

# **Shetland Funerals**

Research into alternative funeral and burial options in Shetland

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Funded by





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# 1. Introduction

## 1.1 Background to the project

This report explores various options for alternatives to traditional burial or cremation, along with social and community-based enterprise opportunities relating to funerals and memorials.

This work has been commissioned by the Community Development Company of Nesting (CDCN), a not-for-profit organisation led by and working for the development of Nesting, Girlsta and Wadbister on the east of the Shetland Mainland.

CDCN began considering options for funerals when planning for Community Asset Transfer of the building it now owns and manages as the Aald Skül. Viking funeral ceremonies were suggested, to draw on the area's Norse heritage, boost employability and create an income stream for the community. There was some early-stage investigation into the logistics of burning replica longboats in the Feasibility Study for the Aald Skül (2018). It also became clear that Shetlands Islands Council were indicating that burial grounds were running out of space and they were considering options.

In the time since, CDCN has become aware of the wider need for sustainable options for Shetland residents at the end of their lives. Maintaining the islands' many traditional burial grounds is becoming increasingly costly to Shetland Islands Council in a context of rising costs and new regulations on site maintenance. Some burial grounds are full and soon to close for full burials. Meanwhile, the environmental impacts of both cremation and traditional burial have come under additional scrutiny. Although CDCN has taken a lead on this project, the needs it responds to are Shetland-wide. The alternatives explored here have the potential to be implemented in partnership with other communities.

The research has been undertaken by Community Enterprise, a team of consultants providing research and development support to social enterprises, charities and voluntary groups across Scotland. This project has been funded by the Scottish Government's Community Led Local Development Fund, the Shetland Islands Council's Economic Development Grant Scheme and the Viking Community Fund.

This report presents the information gathered on all services and will be followed by a business case for the service or services to be taken forward.

#### 1.2 Methodology

Work undertaken to date has included:

- Press, promotion and awareness-raising as described in Appendix 1.
- Online survey with 990 total responses. 80% of responses came from Shetland, and 20% from elsewhere. The survey included:
  - A note on potentially sensitive content and initial opt-in/opt-out question.



- A set of questions on people's attitudes to death, planning for their own death and funeral, their knowledge of and attitude to alternatives to traditional burial and cremation, which were shown to all respondents (other than those who opted out).
- A question on age range (all respondents), used only to understand the sample and segment the data.
- A question on place of residence (all respondents), used to understand the sample and segment the data, and for targeting subsequent questions.
- A set of questions for non-Shetland residents only. These asked about their connection to Shetland (if any), their interest in carrying out funeral or memorial ceremonies in Shetland, and in the services primarily targeted at this group (Viking funerals; space scattering).
- A set of questions for Shetland residents only. These asked about whether or not the residents supported the development of the services primarily targeted at the non-residents (Viking funerals; space funerals).
- Space for any further comments at the end of the survey, open to all respondents.

Data from the survey has been used throughout this report but the full survey analysis can be found in Appendix 2.

- Stakeholder and sector engagement: interviews and focus groups with organisations and businesses in the areas of focus (listed in Appendix 3).
- *Market research and competitive analysis* for the main areas of focus, including research into the applicable regulations and permits needed.
- Analysis of ownership & management options.
- Financial viability testing.
- This Options Appraisal and Research Report presented to CDCN for discussion: business case for one or a combination of options to follow.

## 1.3 Options covered and excluded from analysis

The options explored in detail in this report are natural burial (including the possibility of an eco-friendly columbarium for interment of ashes), alkaline hydrolysis, Norse/Viking themed ceremonies and pet burials. The potential to use alkaline hydrolysis technology for pets and particularly livestock is a question that arose during the research and is addressed in brief in section 6 on pets and animals; however, given the lack of a regulatory framework at present, we have not gone into detail on a potential business model. Similarly, space memorials – scattering ashes in space or the upper atmosphere



- was suggested as an alternative form of premium ceremony and has been covered briefly in section 7.

The following technologies for disposal of bodies have been proposed as alternatives to traditional burial and cremation but are excluded from study here due to being at an early stage of development in the UK or in general:

- Rapid human composting, 'Terramation', 'natural organic reduction' or 'Recomposition', where the body is surrounded by substances (straw, woodchips) and microorganisms that reduce decomposition time to around 1-2 months. Not legally available in the UK at present but permitted in Sweden and seven US states. One established US company, Recompose, does this by placing the body in a vessel where it stays during the process, but the resulting soil is removed and returned to the family once decomposition is complete -a similar process is proposed by the <u>Terramation</u> campaign in the UK. Another US start-up, <u>Transcend</u>, proposes to bury the body in a shroud treated with fungi to produce rapid composting in the ground and fertilise a tree. Rapid human composting is not specifically prohibited in the UK but there is no legal framework for it and there has not yet been consultation to create one (unlike alkaline hydrolysis) - there have, however, been petitions for legalisation<sup>1</sup>. If technologies to speed decomposition of a body in the ground become more widespread, they could be offered at a natural burial ground in future. Rapid human composting in temporary vessels can be explored as and when a legal framework is developed.
- Cryogenic process such as <u>Cryomation</u> or <u>Promession</u>: cooling the body by immersion in liquid nitrogen to a very low temperature, at which point it becomes brittle and fragments into small particles, which could be freeze-dried, producing a small container of biodegradable remains. At present, Cryomation is seeking investors to build and prototype this technology. The Swedish company Promessa Organic AB, which owned the Promession trademark, was liquidated in 2015.

#### 1.4 Conclusions and next steps following this report

In summary, research has shown:

• There is considerable interest in a natural burial ground, both from Shetland residents seeking more eco-friendly options and from Shetland Islands Council, for reasons of carbon reduction and the scaling down of local burial ground provision due to rising maintenance costs, as explored in section 2.2. As with any provision for Shetland residents, numbers will be low per year, so operating costs must be minimised for this to be viable but the natural burial approach lends itself to low-maintenance sites. Building in space for interment of ashes will be important as cremation (and in future alkaline hydrolysis) grow in popularity and

<sup>&</sup>lt;sup>1</sup> UK Government and Parliament Petition (closed): <u>Legalise Human Composting (Natural Organic Reduction)</u> - 2023, 577 signatures and Change.org: <u>Legalise 'natural organic reduction' (human composting) in the UK</u> -



2021, 2499 signatures.

- will also allow the site to cater to people living outside Shetland with a strong connection to the islands.
- Viking funeral ceremonies consisting of setting a scaled-down galley alight at sea would fall under the definition of scuttling a vessel at sea, which is banned (see section 5.7). However, burning a galley on the shore, on private land belonging to CDCN or a willing landowner, where the fire does not cause a nuisance, would be permitted. If the galley is burned on land, there is a question of a final resting place for the ashes of the deceased, given that these would not be scattered into the water: these could be interred at a natural burial ground.
- On the other hand, there is interest in incorporating aspects of Shetland's Norse/Viking and other heritage into a funeral enterprise in general – from residents as well as 'Viking enthusiasts' abroad. There are a wide variety of ways this could happen, including the design of landscapes, memorials, coffins, shrouds and caskets.
- There is some interest in a pet burial ground, and this could be considered as an addition to a natural burial ground if space and site criteria allow.
- Alkaline Hydrolysis is at a very early stage of development in the UK. Regulations
  are still at the consultation stage and a single supplier (who specialise in high
  pressure, high throughput, fast working machines) has secured permission to
  discharge the remaining fluid from their machines. Buying, housing and operating
  one of these machines in Shetland, with an estimated 60-80 funerals a year in
  the short-to-medium term, is unlikely to be viable. Internationally, there is more
  variety available and it may be that in a few years' time, solutions emerge that are
  more suited to Shetland.
- Space funerals in Shetland were the least popular idea proposed in the survey, both among Shetland residents and respondents outside Shetland (who would make up most of the likely market). There is no UK company currently offering to take ashes all the way into space only up to the stratosphere in a balloon but most potential clients would be more likely to travel internationally to established US providers operating from well-known spaceports than to Shetland. After discussion with CDCN, this idea will not be explored further. However, the information in section 7 of this report does offer an insight into how premium memorials can be marketed.

## Following this report:

- Community Enterprise facilitated a workshop with CDCN to discuss the findings and move towards a business plan for the selected option(s). This version of the report contains updates made after this session.
- Further discussion with Shetland Islands Council will be needed to scope out potential partnership to develop a natural burial ground. The Council has stated



that it will either explore or support the others' exploration of a natural burial ground.

- A summary of survey data for stakeholders and the public will be prepared this will include some headline findings but much less detail than this report.
- If pursuing natural burial, CDCN may wish to visit other sites. The Community Learning Exchange will pay for costs of a visit like this (although it will only cover hosting fees for community-led and social enterprise ventures).

## 2. Context to the study

## 2.1 Demographics of Shetland

This section summarises demographic data on Shetland which is relevant to the study. Although Shetland residents are not the target market of all services explored in this report, natural burial and alkaline hydrolysis and pet burials would all cater primarily to Shetland.

