also presents a further conservation challenge in terms of salt water corrosion, particularly to the beached vessels.



Winch at the south-east corner of the Flensing Plan



The Plating Store floor is crumbling due to the effect of the sea

The ground of the Whaling Station is contaminated with heavy fuel oil. There is fuel oil known to be under one of the collapsed tanks in the southern group whilst the area between the smithy and the beach is charged with heavy furnace fuel oil. There also appears to be oil near the Refrigeration Plant. Springs of fuel oil cause oil to ooze out of the ground, particularly in warm weather. The summer of 2017/18 saw unusually high temperatures of 22°C, which has resulted in more oil springs appearing than before. There is also residual oil in some of the tanks and vessels which leaks out.



Oil seeping out of the ground

Climate change has the potential to impact significantly on Grytviken. As noted, the weather seems to be getting wetter and warmer, exacerbating issues described above. The shoreline position means that rising sea levels will pose a potential threat to the built heritage and increase the risk of flooding.

## 5.0 ISSUES AND OPPORTUNITIES

A further threat to the built heritage comes from the wildlife. The greatest risk of damage is on the south side of the Whaling Station where the fur seals move across the remains of the radio workshop, hastening its decay, and also get into the Cemetery. When there are large numbers of seals on the beach, it can impact on visitors and staff, impeding access between KEP and Grytviken and especially access to the Cemetery.



*The Radio Workshop with grass worn down by fur seals*

In recent years, electricity for KEP and Grytviken has been generated by hydro power from the Gull Lake dam, which has ensured a sustainable and renewable energy source with little use of diesel generators. There is, however, no additional capacity. Any new demands for power at either KEP or Grytviken will require a new source of power. It would be a retrograde step environmentally to increase use of diesel generators, which require the transportation of fuel to the island and generate pollution. Equally, any additional renewable power sources would need to be carefully located to prevent them impacting on the aesthetic values of the Whaling Station and its setting.

### Actions

- CA35** Monitor changes to the climate and sea level and adapt maintenance and management procedures if required.
- CA36** Undertake works to protect the shoreline from further erosion.
- CA37** Continue to salvage timbers from the jetties and reuse to rebuild the jetties.
- CA38** Monitor and record the heavy fuel oil springs and consider decontamination works.
- CA39** Empty any residual oil from the tanks and vessels.
- CA40** Develop a response plan for dealing with oil in the ground when it emerges.

### 5.9 HERITAGE VALUE AND CHANGE

Grytviken Whaling Station is of high significance both territorially and internationally. This does not, however, preclude any change and, indeed, change can be necessary to sustain the heritage assets into the future. Within the site, different elements have different heritage values. As a general principle, change should be concentrated in areas of neutral or low significance whilst change should be avoided in areas of high significance and limited in areas of medium significance. Change should be encouraged in detrimental areas provided that the change enhances the overall significance of the site.

The Whaling Station has experienced considerable change to its historic fabric, as much through abandonment as active management, since it ceased to operate in the 1960s. Its character remains predominantly one of an abandoned industrial site but there are areas where this predominant character gives way to a historic Norwegian village character. The significance and the character of the site are fragile. Seemingly small changes, such as the use of different paint or thinner tin sheeting, can collectively have a substantial impact on the appearance and heritage values of the site.

There is a need to balance the requirements of conservation with the reality of the challenges of Grytviken's remote location. However, care must be taken that in negotiating this balance, there is not an unquestioning acceptance of substandard materials or poor quality workmanship as these things will erode the special character of the place. Inadequate materials and changes to design details and finishes can change buildings to their detriment. It is also important that decision-making is transparent and well-communicated between the different parties of the GSGSSI in Stanley and South Georgia and the members of the HAP in Europe.

## 5.0 ISSUES AND OPPORTUNITIES

### 5.10 SUMMARY LIST OF CONSERVATION ACTIONS

CA1	Continue to investigate improvement to internet connections on South Georgia periodically and implement improvements where possible.	CA13	Implement a system of recording materials used in maintenance and project works.	CA26	Provide interpretation relating to any major projects for visitors.
CA2	If communications can be substantially improved, investigate the potential for a shared server system for Government staff on South Georgia and the Falklands.	CA14	Continue to monitor the condition of buildings and structures.	CA27	Improve the interpretation available for visitors in April.
CA3	Continue to hold the Annual Stakeholders Meeting.	CA15	Carry out regular monitoring of the factory plant and bases.	CA28	Consider the installation of a display that is specifically intended to make clear the historical development and significance of the Whaling Station.
CA4	Continue to maintain a good relationship with the existing stakeholders and share information about the heritage works carried out.	CA16	Continue to plan works and pre-ordering materials in advance of each works season.	CA29	Consider the relocation of the large object store if the opportunity arises.
CA5	Enhance the existing communications between the GSGSSI, HAP and SGHT.	CA17	Investigate the potential for procurement of materials from Norway.	CA30	Improve accommodation provision for Museum staff.
CA6	Develop and implement a conservation training session that forms part of the staff induction process.	CA18	Implement a system of checking materials in Stanley to identify incorrect, damaged or insufficient materials prior to transportation to South Georgia and to reduce the time taken to get the correct materials delivered to Grytviken.	CA31	Maintain and develop links with museums and institutions where there may be the potential for exhibitions on Grytviken.
CA7	Identify individual staff training needs and ensure that the appropriate training is received.	CA19	Identify procedures and allocate time for the maintenance of tools.	CA32	Encourage talks and lectures on Grytviken.
CA8	Continue to provide visitor briefings for all visitors either directly or via expedition leaders.	CA20	Replace tools and equipment in a timely manner.	CA33	Update the information about Grytviken on the GSGSSI website.
CA9	Encourage cruise ships to visit on days that avoid more than two cruise ships calling in a day.	CA21	Ensure the Engineering Workshop provides a suitable space for carrying out conservation repairs.	CA34	Connect the Museum fire alarm system to KEP.
CA10	Continue to disseminate information regarding the conservation of the heritage via IAATO.	CA22	Create an accessible WC.	CA35	Monitor changes to the climate and sea level and adapt maintenance and management procedures if required.
CA11	Develop a Conservation Maintenance and Works Manual including method statements for common repairs. This should be specific to the structures, materials and conditions at Grytviken.	CA23	Improve the appearance of the Refrigeration Plant area.	CA36	Undertake works to protect the shoreline from further erosion.
CA12	Implement a continuous system of logging maintenance and project works, ideally including works done by SGHT staff also.	CA24	Minimise the impact of the Building Team's activities on the visitor experience, particularly by minimising vehicular use and concealing vehicles on days when cruise ships are visiting.	CA37	Continue to salvage timbers from the jetties and reuse to rebuild the jetties.
		CA25	Reuse and recycle waste materials as much as possible and cease the burning or burying of waste.	CA38	Monitor and record the heavy fuel oil springs and consider decontamination works.
				CA39	Empty any residual oil from the tanks and vessels.
				CA40	Develop a response plan for dealing with oil in the ground when it emerges.

## SECTION 6.0

### POTENTIAL FOR CHANGE

#### 6.1 CHANGE AT GRYTVIKEN

Grytviken will not remain unchanged: the effects of the weather, sea, ice, wildlife and visitors will result in almost continuous change to the shoreline, the built structures and the landscape in which they sit. The function of maintenance and timely repair is to slow this change.