## Population and age breakdown

The National Records of Scotland (NRS) has the following population statistics for Shetland, as of 2022 mid-year estimates<sup>2</sup>:

- The total population is 23,020
- The population has grown by 4.8% over the past 20 years less than average growth for Scotland, but far more than many rural and island communities.
   Growth has been primarily made up by the 65-74 and 75+ age brackets the population of people aged 44 or under has fallen.
- Between 2018 and 2028, a slight drop of -0.7% is projected in Shetland's population. This is made up by -1.3% natural change (more deaths than births), and +1.1% migration. Growth in the older age brackets is expected to continue while younger age brackets will go on declining, with the population ageing overall<sup>3</sup>.
- 49.9% of Shetland's population are females and 50.1% are males, whereas Scotland's overall population has slightly more females than males. Females outnumber males in Shetland only in the oldest age bracket.
- 18.1% of Shetland's population are aged under 15.
- 60.1% of the population are aged between 16 and 64.
- 21.9% are aged 65 and over.

#### Deaths

Shetland has a small population relative to other local authorities, which lives longer and dies later than average. According to National Records of Scotland (NRS), there were 230 deaths per year in Shetland in 2022, a 10.5% decrease on the previous year. The mean over the past 20 years is just over 216 deaths per year <sup>4</sup>.

<sup>&</sup>lt;sup>4</sup> National Records of Scotland: Shetland Islands Council Profile



<sup>&</sup>lt;sup>2</sup> National Records of Scotland: Mid 2022 Population Estimates (data tables). The population of Shetland on Census Day (March) 2022 was 22,900 (to nearest hundred) – these figures account for expected population change between that date and the date of the estimate (September 2022). We have used the Mid-Year Estimates rather than the Census as they are available in more detail at time of writing.

<sup>&</sup>lt;sup>3</sup> National Records of Scotland: <u>Shetland Islands Council Profile</u> (last updated with 2021 mid-year estimate data)

The standardised death rate was 9.4 per 1000 population in 2022, compared to 11.5 per 1000 population across Scotland. Although the death rate for Shetland fluctuates, it has generally been lower than average for Scotland over the past 20 years and in 2022 it was the second lowest in Scotland<sup>5</sup>.

Life expectancy at birth is 83.2 for females and 79.6 for males in Shetland, both about 3 years higher than Scotland overall. As such, of the 230 deaths in 2022, the largest number were of people aged 90+ (49), although age at death peaks slightly earlier among males than females. Within this small population, there were no deaths in 2022 of anyone aged under 24<sup>6</sup>.

It was suggested by stakeholders that NRS statistics might slightly understate the number of Shetland residents who die in a given year, given that some die while on the mainland for hospital treatment or care. NRS Vital Events statistics are normally coded using the usual residence of the person at time of death, but if the person has been at this address for less than 12 months and lived at a former address for a longer period, the former address will be used. This means that Shetland residents who go away for treatment or care might be counted under a 'usual address' elsewhere, but only if they stay away longer than 12 months before dying<sup>7</sup>. Some Shetland residents who have lived off the islands return to be buried – they would not be included in Shetland deaths statistics unless they returned while still alive and stayed at least 12 months.

#### Income

As discussed further in section 2.4, the cost-of-living crisis is affecting how people across the UK approach planning for funerals. People in Shetland on average have higher income than the rest of Scotland: gross weekly pay is £893.30 a week, versus £702.40 across Scotland<sup>8</sup>. As of 2021, Gross Disposable Household Income per head in Shetland was estimated by the ONS at £21,045 – slightly above average for Scotland, but around £3.000 behind the most affluent local authorities<sup>9</sup>.

On the other hand, SIC has estimated that even under normal circumstances, the cost of living in Shetland is anything from 20-65% higher than the UK average. A cold climate and lack of mains gas connections mean that households pay up to twice as much as mainland ones in energy costs, and the cost-of-living crisis will have an outsize effect<sup>10</sup>.

#### Religious belief and practice

Religious beliefs and practices factor into people's funeral choices. The 2011 census included a voluntary question on which religion (if any) people identified with. The census

<sup>&</sup>lt;sup>9</sup> Office for National Statistics Gross Disposable Household Income Dataset by Local Authorities. This figure is after taxes and benefits but does not account for spending on essentials such as rent and utilities.





<sup>&</sup>lt;sup>5</sup> National Records of Scotland: Shetland Islands Council Profile

<sup>&</sup>lt;sup>6</sup> National Records of Scotland: Shetland Islands Council Profile

<sup>&</sup>lt;sup>7</sup> National Records of Scotland: Shetland Islands Council

<sup>&</sup>lt;u>Profilehttps://www.nrscotland.gov.uk/files/statistics/vital-events/ve-general-geographical-basis.pdf</u>

<sup>8</sup> NOMIS Labour Market Profile: Shetland Islands

did not ask about whether people were actively practising the religion in question. At that time, the data showed people in Shetland to be less likely than the overall population to be a member of a religion<sup>11</sup>.

- 45.4% of people in Shetland had no religion, compared to 37% in Scotland as a whole.
- 29.9% of people identified as Church of Scotland, versus 32% across Scotland.
- 10.6% identified as other Christian (neither Church of Scotland nor Roman Catholic), compared to 6% across Scotland.
- 4.1% identified as Roman Catholic, versus 16% across Scotland.
- 0.4% identified as Muslim, compared to 1.4% across Scotland and a further 0.4% identified as another religion.
- 8.5% in Shetland did not answer this voluntary question.

## 2.2 Existing funeral provision in Shetland

This section summarises the options currently open to Shetland residents at the end of their lives and covers some of the issues that have led to this research being commissioned.

#### Burial

Shetland Islands Council (SIC) maintains 70 burial grounds across the islands, covering a total of 15 hectares – one of the largest areas of burial ground per head of population in Scotland. Many of these sites are historic. While pricing to the public is relatively low, the cost of burials per head is very high in Shetland. Regulations being developed by the Scottish Government under the Burial and Cremation Act (Scotland) 2016, discussed further in section 3.7, will impose standards of maintenance for access roads and paths within burial grounds, meaning that maintaining existing grounds and any new or extended sites with similar characteristics will become increasingly costly. Historically, burial grounds have been extended as they became full, but this has been described as "financially challenging and unsustainable" in current economic circumstances.

Following its "Reimagining Burials in Shetland" consultation in 2023, SIC has published a <u>Burial Ground Management Policy</u>, covering burial ground provision, approach to inactive and historic burial grounds and management of the Council's active sites (to be reviewed once the Regulations under the 2016 Act are published). SIC notes in the policy that "the management of burial grounds is unsustainable in its current form", highlighting staffing shortfalls and maintenance backlogs caused by new maintenance obligations, difficulty

<sup>&</sup>lt;sup>11</sup> Scottish Government: <u>Scotland's Census Area Overviews for Shetland Islands</u> and <u>Census Results:</u> <u>Religion</u>



recruiting, and staff time spent on reactive maintenance and travel between the many active burial grounds.

In summary, the policy and its appendices state that:

- Extensions or future sites are to be sought for communities currently served by the Knab Burial Ground in Lerwick and by Brough Burial Ground in Whalsay.
- Alternatives are to be identified for the communities currently served by the Laxobiggin, Voe, Weisdale (Huxter) and Bixter (Twatt) burial grounds.
- 14 burial grounds will be classed as Inactive Burial Grounds and may be closed to full coffin burial once existing Rights of Burial have been fulfilled.
- In the longer term, SIC will move towards burial ground provision by community area, so burial grounds will not be extended or replaced as they become full unless there is no alternative within the community area.
- The council will prioritise investigations into land ownership rights and obligations for access routes to burial grounds.
- The council will either support further exploration of a natural burial ground or explore this itself.
- The council will not explore further the development of a crematorium or centre for alkaline hydrolysis.

#### Cremation

Shetland has no crematorium, so the bodies of those that choose this option are shipped to Aberdeen on the mainland for cremation and ashes returned to families, a 550-mile return journey. Shetland residents who die on the mainland are also usually cremated there and their ashes returned to Shetland.

Shetland Island Council estimates that about 20% of those who die in the islands choose cremation, so the 20-year mean of 216 deaths would equate to roughly 173 burials and 43 cremations. Goudies estimated a similar figure of 40-50 cremations per year and noted that the price of cremation has decreased which is making it more popular in Shetland. Celebrants who work with families after a death report that the journey puts many in Shetland off cremation, and although growing it is still the minority option. In contrast, national research (discussed in section 2.4 below) shows that cremation is generally the most popular option, especially among older people who are more likely to have a plan in mind for after their death.

Although consultation has revealed interest in establishing a crematorium or alternatives, SIC considers this unviable: the recent Burial Ground Management Policy states that "the industry standard catchment population of 150,000 is typically used to financially justify the construction, running and replacement costs of a crematorium so



this is significantly greater than the population of Shetland". The policy also rules out further investigation of alkaline hydrolysis, as "costs are likely to be in line with crematorium provision (£7M)". The cost of building an alkaline hydrolysis facility is explored further in section 4: the equipment itself reportedly costs around £300,000, but a large part of the cost would be in developing a suitable building (the cost of which will vary depending on scale and facilities provided) and water treatment plant.

#### Interment of ashes

Plots for interment of cremated remains are available "on request and where possible" at selected SIC burial grounds: Eshaness, Fair Isle, Hillswick, Lerwick (Knab) and Tingwall. Areas for interment of ashes have been identified at a further four burial grounds.

Staff at the Visit Scotland iCentre reported that they get a couple of requests a year from visitors for information about scattering ashes in Shetland. SIC does not allow ashes to be scattered within its burial grounds: possible reasons for this are that the accumulation of ashes can be unsightly, and effects on plant life due to high pH, salts and phosphates. People wishing to scatter ashes elsewhere should, in theory, seek permission from the landowner, and it can be hard for visitors to find out who owns land. Windy weather can also make scattering ashes at popular spots such as the cliffs at Eshaness challenging for visitors and locals alike, but visitors cannot wait around for the wind to blow in the right direction.

#### Funeral directors and celebrants

There is one funeral director in Shetland, Goudies, whose staff have been consulted as part of this research.

There are several independent celebrants conducting funeral ceremonies in Shetland, all of whom were approached to participate in this research – interviews have been conducted with two of them.

## 2.3 Environmental impact of existing options

Reliable data on the impact of funerals is hard to find, as both individual choices and regional regulations can both have a large effect.

Life cycle assessment is a method of quantifying the total environmental impact of a product or service throughout its lifecycle, including production, transportation, use and disposal, and on different aspects of the environment. A 2016 life cycle assessment of the environmental impact of burial and cremation based on data from The Netherlands shows little difference between the two main options, but this was primarily due to factoring in land use for burial – the authors note that inclusion of land use in life cycle analysis is controversial. Without the land use score, burial's overall environmental



impact would be overall 25% lower than that of cremation. The CO2 emissions of cremation, assuming a gas cremator is used, are over twice as high<sup>12</sup>.

#### Traditional burial

The above study notes that, land use aside, some of the major factors associated with the adverse environmental impacts of burials are the production of a monument (including quarrying and transportation of heavy stone) and the production of a coffin, especially one lined in cotton, itself associated with pollution and soil degradation. Another commonly cited environmental issue associated with traditional burial (but excluded from the above study) is embalming. According to SEPA, half of all human burials involve some embalming using formaldehyde, which is a biocide with toxic and carcinogenic properties which is also highly corrosive<sup>13</sup>.

Goudies state that they avoid embalming wherever possible for traditional burial in Shetland. Goudies offer an option of a biodegradable cardboard coffin, which they say about 25 people a year choose (roughly 10-15% of total burials). The company is an agent for Robertson Memorials, a granite memorial manufacturing firm based in Aberdeen, which states that it uses British material (although this must still be shipped to Shetland). Avoiding embalming, use of simple biodegradable coffins and shorter supply chains for headstones would all lessen the environmental impact of traditional burial in Shetland. However, there are still opportunities for a natural burial ground to offer even greener options, as covered in section 3.

#### Cremation

Almost all cremations in the UK are undertaken using gas-fired cremators. Hazelhead Crematorium in Aberdeen, which serves Shetland, is among the crematoria using gas-fired cremators<sup>14</sup>. Crematorium consultants CDS estimate based on industry statistics that: "for every gas cremation, approximately 245 kg of carbon is released into the atmosphere which, when added together, is around 115,150 tonnes of carbon released each year; solely from cremation in the UK"<sup>15</sup>.

Electric cremators are sold as a green alternative and produce 50-80% less CO2 emissions, a gap which will increase as the national grid becomes less reliant on fossil fuels<sup>16</sup>, so the impacts associated with cremation could drop as this technology is adopted.

For Shetland, there is an additional carbon footprint of shipping to Aberdeen. A 2020 Shetland News investigation into carbon emissions data for the NorthLink ferry fleet found that journeys on the existing ferries have a higher carbon footprint than air travel.

<sup>&</sup>lt;sup>16</sup>Copeland, "A comparison of gas and electric cremator emissions in the UK", 2021



<sup>&</sup>lt;sup>12</sup> Keijzer, "The environmental impact of activities after life: life cycle assessment of funerals", 2016, International Journal of Life Cycle Assessment

<sup>13</sup> SEPA: Groundwater Protection Policy for Scotland V3 November 2009

<sup>&</sup>lt;sup>14</sup> Scottish Government: Report of the National Cremation Investigation by Dame Elish Angiolini DBE QC

<sup>15</sup> The CDS Group: The UK Cremation Industry Emissions

When the fleet's overall emissions were broken down to individual passenger, car and freight journeys, researchers calculated that a return passenger trip generated between 160 and 240 kilos of CO2 emissions per person<sup>17</sup>. While data for freight was not broken down to the level of individual shipments, this gives an indication of the level of carbon emissions added due to transport via a fossil fuel-dependent fleet.

#### 2.4 Attitudes to death and funerals

This section summarises data on how people plan for funerals, including both the disposal of the body and any ceremonies or memorials. We consulted on this in our survey and have also reviewed published data.

## Planning for death

A YouGov 2021 study on attitudes to death showed that:

- 49% of people in the UK had pictured what their funeral would look like:
  - 41% had thought about it in general.
  - o 8% had thought about it in detail.
- 48% had given no thought to their funeral.
- The oldest age bracket of 60+ was most likely to have pictured their funeral in detail or at all, and women were more likely than men to have thought about their funeral across all age groups<sup>18</sup>.

In our survey, we broke down planning for a funeral into two questions: what people would like to happen to their body after death, and what they would like to happen at the event or ceremony (if any) itself. Overall, the numbers of respondents who had thought ahead about both elements were higher than in the YouGov study but people were more likely to have thought about their wishes for their body than other aspects of the funeral:

- 96.6% had thought about what they wanted to happen to their body to some extent.
  - 56.8% had thought about it but didn't have a specific plan.
  - o 39.8% had a plan in mind.
- Only 3.4% had not thought about it at all.
- 89% had thought about their funeral ceremony to some extent.
  - o 59.2% had thought about it but didn't have a specific plan.

<sup>18</sup> YouGov Death Study



<sup>&</sup>lt;sup>17</sup> Shetland News: Taking the Plane Turns Out to Be Better for The Climate

- 29.8% had a plan in mind.
- 11% had not thought about their funeral at all.

As with the YouGov report, younger age groups among our survey participants were less likely to have a plan in mind than older ones –almost half our survey respondents aged 65-74 had a plan in mind.

We also found that many of our survey respondents (80% of whom were from Shetland) had taken actions to let others know about their wishes. The most common of these (59.4%) was discussions with family.

Locally, Goudies do not offer funeral pre-purchase plans, but SIC does allow people to reserve a lair in advance and report that this is popular among the island's older residents. Many of our survey respondents who had taken other actions to let people know about their funeral preferences said that they had reserved a lair in advance.

#### Cremation and burial

As of 2022, there were 526,756 cremations in the British Isles, which accounted for 79.83% of the 659,718 deaths<sup>19</sup>. Since Cremation Society records began in 1885, there has been a general trend of growth in the number of cremations, reflecting its increasing popularity as an option for disposal of the body.

The Cost of Dying Report from Sunlife, a UK-based financial services company, is an annual research paper that provides an overview of funeral costs in the UK. For the latest version of the report, interviews with 1,522 individuals who had organised a funeral over the past 4 years were conducted. 45% of those had organised a funeral within the past 12 months. In 2023, a cremation with a service was the most popular type of funeral: 53% of respondents said that they organised a cremation with a service. In addition to this, 20% of respondents organised a direct cremation (cremation without a service), which increased by 2% from 2022. 27% of respondents organised a burial.

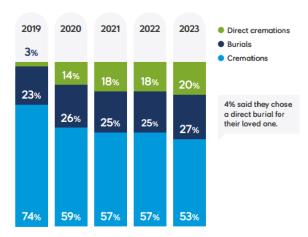
Below is a table from The Cost of Dying Report 2024, showing trends in types of funeral from 2019-2023<sup>20</sup>.

<sup>&</sup>lt;sup>20</sup> Sunlife Cost of Dying Report 2024



<sup>19</sup> The Cremation Society

#### Type of funeral (2019–2023)



Nationally, most people prefer to be cremated after death. In the YouGov study cited above:

- 45% wanted to be cremated
- 15% wanted to be buried
- The preference for cremation appears to increase with age: in the 2021 data, only 22% of 16–24-year-olds would choose cremation, rising to 58% of those aged 60+. Burial is slightly more popular among younger age groups, but also, more people in these groups have not yet decided on what they want to happen to their body.
- The preference for cremation is notably weaker among those who are religious and actively practicing<sup>21</sup>.

Data on emerging technology as an alternative to burial or cremation is covered in section 4 on Alkaline Hydrolysis.

## Spending on funerals

According to the SunLife Cost of Dying Report, as referenced above, the average cost of a funeral in Scotland is £4,030. Although funerals with burial were on average more costly than those with cremation, both direct cremation and direct burial were significantly cheaper than the typical funeral<sup>22</sup>.

Not included in the above figure is spending on the 'send-off' – optional extras.
 Average spend across the UK on these was £2,768, described as a 'bounce-back' from the pandemic. The largest factor in this is the memorial (e.g. headstone – average spend £1,037) although only 42% spent on this at all.

<sup>&</sup>lt;sup>22</sup> Sunlife Cost of Dying Report 2024



<sup>&</sup>lt;sup>21</sup> YouGov Death Study

- Simple direct cremation jumped in popularity during the pandemic, but has remained popular, accounting for 20% of funerals in the 2024 edition – although some of these took place during Covid-19 restrictions, the most common reason for choosing direct cremation was that it was the deceased's choice.
- 20% experienced notable financial concerns when paying for a funeral and 44%
  of funeral organisers said the cost-of-living crisis impacted how they organised
  and/or paid for the funeral. The most common ways to economise were to spend
  less on flowers and choose a cheaper coffin.
- 37% of the participants wanted their family to spend as little as possible on their own funeral, although this figure dropped slightly from 2022. Meanwhile, 4% said that they wanted a lavish or expensive funeral – this is the group that options like Viking funerals and space memorials would target.