There is another form of change that results from proactive change. This form of change needs to be carefully managed in line with the Conservation Framework set out in Section 4 to ensure the preservation of the Whaling Station's significance and to prevent harm to it.

Generally the potential for change is the inverse of the significance so where a heritage asset has high significance, its potential for change is very low whereas an element of neutral value has high potential for change. Heritage assets of low significance have greater potential for change than assets of high or medium value but should nonetheless be seen as having some heritage value, which should be understood and preserved as part of any proposed works. For example, within a building, a partition of low significance could have its illustrative value preserved by retaining a downstand to indicate its location if the partition were removed. It is desirable to change elements of detrimental value.

The following section considers the priorities for future works. It should be updated on a regular basis.

#### 6.2 MANAGING GRYTVIKEN'S HERITAGE

Timely maintenance is fundamental to preserving built heritage and the ongoing maintenance of the historic buildings in use should always be a high priority. This will not only ensure their ongoing usability but also preserve their heritage value.

Whilst some of the buildings and structures have been maintained or brought back into use, much of the site has not been and consequently there are many potential works that should or could be carried out at Grytviken. This section identifies works that should be prioritised to preserve or enhance the significance and legibility of the Whaling Station. It should be considered alongside the priorities for works identified in the Condition Surveys.

##### Flensing Plan

The Flensing Plan was the centre of the factory area and the location of the start of the whale processing. The loss of the timbers that formed the Plan means that it no longer exists even in its historic shape because of coastal erosion and the once covered stream now runs through the plan dividing it. Furthermore, the lines and heaps of chain and the motorboat further disrupt an understanding of the Flensing Plan's form.

The removal of the chains and the motor boat are a comparatively straightforward first step towards improving the understanding of the Flensing Plan. Stabilising the foreshore and preventing the loss of the perilously located winch, if necessary by resetting its foundation, are also necessary. The covering of the stream to enable people to walk across it would reinstate its shape.

It is not necessary to recreate the Flensing Plan in terms of introducing new or reclaimed timbers, which would be a considerable undertaking given the size of the Flensing Plan. It is preferable that the Flensing Plan area is, however, covered in a single surface type, with the exception of the Blubber Plan adjacent to the Blubber Cookery, where some timber flooring does survive. These timbers should be preserved and if it is proposed that part of the timber flooring of the Flensing Plan should be reinstated, this is the area where that should occur.

The winches should be preserved *in situ* as they form fundamental elements of how the Flensing Plan was used.

The reinstatement of the Flensing Plan's legibility as an area is not necessarily incompatible with the introduction of some form of public art to commemorate the whale. However, such an artwork should not disrupt the form of the Flensing Plan and should be readable as a clearly contemporary addition.

The chain, which is thought to post-date the whaling era, is not of particular heritage value. The motor boat, however, is of significance as one of two types left at Grytviken and for the important role it played in the Whaling Station's operations. It should therefore be retained at Grytviken.

##### Shoreline

Much of the shoreline of the Whaling Station was manmade. The sea defences have not been maintained and the reclaimed land is being lost to the sea together with the industrial refuse used to create it. Continuing erosion will compromise the form of the Whaling Station and result in the loss of parts of the Flensing Plan, the Plating Workshop and other elements, such as one of the winches on the Flensing Plan. It will also result in the loss of the industrial artefacts within the made ground. Ideally utilising the historic methods evident at Grytviken, the shoreline should be preserved and where necessary, lost ground reclaimed.

##### Jetties

The jetties at Grytviken were fundamental to the Whaling Station from being the places where the loading of oil and other products for shipment to where men, materials and supplies were landed to ensure the ongoing functioning of the station. The weather, the sea and icebergs have caused considerable damage to the jetties. It is necessary to the understanding of the Whaling Station that the jetties remain, ideally retaining as much of their historic fabric as possible.

## 6.0 POTENTIAL FOR CHANGE

### Repair Yard

The understanding of the Repair Yard has been compromised by the creation of the helipad from steel sheets laid on raised ground. The importance of the relationship to the sea and the lost slipway is obscured. The removal of the steel sheets from this area and reprofiling of the ground will enhance the understanding of the Repair Yard. The work done to create the helipad should be ascertained so that it can be reversed if possible, rather than works being carried out that may result in either the creation of an incorrect ground profile or the missed opportunity to return material to whence it came. (It should be noted that the steel plates are artefacts and should be retained and stored.)

The distinction between the Repair Yard and the factory area is not especially clear at present. Greater demarcation along the line of the Guano Store wall would aid legibility of the site.

### Bridges

Most of the bridges that crossed the streams around the Whaling Station have been lost although large rocks indicate the locations of some of them. To enable visitors to move through the Whaling Station as it would have been possible to do before it closed, it is desirable to reinstate bridges at the historic stream crossings.

### Factory Area

The Factory is the reason for the Whaling Station's existence and what distinguishes it from repair stations or scientific stations. Maintaining the pre-eminence of this area, whether or not it is possible to maintain the structures or plant in the coming decades, and the legibility of the different components (i.e. the Blubber Cookery, the Meat Cookery, the Bone Cookery, etc) should be a priority in decision-making about future works.

### Storage Tanks

The two large banks of oil storage tanks are important parts of the Whaling Station as they give a sense of the scale of the Whaling Station both in terms of the size of the buildings and the output of the factory. The tanks were increased in number over a period of 30 years and it is not essential that all the tanks remain. However, a good number of them need to be preserved to maintain the impression of the massed tanks in the landscape. The tanks are starting to fail and therefore proactive conservation will be required in the coming years to avoid the loss of all the tanks.

### Vessels

The two former whale catchers, the *Petrel* and the *Albatros*, together with the *Dias* and the barque *Louise* all make an important contribution to the character of the Whaling Station as well as being heritage assets in their own right. The condition of the vessels is deteriorating and options for their conservation will diminish as the historic fabric fails. Given that the barque has been at the Whaling Station since its creation, it should remain and be conserved in Grytviken. It is also desirable that at least one of the whale catchers should remain and be conserved here. Efforts to conserve all the vessels need to be undertaken in the near future.

### Further Observation

Although not directly necessary to the preservation and enhancement of the significance of the site, the caring for the Museum's collection and other objects relating to the island's history is of fundamental importance to the preservation of South Georgia's cultural heritage. Also the opening of the Museum to the public and provision of tours facilitates understanding by visitors. It is necessary that there are sufficient staff to carry out these important tasks. Visitor numbers are continuing to increase whilst the *Heritage Framework and Strategy* requires a professional level of care of South Georgia's collection as well as implies its ongoing expansion. The provision of adequate accommodation for the staff carrying out the conservation and visitor engagement work is therefore also a priority for the wider management of Grytviken.