In our survey, we asked people to place themselves on a scale, with "price is most important" on the left, and "willing to pay more" on the right. The average position was about a third of the way along the scale, suggesting that on average, people consider price to be important but not the only factor to consider. Older people were slightly further towards the "willing to pay more" side than younger ones.

## Ceremony preferences

Among those interviewed for the Cost of Dying report, 30% want a standard/typical funeral for themselves, and much smaller numbers mentioned a specific request such as a humanist or environmentally friendly option. However, 56% of the funeral directors had seen a drop in the number of traditional religious ceremonies, and a variety of unusual requests were described.

The Cost of Dying report breaks down in detail how much people planning funerals knew about their loved one's wishes on various topics. 46% in the 2024 report knew whether their loved one wanted burial or cremation, but people were less likely to be aware of other preferences:

- 34% knew whether their loved one wanted a religious or non-religious service
- 27% knew whether they wanted their ashes scattered, interred or disposed
- 24% knew their preferred cemetery or burial ground
- 14% knew what type of coffin or casket they would prefer

Our survey asked people to rank various factors of funeral planning (aside from cost) as low, medium or high priority to them.

 Convenience for family was the highest rated priority, with over 90% considering this to be either high or medium priority. Prioritisation of convenience seems to drop off in older age groups, perhaps as some have planned further and see a



funeral as less of an unexpected shock for their family and loved ones: 79% of 25-34s see convenience as high priority, versus 51% of those aged 75+.

- Next highest priority overall was the person's personality and values in life, which 86.3% overall considered to be high or medium priority. Personality and values were emphasised more by younger adults than older ones: among those aged 75+, 41.5% rated this factor as low priority, compared to only 6.5% of 25-34s and 5% of 35-44s.
- This was followed by impact on the environment, rated as high or medium priority by 81.9% overall. This factor appears less influenced by age.
- With regards to physical memorials such as a headstone, bench, urn or tree, there was a more even split of responses: 57.7% considered these high or medium priority but 42.3% saw them as low priority. The percentage who prioritise physical memorials decreases with age 32% of both the 25-34 and 35-44 age groups see this as low priority. On the other hand, 49% of 55-64s, 48.3% of 65-74s and 58.1% of over 75s see memorials as low priority.
- Shetland residents were also more likely to prioritise a physical memorial than people in the rest of Scotland or the UK.
- Ancestry and heritage, family tradition and religious beliefs were all rated as low
  priority by over half the survey respondents. Religious belief is rated low priority by
  more of the younger respondents, although in every age group a majority rates it
  as low priority. There was no significant difference between people from Shetland,
  the rest of Scotland or the rest of the UK with regards to religion.

## Scattering and interring ashes

The Cost of Dying report also covers what participants who had planned a funeral did or planned to do with their loved one's ashes:

- 47% scattered the ashes. Among these, the most popular site was a garden of remembrance (31%) followed by the beach (11%), a local or national park (11%), at sea (10%) and in woodland (10%).
- 30% kept them.
- 21% buried them.



## 3. Natural burial

#### 3.1. What is involved?

Natural burial, sometimes known as 'green burial' or 'woodland burial', describes the burial of human remains in a designated area which is managed to minimise adverse environmental effects and preserve, improve or create habitats.

#### **Principles**

There is no industry-wide rule on what kind of coffins/shrouds are allowed in natural burial. The industry code (see section 3.8) states that each natural burial ground should have its own clear policy on type and on materials used, and that they should "conserve existing local wildlife, promote biodiversity and manage their projects according to sound sustainable and ecological principles". Two of the larger natural burial companies, The Natural Burial Company and Leedam Natural Burial (see below) provide guidance via website FAQs: Leedam note that "coffins should be made from and lined with natural and biodegradable materials. No plastics, MDF or chipboard should be used"; the Natural Burial Company say "we strongly encourage the use of an environmentally friendly coffin such as cardboard, bamboo or willow. We also allow shroud burials".

#### Grave markers

Many natural burial grounds do not allow grave markers, as these can disrupt other use of the land (e.g. mowing for meadows) and encourage families to leave flowers, photos and other tributes which can be harmful to nature. On the other hand, such natural burial grounds may have a designated memorial area – for example, a sign at the site entrance with individual inscribed plaques.

Although some burial grounds do offer trees as markers, one operator interviewed warned against this: seedlings can sink into loose ground disturbed by a burial, established trees with large root systems may prevent surviving spouses from reserving the plot next door, and people can treat trees as shrines, disrupting the natural environment. Tree planting can, however, take place once burials have finished on a section of the site.

CDCN and other local stakeholders felt that a site without any grave markers was less likely to appeal to people in Shetland, where traditional burial remains much more common than elsewhere in the UK. Allowing some burial markers also increases the potential heritage and economic development benefits. An additional factor in support of grave markers is that highly accurate grave-mapping software may not be cost-effective for a small site, as reported by one software provider we contacted. Markers that would fit within the ethos of natural burial might include:

 Rough-cut local stone, laying flat or standing (although any monument may require inclusion in a maintenance plan under upcoming regulations for the Burial and Cremation (Scotland) Act 2016). Flat grave markers are used by some natural burial grounds as they allow the grass to be mown more easily. Markers could be quite small – see example from the Green Graveyard Company in Ireland.

- Carved wooden plaques which biodegrade naturally over time.
- A limited number of Hogback stones as associated with the Viking/Norse period, if carved from local stone.

## 3.2. Survey findings

All survey respondents were asked whether they were aware of natural burial. 37% said they knew about it, and 40.1% had heard about it but didn't know what it involved. 22% had never heard of it. Shetland respondents were less likely than respondents in the rest of Scotland and the rest of the UK to say that they knew about natural burial, and more likely to say that they had never heard of it, perhaps due to the lack of available options locally. Respondents aged 65-74 were also more likely to know about this option than some of the younger age groups, perhaps because, as this and other surveys have highlighted, they were more likely to have thought about their funeral preferences.

All survey respondents were then given a brief explanation of natural burial, and asked whether they would choose this option for themselves and/or a loved one, or neither. Overall, well over half would consider natural burial for themselves:

- 65.7% would consider natural burial for themselves. This rises to 74.2% among those aged 25-35.
- Fewer people would consider it for a loved-one: 35.5%.
- The reasons people gave for considering natural burial included a lower environmental impact, simplicity and lower cost.
- 30.1% would not consider natural burial at all, either for themselves or for a loved-one but older respondents were more likely to rule it out than younger ones.
- Reasons people gave for not considering natural burial included a preference for cremation or other options, a desire for a headstone or other grave marker (although, as noted above, these could be provided), the lack of local provision in Shetland, and having made other arrangements such as reserving a lair.
- Fewer people in Shetland (64.7%) say that they would consider natural burial for themselves than people elsewhere in Scotland (77.1%) or elsewhere in the UK (77.9%), perhaps due to this not being an established option locally.

Respondents from Shetland only were asked whether they supported the development of natural burial in Shetland as an alternative to traditional burial and cremation. Among the two alternatives included in this question (natural burial and alkaline hydrolysis), natural burial had higher levels of positive feelings.



- 40.3% were strongly positive about natural burial and a further 28.6% were positive. Comments in support of the development of a natural burial ground highlighted a need for more options.
- 22.6% were neutral. Some respondent comments called for more information before making a decision.
- 3.4% were strongly negative and a further 5.12 were negative. Comments against the development of a natural burial ground tended to relate to concerns over land use and whether trees would grow in Shetland.
- There was no significant relationship with respondent age (unlike for alkaline hydrolysis, which older people were more likely to feel negative about).

## 3.3. The market nationally

The first natural burial ground was opened in 1993 by Carlisle City Council on an unused woodland section of an existing cemetery. The Association of Natural Burial Grounds reports that there are now 270 natural burial grounds across the UK, of which just over half are run by local authorities, with other owners including farmers and estates, charitable trusts and not-for-profit organisations<sup>23</sup>.

Research shows that there is growing awareness of environmental factors in funeral planning, although people are most conscious of cost and can be put off eco-friendly options if they perceive them as more expensive:

In the SunLife 'Cost of Dying' report (referenced in section 2.4 above), 9% said that they wanted a 'woodland or eco/environmental funeral', compared to 30% who wanted a 'standard/typical funeral' - the largest segment of respondents, 37%, just wanted their loved ones to spend as little as possible.

The Natural Burial Company, a burial ground operator, conducted a study, which found that 44% of their respondents believed a green funeral to be more expensive than a traditional funeral, while 25% thought it would be less expensive. The cost would stop 41% from organising an environmentally friendly funeral. When prompted about specific measures to make their funeral more eco-friendly, however, most were positive: 83% would avoid plastic-wrapped flowers, and 84% would choose a coffin with greener materials. The company concludes that there is a misconception that natural burial is an expensive premium option<sup>24</sup> and points out elsewhere that their costs are comparable to and in some cases lower than national averages per the Cost of Dying Report<sup>25</sup>.

In research by another insurer, Legal and General, 40% of respondents were aware of the environmental impact of traditional funeral practices such as burial and cremation. 30% said that climate concerns would play a role in their choice of funeral. Younger

<sup>&</sup>lt;sup>25</sup> The Natural Burial Company: Saying Goodbye Should Not Cost The Earth



<sup>23</sup> The Natural Death Centre: Directory of Natural Burial Grounds

<sup>&</sup>lt;sup>24</sup> The Natural Burial Company: Survey Shows Public Demand for Greener Funerals

respondents were both more likely to be aware of the impacts and more likely to factor in climate concerns. On the other hand, when asked to choose from a range of factors the ones that would influence their funeral arrangements the most, 18% chose environmental concerns – behind religious and cultural beliefs (21%), family tradition (32%), personal preference (44%) and cost (58%)<sup>26</sup>.

#### Who chooses natural burial?

A natural burial ground operator consulted estimated that about half their clients preplanned a natural burial for themselves, while the other half are families choosing this option after the death of a loved one. In the latter case, families choosing natural burial usually have a good idea of the dead person's wishes, either from previous discussions or just the knowledge that they cared a lot about nature.

## 3.4. The market locally

Traditional burial occurs for around 80% of deaths in Shetland, with about 20% choosing cremation, according to SIC. This higher rate of burials when compared to burial rates nationally and people's reported preferences is likely to be due to reluctance to ship a loved one's remains to the mainland for cremation. Both SIC and Goudies report that people in Shetland choose to be buried very locally and alongside family, although the closure of some burial grounds and move to one burial ground per community area will make this less feasible in future.

An SIC Burial Grounds Officer interviewed reported that there have been very few requests for natural burial in Shetland, although this is likely to be due to the lack of existing options - people enquiring would currently be signposted to sites in Aberdeenshire or might in some cases would decide on a home burial (see next section).

The 20-year average number of deaths per year recorded in Shetland, as referenced above, is **216**. Of these, some will die on the UK mainland and be cremated there, and others choose cremation. Of those who opt for burial, many will have already purchased or expressed a preference for a plot close to home.

Shetland Mainland is home to about 82% of Shetland's population. If we assume that deaths are generally distributed evenly across the islands, this will mean about 177 deaths a year on Mainland. If 9% of this number choose a natural burial, as per the Cost of Dying Report (although our survey indicates wider interest), there would be about 15-16 burials a year. Given that interest in this option is higher among younger people, and that the choice of local burial grounds will reduce over time, it would be reasonable to expect this number to grow in the long term.

Assuming total pricing of £1400 for lair and grave digging (generally priced and purchased separately, see comparator pricing in the next section), this would equate to revenue of £21,000 -£22,400 a year (excluding income from interment, memorial sales and others).

<sup>&</sup>lt;sup>26</sup> Legal and General: The Future of Funerals. Based on a survey of 2000 respondents aged 16+.



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It is likely that the demand for full burial in a natural burial ground Shetland would be almost exclusively from residents. However, interment of ashes may appeal both to residents and to those with another connection to Shetland, particularly those who have emigrated or have a family or ancestral link to the islands. Ashes may be split and can more easily be transported by air and across national borders (see section 5.6).

## 3.5. Competition

Other options open to Shetland residents interested in natural burial are:

- Traditional burial at an SIC site. Some clients are attracted to natural burial grounds for their beauty and peaceful feel, which many of SIC's historic sites also offer. A natural burial ground operator we spoke to cited competition from beautiful traditional sites as a reason for the natural burial sector being less developed in Scotland generally. As noted in section 2.2, however, SIC is soon to restrict full coffin burial imminently at some of its most historic sites. The Council has expressed support for exploration of new alternatives to its burial grounds, which are heavily subsidised, as this will reduce capital spend in the long term.
- Someone with strong views about how they want to be buried might choose burial at home or on private land not designated as a burial ground, referred to as 'private burial' in the 2016 Burial and Cremation (Scotland) Act and as 'green burial' by SEPA. Prior to the 2016 Act, requirements for burial outside a burial ground were not defined in Scots law, and Local Authorities' treatment of this practice was inconsistent. Shetland Islands Council, unlike some other Local Authorities (e.g., East Ayrshire) does not have any published guidance on private burial, although there have been some cases of people being buried at home or on non-burial-ground land in the area. The 2016 Act enables the Scottish Government to enact regulations on private burial, which may cover<sup>27</sup>:
  - the process of applying to a Local Authority for permission for private burial, documentation to be provided and timing of applications
  - fees charged by Local Authorities
  - criteria for approval of applications for private burial and process for appeals
  - the size of land, maximum number of private burials, minimum distance between lairs

A standardised process for private burial will therefore come into being soon. Stakeholders thought that this would discourage people but more awareness and a process to follow could in fact encourage some to choose this option.

<sup>&</sup>lt;sup>27</sup> See <u>Burial and Cremation (Scotland) Act 2016, section 22.</u> These regulations will not apply to the interment of ashes or to remains from a pregnancy lost before 24 weeks.



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- Natural burial elsewhere in Scotland/the UK; however, natural burial ground operators interviewed reported that most of their clients choose sites that are as local as possible, unless they have another emotional connection to the site (e.g., they spent holidays there or grew up nearby). The nearest options to Shetland are in Aberdeenshire. There is only one community-owned natural burial ground in Scotland, Wilkies Wood in Findhorn, although other community landowners have shown interest in developing this in future.
- Cremation in Aberdeen and either scattering ashes informally or interring them at an SIC burial ground.

As a point of comparison, pricing for SIC burial grounds and selected natural burial grounds across Scotland is provided below. For comparison against all of these, the cost of an unattended cremation organised via Goudies and taking place in Aberdeen is £2600, of which £809 is the cremation fee for an attended service. This drops to £684 for an unattended service and £420 for an early morning, unattended service<sup>28</sup>. Even in the absence of a local crematorium, cremation is the cheapest alternative for Shetland residents.

Service	SIC (traditional burial)	Delliefure (Leedam), Aberdeenshire	Wilkies Wood, (social enterprise, part of Findhorn Hinterland Trust) Aberdeenshire	Clovery Woods of Rest (privately owned), Aberdeenshire
Burial plot	£653.94 (residents)	£975 - £2280 depending on area chosen	£1150	At time of burial: £1450 Advance reservation: £650
Plot for interment of ashes	£326.96	£485 - £1135 depending on area chosen	Separate rate not advertised	At time of burial: £360 Advance reservation: £220
Funeral director's fee	£2700 for unattended burial (Goudies)	Varies	Varies	Varies
Digging of lair/grave	£609.23	£515 for burial £210 for ashes	£700 for burial £248 for ashes	£800
Additional fees		£240 registration fee		

 $<sup>^{\</sup>rm 28}$  Typical fee as per Goudies CMA Statutory Standardised Price List



## 3.6. Partnership opportunities

There is potential to work with local artists and crafters to produce biodegradable coffins, urns or shrouds, as well as suitable grave markers. During this research we have looked into two possibilities, both using local materials and techniques: felted wool and woven baskets.

#### Felted wool

Felted wool funeral goods are already on the market, with the company <u>Bellacouche</u> in Devon being well recognised – it was highlighted by multiple people we spoke to during this research. Bellacouche sell soft, cocoon-like coffin alternatives, shrouds and funeral urns, which are promoted as being suitable for natural burial.

We spoke to Helen Hart of Hart of Shetland, who has a croft on North Yell with 42 Shetland Sheep and specialises in 'cruelty-free' sheepskins which use felted wool as a base. Helen was enthusiastic about the potential for linkage with her business and/or wool producers on Shetland more widely and shared some information on the felting process.

The price of wool is very low. Most wool from Shetland goes to a wool broker for sorting and grading. However, there is an opportunity to buy directly from crofters, so that the provenance is known. Rinsing, drying and scouring fleece prior to use is quite labour intensive. Hart of Shetland use a drum carder. Many wool producers on Shetland send their wool away to have it scoured, processed, and often spun before it is sent back to Shetland. Jamiesons have their own scouring process, but do not take in wool from small producers for scouring. Foula Wool have recently had funding to set up a woollen mill.

Once wool has been prepared, felting can be done relatively quickly, although flat felted cloth can need smoothing out with a machine to remove bumps. Felted wool products are completely biodegradable. Hart of Shetland use olive oil soap, avoiding palm oil which is often produced unethically. Their wool is undyed, so any colour and patterning comes from the sheep's natural coat and colouring. To make a rug backing of 1m \*1.25m Helen uses about half a kilo of wool, but the amount of raw material needed depends on the thickness – to produce a semi-stiff urn or casket or a soft coffin, the material would need to be thicker.

Waste wool is also sold by the kilo for felting by Jamiesons. This can require additional cleaning to remove vegetable matter. Undyed waste wool wood be preferable for producing goods for natural burial. Different wool varieties behave differently, so any wool sourced from waste would need to be of a suitable type. In general, the Shetland Flock Book Society Sheep has wool that is good for felting because it is very fine and shrinks down. The sheep that Helen keeps are a variety more similar to what the Vikings would have had, and have an inner and outer coat, known as tog and thel (words which Helen thought were likely to be from Old Norse) – from these sheep, the coarse outer coat is unsuitable for felting but the fine inner coat is suitable.

#### Shetland Aets

Heritage experts and makers Eve Eunson and Samantha Dennis are involved in a project to restore two historic Shetland crafts which are on the Heritage Craft Association's <a href="Critically Endangered List">Critically Endangered List</a>.