## SECTION 7.0

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# APPENDICES

## CONTENT

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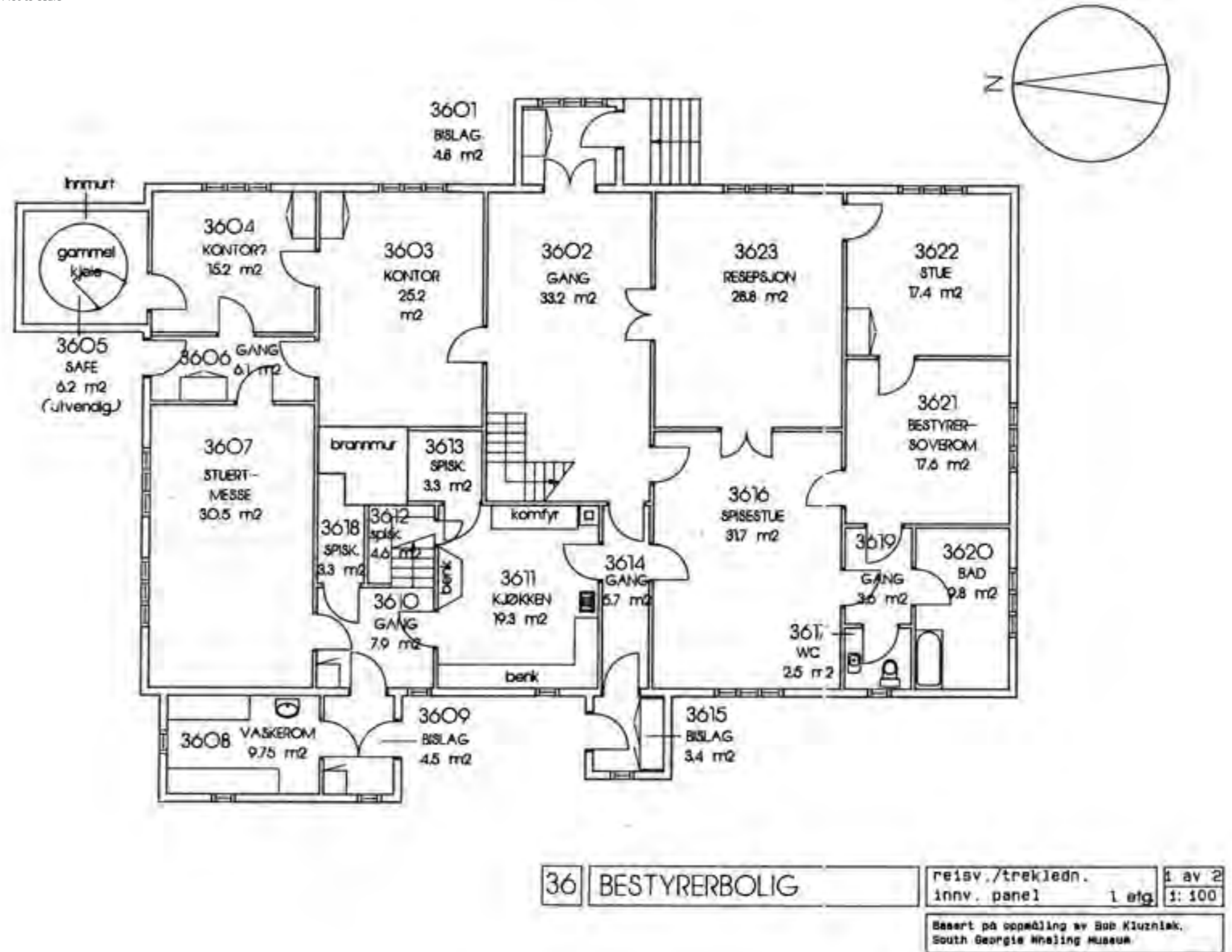
# APPENDIX A

## 1992 SURVEY PLANS

1992 Survey Plans, BL Basberg and G Rossnes (NARE 1996/7). (Reproduced with kind permission of Bjørn L. Basberg.)

Museum Ground Floor

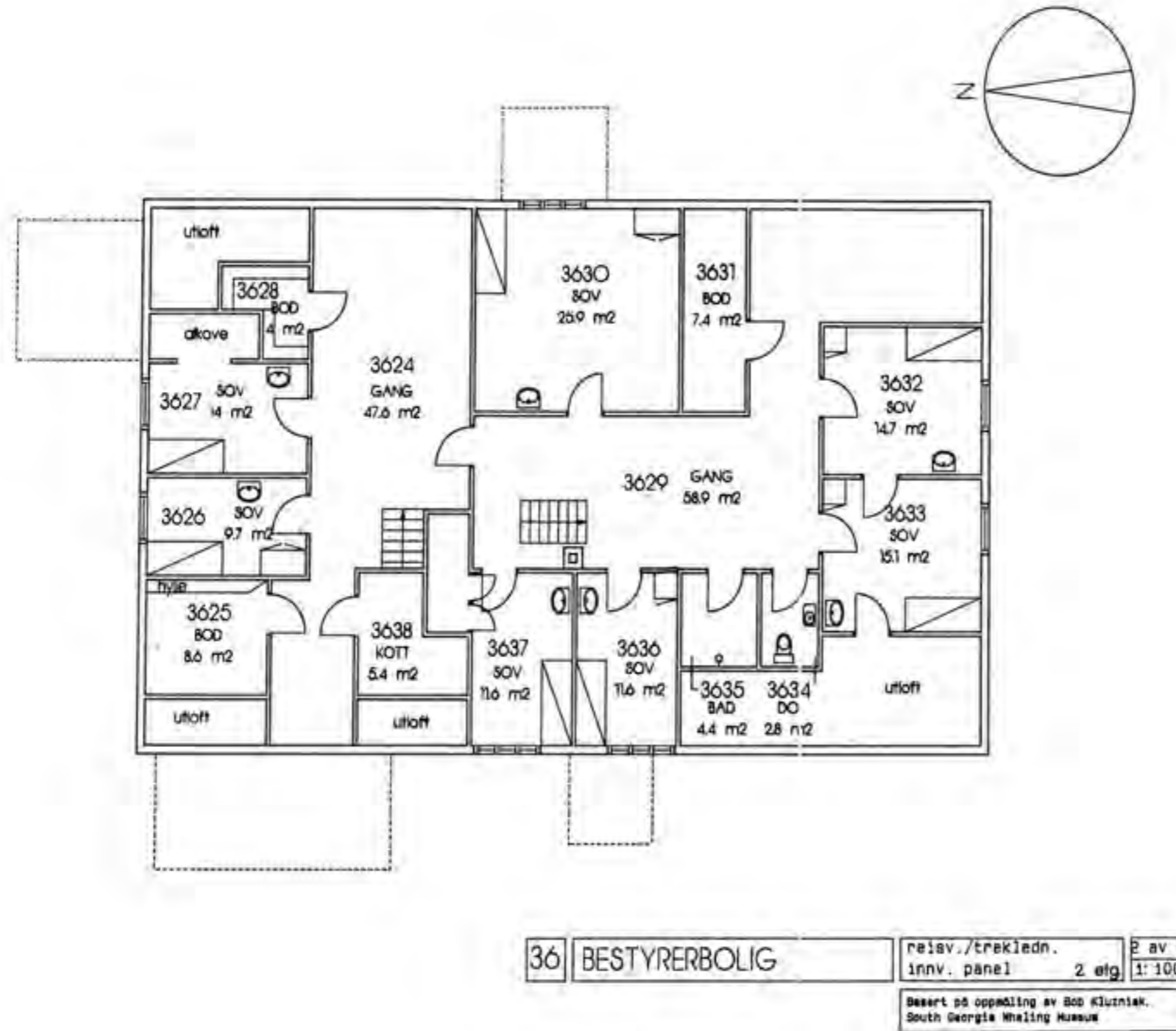
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# APPENDIX A: 1992 SURVEY PLANS