- <u>Fair Isle chair making</u>, using a knotted technique.
- Coiled straw basketmaking, using sewn technique.

Both of these use Shetland aets (or oats), *Avena Strigosa*, a different species to the common oat. Shetland aets were grown in the Northern Isles as winter feed for animals. This species grows well in poor soil on lowland areas of the islands. It can be grown on a small area so lends itself to cultivation on crofts. It is well adapted to the short growing season, sown in May to be harvested in September. Along with the above techniques, aets are used to make Kishies.

There are only 2 people known to be working in Fair Isle chair making technique, one professionally. Coiled straw basketmaking has 6-10 craftspeople working professionally or semi-professionally as it is more common in Orkney, where there is more good arable land and common oats will grow. In Shetland, there are only two makers.

Contributing to the decline of these crafts is a shortage of aets being grown in the isles, and a shortage of seed. Samantha and Eve's experience is that most crofters who grow them now do so for their novelty and historic value rather than as fodder. Poor weather conditions and birds eating the seeds are contributing factors<sup>29</sup>.

Going on the Heritage Craft Association's list has been beneficial as it has brought press coverage and interest. Eve and Samantha have done two winters of straw workshops, with people learning both endangered crafts. They have had 10 in each group this past winter, with ages ranging from 20 to 80 and a mix of women and men, longtime residents and newcomers. They have had really good feedback from the workshops – it is hard to get people to leave at the end of the session. Basketmaking has a claim to be the oldest and one of the most universal types of craft, and it lends itself to chatting while making.

The next stages of Samantha and Eve's project involve:

- Finding a retail outlet for the craft. Basketmaking crafts have been much lower
  profile in Shetland than knitting and wool, and bulky baskets can be more
  difficult to sell to visitors than smaller items like socks and jumpers. Owing to the
  labour-intensive process, these baskets would need to be priced at a premium.
- Promoting cultivation of Shetland aets and moving towards paying crofters to supply them, creating an incentive to conserve the species and therefore the craft. So far, they have relied on a supply of the raw material being donated.



<sup>29</sup> https://www.sasa.gov.uk/

More on the project can be found in **Shetland Times reporting**.

Samantha Dennis, who has a background in burial archaeology, has produced a scaled down model of a human coffin and a prototype of an urn for ashes using the coiled straw technique, both pictured below. Both makers are supportive of the natural burial ground idea and think there may be potential for partnership with their project. Coffins and urns produced using this technique would have a very low carbon footprint and being biodegradable, fit the ethos of a natural burial ground.



1 Scaled-down coffin and Iron Age inspired urn using endangered coiled basket technique, by Samantha Dennis (permission given by the maker to take this photofor use in this report only)

There are several challenges to be worked through:

 Based on the scale model, which took about 9 hours to produce, a full-size coffin with a lid would take about 420

hours (60 full 7-hour days). This could make them prohibitively expensive. Urns would take about 9-15 hours (1.5 to 2 full days) depending on the shape. This is much more time-consuming than wicker coffins using willow, which are popular at natural burial grounds.

- While there is a market for premium custom coffins, people seeking natural burial may be less likely to spend money on an expensive coffin than others – natural burial emphasises simplicity and materials that break down quickly in the earth.
- Both makers emphasised that they would support a natural burial ground offering an affordable alternative – premium products should not be pushed.
- Given production time, they would not be able to make coffins to order in time for burial. They may, however, be able to do this with urns.
- It isn't clear from the prototype whether the coffin could bear the load of a body.
   There may however be potential to adapt the Fair Isle chairmaking technique, on which a basket is woven onto a wooden base.
- It is not clear whether an urn would require a lining to contain ashes.

On the other hand, there are several opportunities for a mutually beneficial partnership:



- The prototype urn is based on an iron-age design, from fragments found at Scatness. Urns could be produced based on different periods of Shetland's history, including neolithic as well as Norse artifacts. A focus on earlier periods of history could tie in with efforts to secure World Heritage status for sites in the south of Shetland mainland, and would be a better reflection of the range of heritage sites found around the islands.
- 'Make your own coffin' workshops have been promoted by willow-weavers: see Naturally Useful and Wyldwood Willow, both priced around £650 without accommodation.
- If a lining is needed to contain ashes, it could be produced from felted wool, which should be easy to source locally. There was a suggestion to look into waste material from Jamiesons woollen mill.
- If the Fair Isle or coiled basket techniques do not work for coffins or urns after further testing, the Kishie technique could be adapted instead. This can also be done using Shetland aets but produces a softer, more bag-like basket. There are more people who make Kishies, and they may be quicker to make.
- Shetland-produced funeral goods could be exported for use at other natural burial grounds in the UK.



2 Kishie, Shetland Museum and Archives

#### 3.7. Potential business models

There are two main options in terms of the business model for a natural burial ground. We have also included information on an alternative, interment-only model (a columbarium) being developed in the South of England, which may be worth exploring if site investigations (see sections 3.7 and 3.8) are not positive or could be integrated into a natural burial ground development.

a. Operating one or more natural burial grounds independently

A new natural burial company could be set up for Nesting or Shetland as a whole. This might operate across a single site (or multiple sites but given the small population size we have assumed that a single site at an accessible point on the Shetland Mainland would be sufficient).

An example of a natural burial ground operated independently by a community landowner is Wilkies Wood in Moray, operated by the Findhorn Hinterland Trust. The site was originally set up by Findhorn Hinterland Group. Planning permission was granted in 2008 for up to 700 lairs. The Hinterland Group remained unincorporated until 2015,



when Findhorn Hinterland Trust formed as a SCIO, in anticipation of the Burial and Cremation Act (Scotland) 2016 establishing a legal definition and responsibilities of a Burial Authority. The SCIO then purchased the site for a nominal fee from the Findhorn Foundation<sup>30</sup>.

The most recent annual report and accounts<sup>31</sup> for the Trust show:

- The Trust now has four people in its burial team. Previously, a single coordinator had taken responsibility for liaising with customers and funeral directors.
- In the financial year to 2023, 9 burials took place they note that 3 were longterm community members.
- The total number of burials at the site by financial year ending 2023 was 51. A further 66 lairs have been reserved, and 112 are available for sale.
- Lair sales generated £18,554 in FY 2023 and £13,878 in FY 2022. Costs attributed to this activity were £6,388 in FY 2023 and £3,973 in FY 2022.
   Without an apportionment of administration and overheads, this is a direct cost of 29-34%.
- The Trust treat all burial ground income as restricted, and maintain a restricted fund dedicated to Green Burial. Accounts state that this fund is intended in part to cover future expenditure associated with burial and caring for the burial ground. This suggests that the main purpose of this activity is not to support the Trust through income generation.
- However, the restricted fund also covers potential refunds to 52 lair holders who
  purchased their lair from the previous land managers, Findhorn Hinterland Group,
  under terms which allowed an 80% refund should their circumstances change so
  that they have to be buried elsewhere. Findhorn Hinterland Trust no longer offers
  refunds but honours the terms of past agreements. This means that the Trust has
  to maintain a larger restricted fund.

Marketing of the Wilkies Wood burial site is not intensive – there is a simple set of pages within Findhorn Hinterland Trust's website, very little imagery of the site and at the time of reviewing these, some information was out of date. With the Findhorn eco-village (population 500+) nearby, Inverness (population 47K) within an hour's drive and Aberdeen (population 260K) within two hours, it appears that there is enough demand without active promotion.

b. Lease and profit share arrangement with an existing operator

Leedam Natural Burial operates on a profit-share basis under a 99-year lease. Income and maintenance costs are split between the landowner and the operator. Landowners

<sup>31</sup> OSCR Charity Register



3

<sup>30</sup> Community Woodlands Association: Information Note On Green Burials

can cut costs and therefore maximise their share of profit by acting as the contact on site, carrying out maintenance and digging graves. For the operator, this means that overheads such as office and staff costs and marketing (which is much more intensive than that of Wilkies Wood) can be split across multiple sites.

Leedam Natural Burials has advised that they are not seeking new sites. The Natural Burial Company advertise that they are open to new partnerships.

In this business model, revenue for CDCN or a new partnership organisation as landowner would come from:

- Profit share in burial, interment of ashes, memorial sales and renewal of memorial rights, either at the grave site (if compatible with management of the land as a meadow, woodland or similar) or elsewhere, such as a site entrance. If memorial rights are sold for a fixed period, their renewal can fund maintenance of sites and overhead costs after burials have ceased or slowed.
- Gravedigging, usually charged separately and undertaken by the landowner rather than the site operator (where these are different).

This would be dependent on a suitable partner being identified.

c. 'Burial mound' or similar structure - interment only

Sacred Stones is a private limited company which has built four and operates two 'long barrows' in England and is in the process of building three more. One of the founders has shared information and offered future support if CDCN decides to pursue this option.

People can have their ashes interred within these structures, built in stone according to tradition, which the company says, dates back millennia: "The closest prehistoric parallels for the modern columbaria, such as those proposed, are Neolithic sites known variously as chambered cairns, long cairns and passage graves, the best-known examples being West Kennett in Wiltshire and Maes Howe on Orkney"32. They have partnered with academics from various universities in developing the design of the barrows. There is no power within the barrow and candles are used for lighting when visitors come in. All construction materials are of natural origin and they avoid any specific religious or cultural reference.

Despite the historic inspiration, in conversation with one of the founders (who has offered further free advice if required), Sacred Stones said that they do not aim to replicate or reinstate practices from historic times, which would probably seem barbaric to modern audiences. Their market is *not* people with a specific interest in archaeology or the neolithic. Instead, the barrows appeal to a growing subset of people who are spiritual, but not religious, and to a universal desire to gather. Visiting the sites, people have said "I feel like I'm coming home".

<sup>32</sup> Gedling Borough Council Planning Application Documents 2023/0913



They encourage people to visit the sites and engage with them: one of the barrows has been the stage for an original National Youth Theatre production and a performance of Beowulf. They have had musicians play during construction and have had artists create installations. They have engaged with local communities to take part in the building – which drove off-plan sales even before construction was complete. Soulton Long Barrow is built so that its entrance aligns with the midsummer sunrise and sunset at winter solstice, which brings people to visit every year. Overall, the ethos is "not a place for death, but a place for life".

The various Barrows have different operating models:

- Soulton Long Barrow is within the Soulton Hall estate in Shropshire. Sacred Stones has a joint venture with the landowner.
- Willow Row Long Barrow is on private farmland in Cambridgeshire. They hold a 99 year lease, with option for freehold.
- Planning permission was granted in 2023 for a barrow within George's Lane cemetery, Nottinghamshire, which is owned and operated by A.W. Lymn The Family Funeral Service Ltd.
- Two other barrows were built for other operators and the company has no ongoing involvement.







At the sites it manages, the company generates income from:

- Niches, leased for terms of 1 year (£800 for 1 urn) to 99 years (£1950 for 1 urn).
   Larger niches are also available for up to 5+ urns (£7000 for 99 years) full pricing <a href="here">here</a>. All niches come with right to exclusive use of the barrow for a service, a blank stone tablet to seal the niche, and a handmade felt urn. Scale varies: the newest barrow will contain 756 niches but they have made proposals for sites as small as 150 niches.
- Attended services with a local guardian, £50/hr on weekdays and £70/hr on weekends. These guardians are not employees and are paid hourly, with some regular maintenance time plus availability for events and services.



- Extra items for niches: aluminium doors £390, fitting of glass panel or stone tablet £80, personalisation on request.
- Hire of items for services: wooden folding chairs £2 each, gazebo £30
- Hire of the barrows for family events or private services (other than an initial placement or memorial service) £200.

They report that, before Covid and recent cost inflation, the initial investment in building a barrow would pay off in three years, and that the model "washes its face" although it is "not a financial firecracker". With regard to ventures run by others, factors that can affect their financial performance are the brand or identity of the organisation running it, and the design specifics.

A possible advantage of the barrow model over a full natural burial ground in Shetland is that, while planning permission would be required for the new structure, the approval process is similar to any other building, i.e., with fewer constraints on soil and groundwater conditions (see section 3.7 below). Although their recent planning application in Nottinghamshire was initially refused due to being on green belt land, they were able to re-site the building and reduce the roof hight to obtain approval. Lack of previous experience among planning officers can be a challenge, but they have been able to address all their concerns. Sacred Stones report that, much like a natural burial ground, a barrow can be a net gain for the environment: birds nest in crevices in the stone, they attract beetles and invertebrates and have green roofs.

On the other hand, there are a few challenges to keep in mind:

- The small size of the local market is an issue, as with any option covered in this report. The company has looked into building a barrow in Ireland, given the demand from the diaspora, but did not proceed with this. Their founder thought that over-relying on this market without much local interest would not work. Part of the idea is for people to feel a sense of ownership over their loved one's niche and visit it frequently, feeling a sense of civic pride that encourages them to take care of the whole site. One idea discussed was to limit the longer term use of niches to residents and allow non-residents to purchase niches only for a limited period of time, after which their ashes could be scattered at a pre-agreed location.
- Sourcing stone. Limestone is generally used for their construction as it is malleable. There is no working limestone quarry on Shetland and although the stone occurs naturally on the islands, it is a harder type. Importing stone from elsewhere would increase cost and carbon footprint but other locally-sourced stone (such as sandstone) could be explored.
- A built structure such as a barrow is likely to require more maintenance than a natural burial site.



- When building a corbelled roof, as their existing structures have, the diameter of
  the chamber is correlated to its height. The roof of the structure contains no
  niches, so is pure cost, whereas wall space generates income. This limits
  maximum size. They are looking into building open-air "sky barrows" (a term they
  created) as a response to this.
- Part of their concept is about attracting people to visit and interact with the barrow (at least the exterior). There was understandable concern among stakeholders about encouraging spectators to view and possibly interrupt local people's private services or moments of reflection. The contact we spoke to at Sacred Stones felt that clearly worded Terms and Conditions would be needed to communicate to niche holders about public access and that a site outside of a main town would not have problems with casual onlookers but also that an element of culture change was needed to embrace the full range of potential of sites like this for creative and community use.

A similar model is being developed at Kinghorn in Fife by the <u>Kinghorn Community Land Association</u>. A barrow-style columbarium will sit alongside a natural burial ground and both together aim to address a shortage of burial space in the existing cemetery.

## 3.8. Regulations and standards

Establishment of burial grounds

Natural burial grounds are subject to the same regulation as any other place of burial. In the Groundwater Protection Policy for Scotland V3 (November 2009)<sup>33</sup>, SEPA recommends that bodies should not be buried:

- Within 250 metres of any spring, well or borehole used as a source of drinking water
- Within 50 metres of any other spring, well or borehole
- Within 50 metres of any watercourse
- Within 10 metres of any field drain.

Although there are many springs, wells, boreholes and watercourses on Shetland, use of these for drinking water is rare.

#### SEPA also recommends:

- There should be no standing water in the bottom of each burial pit when first dug
- There should be no sand or gravel at the bottom of each burial pit
- There should be at least one metre of subsoil below the bottom of the burial pit

<sup>33</sup> SEPA: Groundwater Protection Policy for Scotland V3 November 2009



• The burial pit should be deep enough to give at least one metre of covering soil (this applies to each burial pit but means that depth of soil will be a key criterion for site selection).

In the same Groundwater Protection Policy for Scotland, SEPA sets out recommendations on 'green burial;' however, this is defined as 'burial outwith a site covered by the Burial Grounds (Scotland) Act 1855 in private grounds', i.e., those that would be termed Private Burials under the Burial and Cremation (Scotland) Act 2016. There are no specific statutory requirements on natural burial grounds, although there is an optional industry code (see below).

## Operation and maintenance of burial grounds

The <u>Burial and Cremation (Scotland) Act 2016</u> replaces previous legislation on burial and cremation, makes provision for the inspection and regulation of burial authorities, cremation authorities and funeral directors and enables provision to be made for the licensing of funeral directors. Following the Act, a <u>Burial Regulations Working Group</u> was formed to work on the regulations for burial authorities and burial grounds. Meetings of this Working Group concluded in December and at the time of writing, the regulations have not yet been published. An SIC staff member who was part of the Working Group reported that they are expected to be much more prescriptive than in the past, particularly in terms of maintenance of structures and walkways.

Relevant content of the Act is noted below. This should be reviewed once the Regulations are available.

- Under the Act, the person having responsibility for the management of the burial ground is referred to as the burial authority. If CDCN operates a natural burial ground, it would be a burial authority, and therefore subject to the same regulations as Local Authorities with many burial grounds.
- The Scottish Ministers may regulate the management of burial grounds by burial authorities, including the maintenance of buildings, walls, fences and any other structures on the burial ground, as well as the access road to the site. Under the proposal put forward for consultation, each burial authority would be required to prepare and maintain a 'management plan' covering all the grounds it manages<sup>34</sup>. This aspect of upcoming regulations is of particular concern for SIC and other burial authorities managing a large number of historic sites. A natural burial ground with no buildings and minimal walls or fences would have less to maintain, although potential costs of maintaining an access road should be considered.

<sup>&</sup>lt;sup>34</sup> Scottish Government: <u>Management of burial grounds, application for burial, exhumation, private burial and restoration of lairs: regulation in Scotland</u>



- The Scottish Ministers may regulate the depth at which human remains can be buried.
- Burial authorities must maintain a register containing information on the burials that have taken place, and the regulations may specify the form of this information.
- People holding right of burial in a lair may appeal to the burial authority for the
  right to erect headstones or other memorials. Placing headstones or memorials
  on graves is not common practice at natural burial grounds. However, the Act also
  states that "a burial authority may refuse such an application if, in the opinion of
  the authority, it is reasonable to do so".

## Industry bodies and standards

The <u>Association of Natural Burial Grounds</u> is the accrediting body for the natural burial sector, and is run by a small charity, the Natural Death Centre. The ANBG has a code of conduct but reportedly limited capacity to enforce this among members. Membership is not universal in the sector.

Membership for the Association of Natural Burial Grounds is calculated by the number of plot sales in the previous 12 months. Given expected numbers of burials at a Shetland natural burial ground, the relevant tiers are:

- New/provisional members: £110/year.
- 0-5 plots sold in previous 12 months: £66/year.
- 6-10 plots sold in previous 12 months: £132/year.
- 11-20 plots sold in previous 12 months: £198/year.
- 21-30 plots sold in previous 12 months: £264/year.