## Museum First Floor

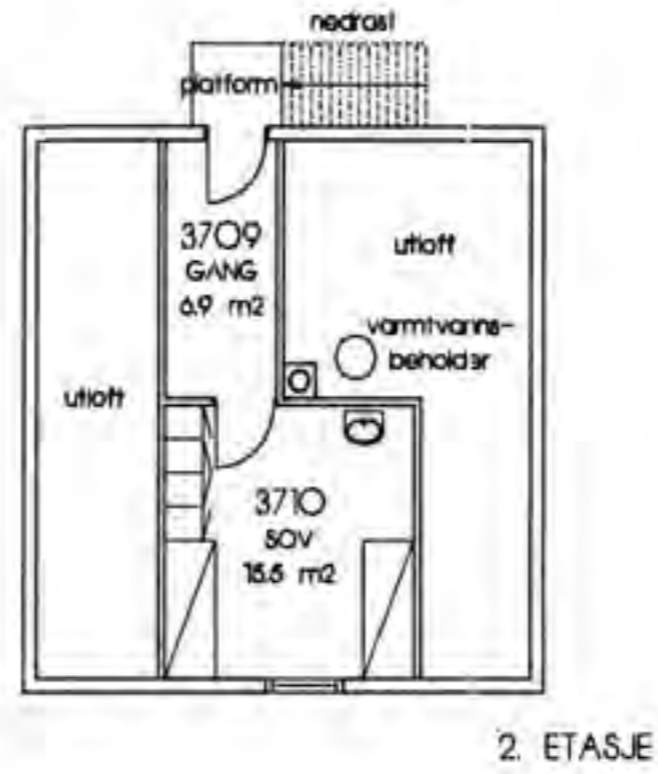
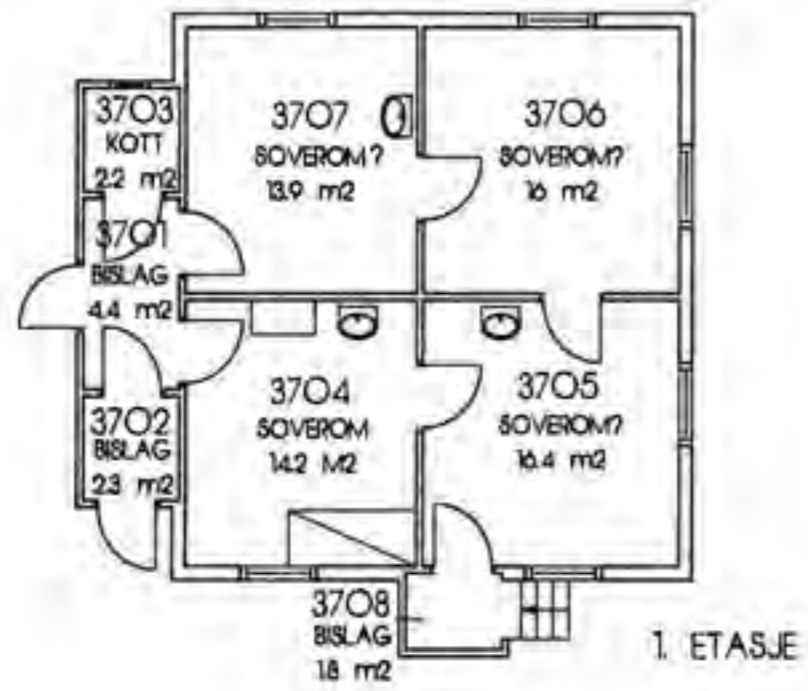
Not to scale



# APPENDIX A: 1992 SURVEY PLANS

Drukken Villa

Not to scale

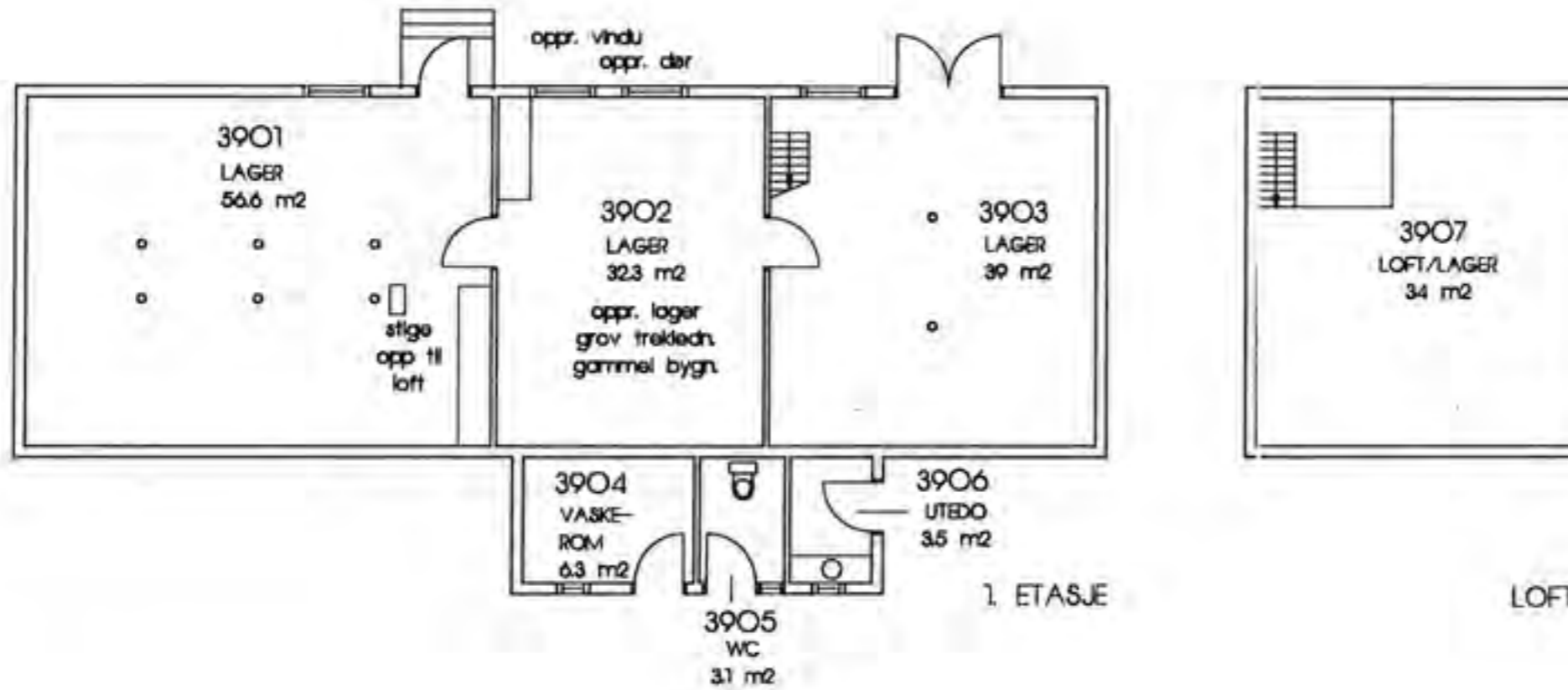


37	FORMANNSBRASSE	reisl./trekleadn. innv. panel	1/2. etg.	5 av 1 1:100
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# APPENDIX A: 1992 SURVEY PLANS

Provisions Store I, which was replaced by the Carr Maritime Gallery

Not to scale

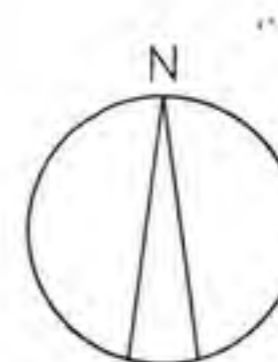
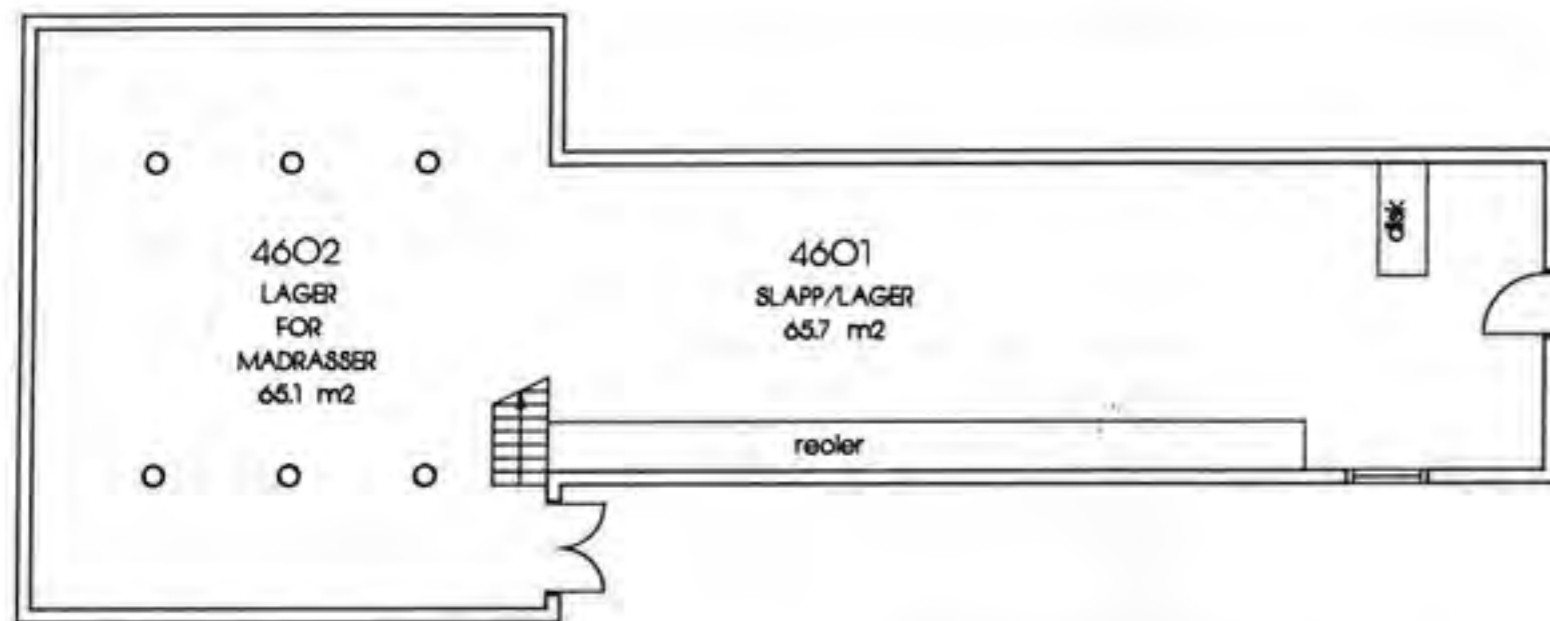


39	PROVIANTLAGER NO.1	Reisverk b/b treklech. i deler	1 etg.	1 av 1 1:100
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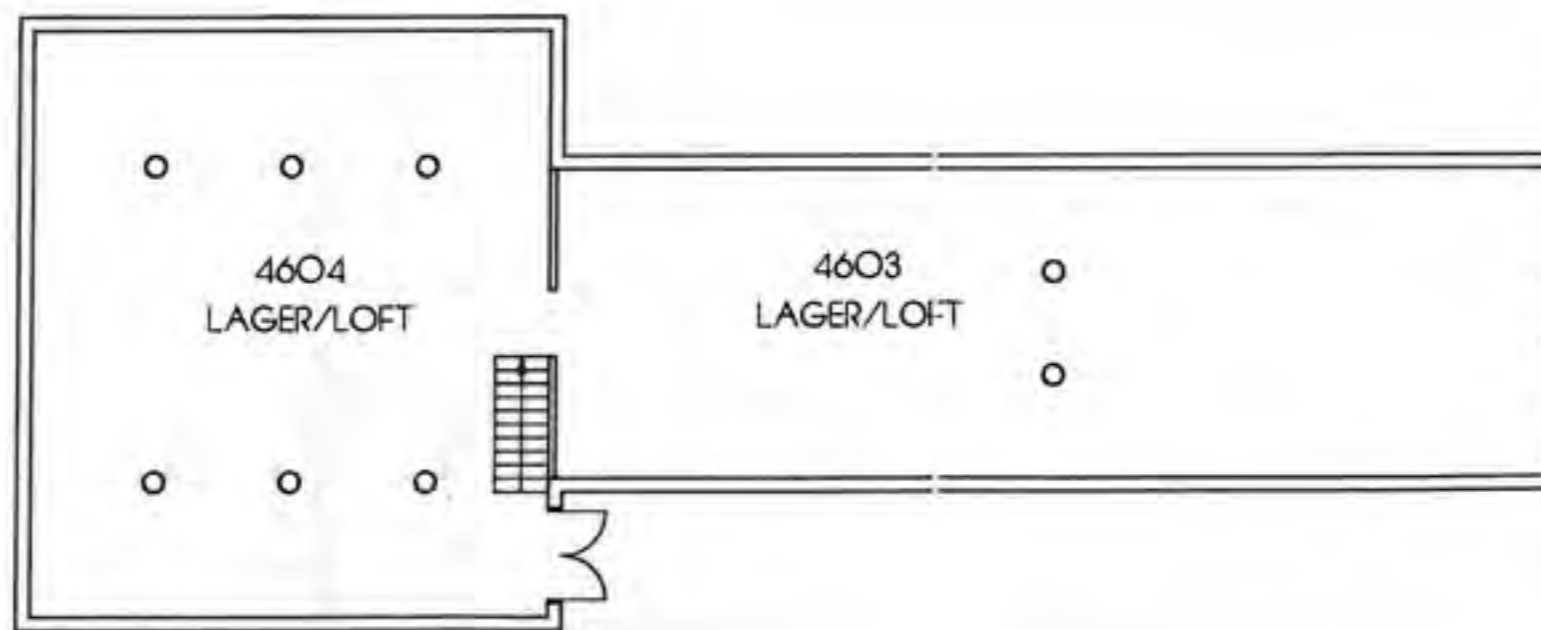
# APPENDIX A: 1992 SURVEY PLANS

## Slop Chest

Not to scale



1. ETASJE



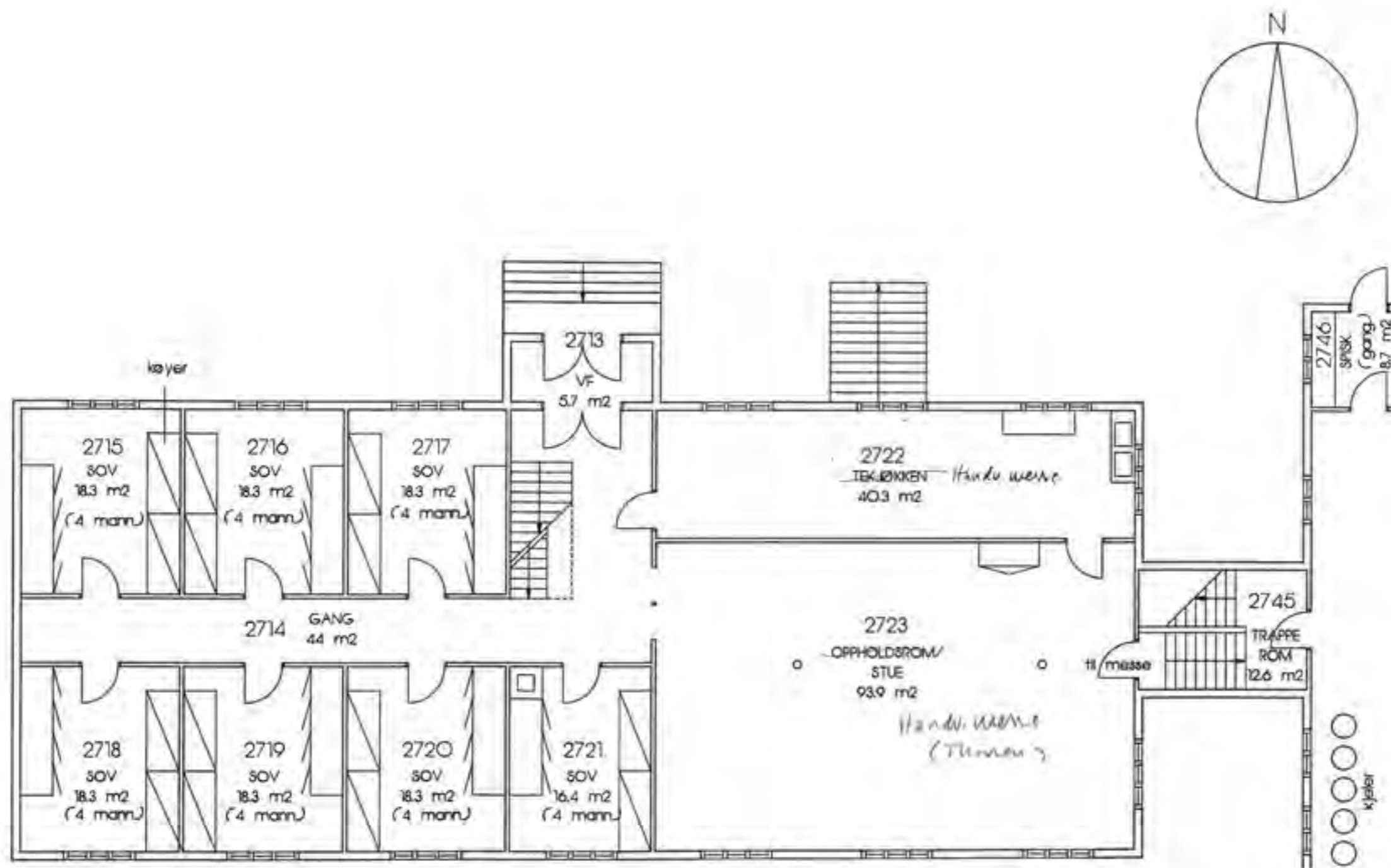
LOFT

46	SLAPP	Relatert b/b	1 etg./loft	1 av 1 1: 100
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# APPENDIX A: 1992 SURVEY PLANS

## Nybrakka Ground Floor

Not to scale

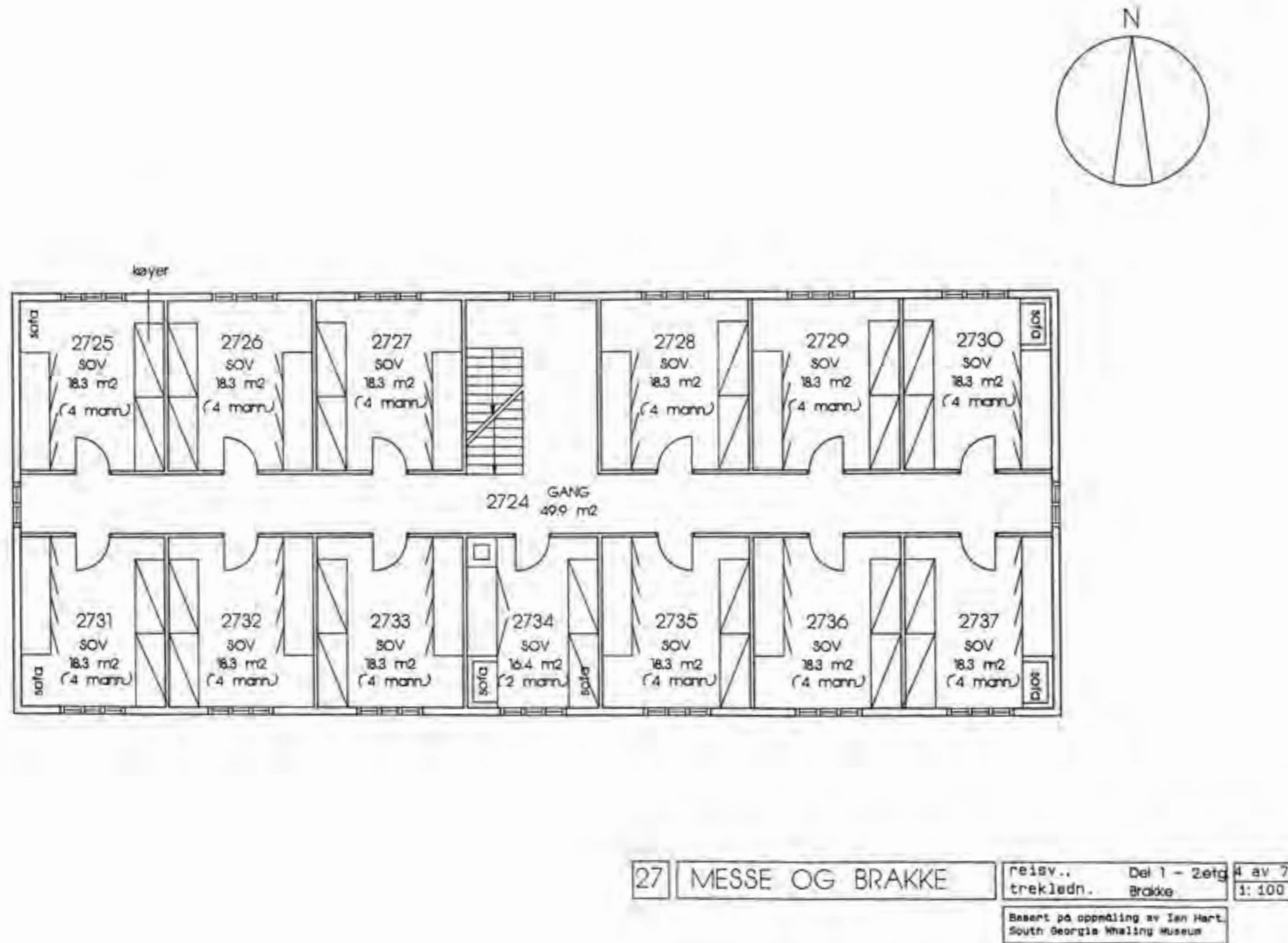


27	MESSE OG BRASSE	REISV..	Del 1 - letg	5 av 7
		trekledn.	Brakke	1:100
Besert på oppmåling av Ian Hart, South Georgia Whaling Museum				

# APPENDIX A: 1992 SURVEY PLANS

## Nybrakka First Floor

Not to scale

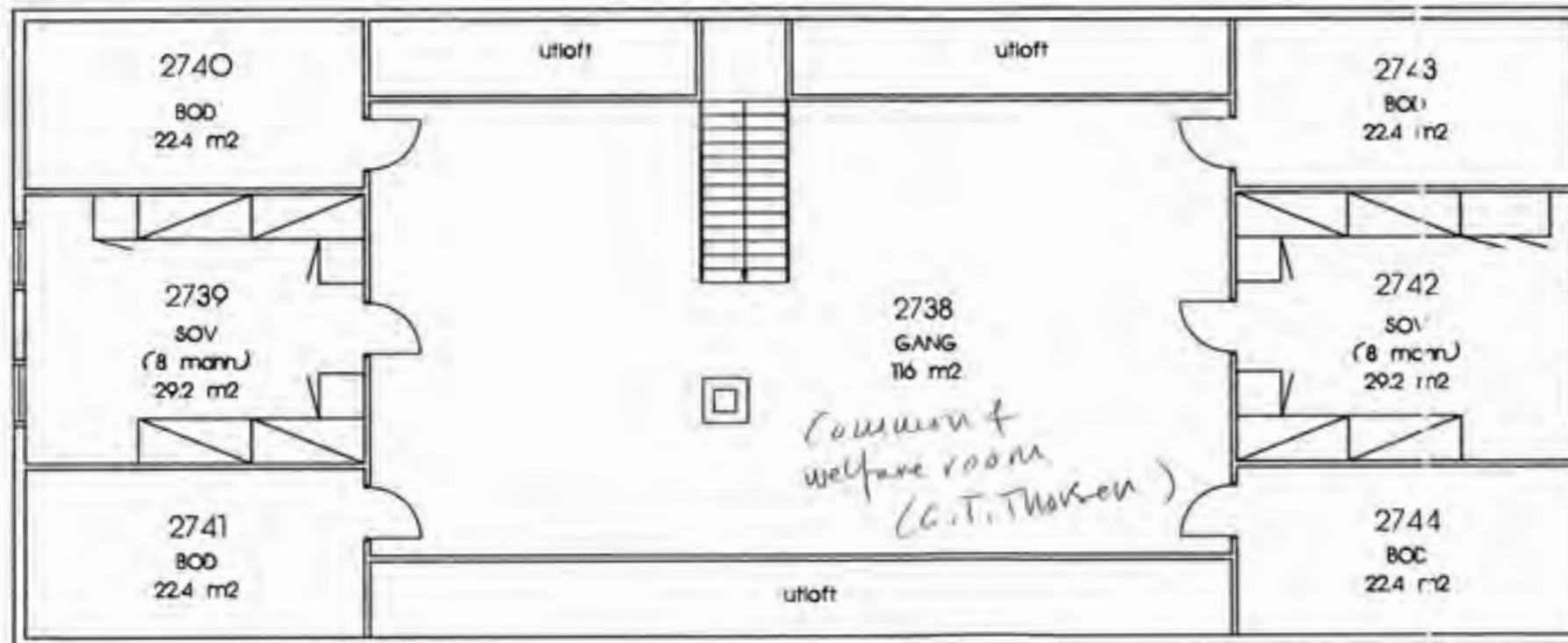




# APPENDIX A: 1992 SURVEY PLANS

## Nybrakka Second Floor

Not to scale

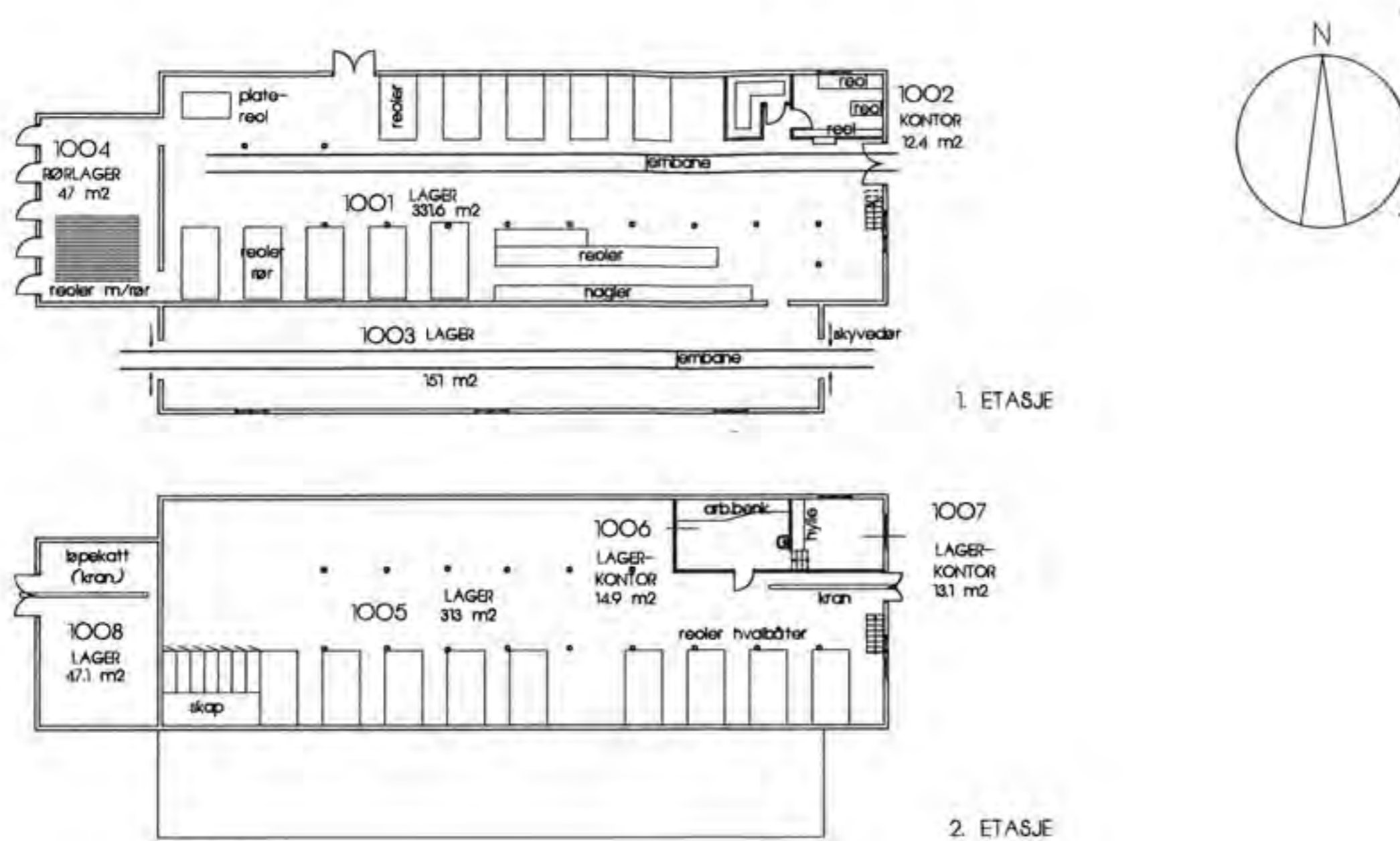


27	MESSE OG BRASSE	reiser..	Del 1 - 3. etg.	5 av 7
		trekledn.	Brakke	1: 100
Basert på oppmåling av Ian Hart, South Georgia Whaling Museum				

# APPENDIX A: 1992 SURVEY PLANS

## Main Store

Not to scale

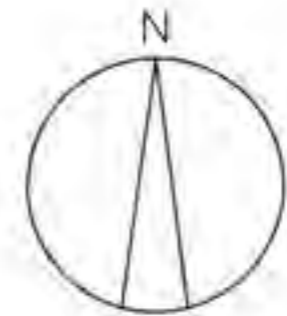
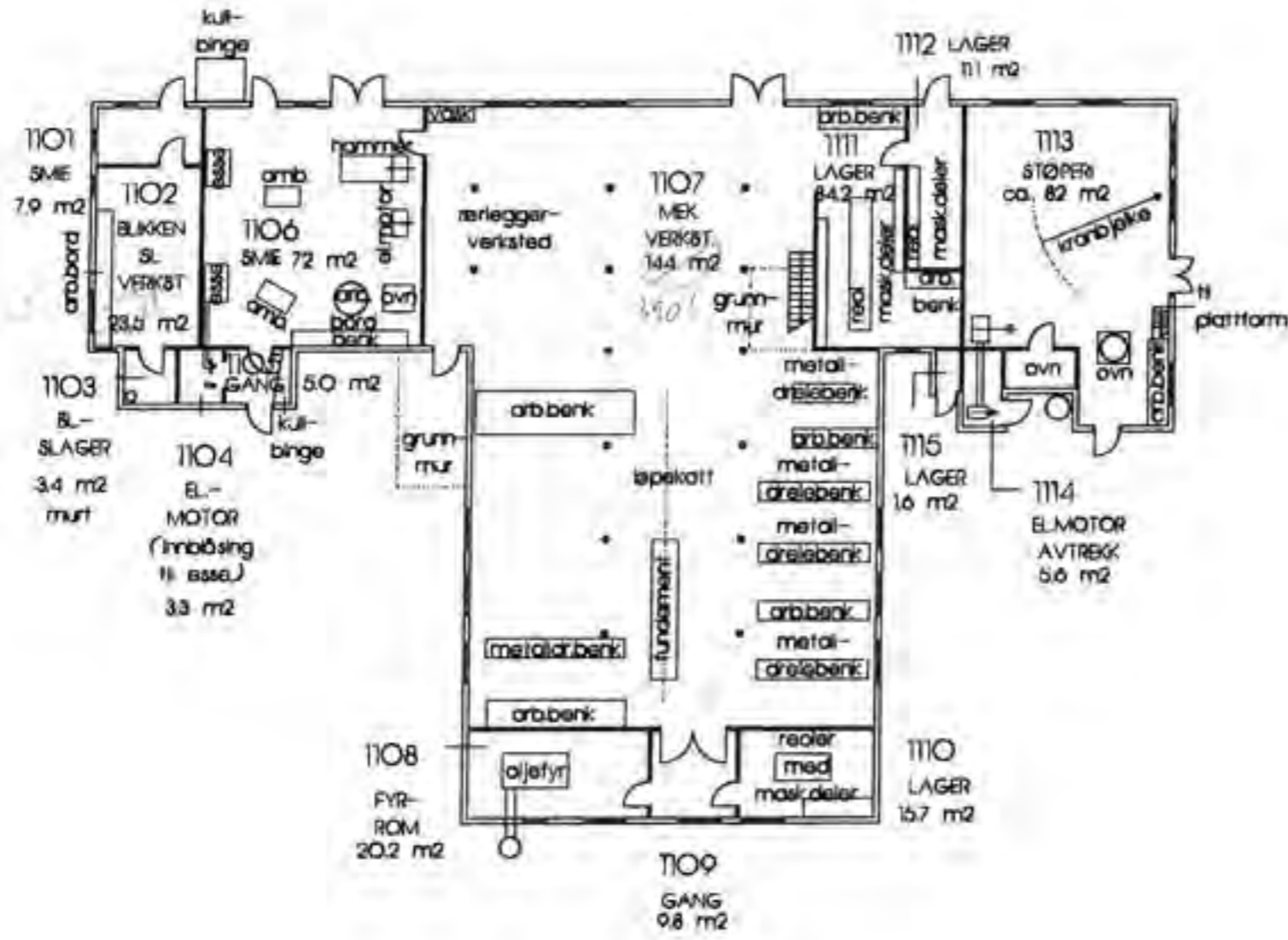


10 HOVEDLAGER HVALBÅTER "MAGASINET" reisev. b/d 1. og 2. etg. 1 av 1 1:200

# APPENDIX A: 1992 SURVEY PLANS

## Engineering Workshop Ground Floor

Not to scale



11	MEK. VERKST./SMIE/STØPERI	reislv. tre/stål b.b/betong	1. etg.	1 av 2 1:200
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## APPENDIX B

### RECENT WORKS TO GRYTVIKEN WHALING STATION

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This appendix is based on the annual Buildings Team reports. These vary in layout and content, which is reflected in the information contained here.

- 2013 /14** Rewiring of the Church and replacement of the lighting using shades from Leith.
- ↳ Reroofing and repainting of Nybrakka, draining and sealing of the basement and window repairs.
- ↳ Reglazing of the Engineering Workshop windows.
- ↳ External painting of Drukken Villa.
- ↳ Clearance of aggregate from Bore Valley Dam reservoir.
- 2014 /15** Internal works to Nybrakka including floor repairs and ceiling removal.
- ↳ Refurbishment of the Slop Chest as the Post Office and temporary exhibition gallery. This included the complete renewal of the external timber cladding. Internally half the historic cladding was retained in the Post Office. A new floor was laid over the concrete floor. Light fittings were used from Leith and timbers for the oak benches came from Stromness.
- ↳ Renewal of the roofs of the Potato Store and Provisions Store including rebuilding the roof structure of the Potato Store as it was rotten. Coffee Roasting House was painted.
- ↳ Barrier inserted in the Boiler House.
- ↳ Light fittings from Leith were installed in the Museum and a new archive store created in the eaves of the Museum.
- ↳ Repairs to the Bone Loft steel structure.
- ↳ The east and west annexes of the Engineering Workshop were reclad with new tin.
- ↳ Gabions inserted in stream bank near the football pitch.
- 2015** Works to Nybrakka and the Slop Chest were completed.
- /16**
- ↳ Steps of the Drukken Villa boiler house rebuilt.
- ↳ Museum repainted.
- ↳ Main Store doors rehung.
- 2015** Artefacts in the Engineering Workshop were catalogued and moved to the Main Store.
- /16**
- ↳ Refurbishment of the Church windows.
- 2017** Replacement of the Main Store roof (excluding the lean-to).
- /18**