Many natural burial grounds are also members of the <u>Institution of Cemetery and Crematorium Management</u> (ICCM) which exists to raise standards for bereaved people through the promotion of best practice, guidance, accredited training and education.

The relevant corporate membership rates for 2024/2025 are as follows:

- Unitary Authority/District Council/London Borough or Burial or Cremation Companies: £465.
- Associate Corporate Membership (those not directly providing burial and/or cremation services, e.g., manufacturers and suppliers): £170.



#### 3.9. Next steps

Establishing a natural burial ground will be dependent on identification of one or more suitable sites.

The site for a natural burial ground needs secure, long-term tenure, which can be in the form of a long-term lease or ownership. Generally, sites have no other development value. They must also meet the criteria noted in the previous section.

A natural burial ground operator stated that their screening process for new sites is as follows:

- a) Desktop environmental search, checking soil suitability, aquifers, extraction points for drinking water, surface water features on existing maps.
- b) Study of road access and siting for parking area.
- c) Onsite investigations: trial pits are dug across the site to check depth of soil and character of it. These are monitored over the course of a year to check for seasonal groundwater variations.
- d) Planning process, which entails groundwater risk assessment. It should be noted that SEPA is a statutory consultee and may request measures to mitigate any adverse effects on groundwater; if SEPA considers that unacceptable adverse effects cannot be mitigated, SEPA will object. As well as overall approval for the site, the planning process may limit the number and location of burials within a site

Archaeological and ecological screening, to identify sensitive areas within a site where burials should be avoided.

## 4. Alkaline Hydrolysis

#### 4.1. What is involved?

This process is referred to under various names, including water cremation, Resomation and other trademarks relating to variations on the process<sup>35</sup>.

There are various patented machines which all use a strongly alkaline solution of potassium hydroxide to reduce a body to bones, which are then ground to an ash-like powder. The primary benefits of alkaline hydrolysis in general over cremation are the efficiency and reduced environmental impact.

Patented processes for Alkaline Hydrolysis

In the process developed by <u>Resomation Itd</u>, the deceased person is delivered in a biodegradable shroud inside reusable casket to the Resomator unit. The system uses high temperature (150-160c) and high pressure to dissolve bodily tissues. The remains are then dried and ground into a white, sterile ash-like powder, which can be returned to the relatives. The process takes on average 3.5-4 hours<sup>36</sup>.

The company say that the Resomator: "does not produce airborne mercury emissions, has a very small carbon footprint and uses up to five times less energy". Each Resomation uses around about 90 kWh of power and 1500 L of water<sup>37</sup>. Other cited benefits which are more specific to this version of the technology are that it is highly automated, so can operate unattended, and is quiet and suited to family viewing – the machine remains stationary in a horizontal position, which the company describes as dignified.

BioResponse Solutions, also US-based, sells a variation on this technology, marketed as Aquamation. The company also manufactures machines for disposing of pets' bodies, and BioLiquidator machines for livestock, all using alkaline hydrolysis technology. The main difference between the two products appears to be that the Aquamation involves a machine that tips into an angled position during operation, whereas a Resomator stays in the 'more dignified' flat position. BioResponse Solutions also describe operating time of 6-8 hours or 18-20 hours, depending on temperature, which can be as low as 95.6c with a longer processing time.

A third manufacturer, <u>AquaSolve</u>, is based in the Netherlands, and also offers both human and animal versions of the technology, which it calls the Hydrolyser. They state

<sup>&</sup>lt;sup>37</sup> Robinson, Georgina: "<u>Dying to Go Green: The Introduction of Resomation in the United Kingdom"</u>, Religions, 2021, 12(2), 97. This article gives a thorough history of the technology and steps towards its introduction in the UK.



<sup>&</sup>lt;sup>35</sup> In consultation, 'water cremation' has been the main term used, as it was judged to be the non-trademarked term most acceptable to the public; however, other terms have been given in brackets. In the survey analysis, we refer to water cremation, as this was the term that people were asked about. In the body of this report, we will use the generic term 'alkaline hydrolysis' unless referring to one of the various patented versions of the technology.

<sup>&</sup>lt;sup>36</sup> Resomation: What is Alkaline Hydrolysis?

that processing time is around 6 hours (less for smaller animals). Their sales brochure references the fact that their process takes place at atmospheric pressure, unlike that of Resomation (Resomation's sales material says that high pressure is necessary to maintain consistent high temperatures for sterilisation).

In the rest of this section, we focus primarily on Resomation, given that it is the best recognised in the UK, is the only alkaline hydrolysis company that has been given permits to discharge wastewater into the sewer systems by other UK council areas and has a sales representative in the UK. Nevertheless, competition from established or new companies is likely to grow as the technology becomes regulated and normalised in the UK.

#### 4.2. Survey findings

All survey respondents were asked whether they were aware of "water cremation (also known as alkaline hydrolysis or under the trademark Resomation"). 21.2% of respondents knew about it and a further 27.4% had heard about it but didn't know what it involved, while 51.5% had never heard of it. This was a lower level of awareness than natural burial. There was no significant relationship with age. The percentage who knew about water cremation was similar in respondents from Shetland to those from the rest of Scotland but both were lower than respondents from the rest of the UK.

Survey respondents were then given a brief explanation of the process and were asked whether they would choose this for themselves and/or a loved one. Overall, water cremation was less popular than natural burial. More than half would nonetheless consider this option for themselves, but people were less likely to consider it for a loved-one.

- 52.8% would consider water cremation for themselves. The reasons given in comments highlighted the environmental benefits, saving space and convenience (if available locally).
- Fewer people would consider it for a loved-one than for themselves: 20.9%.
- 44.2% would not consider this either for themselves or for a loved-one. Reasons
  why people would not consider this include a perceived higher cost,
  environmental concerns around energy use and the use of hazardous chemicals
  and feeling uncomfortable with the idea and a preference for other methods.

The survey does not show any significant relationship between people's age and the likelihood of them choosing water cremation for themselves but younger people are more likely to consider it for their loved ones than older people:

- 29% of those aged 25-34 and 29.6% of those aged 35-44 would consider water cremation for a loved one.
- Only 9.1% of those aged 75+ would consider this for a loved one.



On water cremation, there was no significant relationship with place of residence – people from Shetland were about as likely as those elsewhere in Scotland or the UK to consider this option.

Respondents from Shetland only were asked whether they supported the development of water cremation in Shetland as an alternative to traditional burial and cremation. More Shetland residents were positive than negative about this:

- 26.6% were strongly positive about water cremation and a further 28.6% were positive.
- 31.1% were neutral on water cremation.
- 6% were strongly negative and a further 7.8% were negative on water cremation.

#### 4.3. The market nationally and internationally

In the 2021 YouGov attitudes to death study, 'other' options (which would include water cremation) accounted for only 4% of respondents, rising slightly among the youngest age brackets<sup>38</sup>. However, lack of awareness is a likely factor in this. According to a YouGov study commissioned by Coop Funeralcare, 89% of UK adults had not heard of the term but when participants were informed about the process, 29% would choose it for their own funeral, if available<sup>39</sup> - lower than our survey but still a substantial number.

In the USA, the alkaline hydrolysis process is legal in 19 states and has been functioning commercially for a decade. Use of alkaline hydrolysis to process the remains of pets is also legal all over the USA and is well established<sup>40</sup>. In the UK, the process is legal as long as it does not infringe sanitation laws or offend public decency, but at present it has not been defined in law and there is no legislation on it nor guidance on how it should be carried out<sup>41</sup>. However, Scotland is likely to be the first part of the UK to introduce regulation – see section 4.6 below.

<u>Kindly Earth</u>, based in Yorkshire and incorporated in 2021, has rights for the resale of Resomation equipment in the UK. On Companies House, LBBC Limited, the parent company of Resomation Ltd, is listed as a person with significant control in Kindly Earth. Coop Funeralcare have announced plans to introduce Resomation via Kindly Earth, and it is likely that this pilot is the reason for LBBC securing effluent permission in Yorkshire<sup>42</sup>. At the time of writing, there is no centre for Resomation operating and the process has

<sup>&</sup>lt;sup>42</sup> Resomation: Co-op Announces Biggest Change To Funerals In Over 120 Years - Resomation To Be Available In UK



<sup>38</sup> YouGov Death Study

<sup>&</sup>lt;sup>39</sup> Coop Funeralcare: The Future of Funerals. NB Coop Funeralcare have a stake in the technology through their partnership in Kindly Earth.

<sup>&</sup>lt;sup>40</sup> Robinson, Georgina: "<u>Dying to Go Green: The Introduction of Resomation in the United Kingdom"</u>, Religions, 2021, 12(2), 97.

<sup>&</sup>lt;sup>41</sup> As above

taken place only in an experimental setting. However, some funeral directors are advertising that they will be partnering with Kindly Earth to offer this in future<sup>43</sup>.

Public perception, particularly distaste at the idea of the wastewater entering the water supply, has so far held back the spread of the technology in the UK. Plans to install a Resomator by Sandwell Council at Rowley Regis Crematorium in the West Midlands were put on hold in 2017 when Severn Trent Water refused the council a trade effluent permit. A water industry body stated at the time that it had "serious concerns about the public acceptability of this"<sup>44</sup>. Reportage also focused on this aspect: a Daily Express article at the time was titled "Council to flush dead bodies down the drain in macabre 'liquid cremation' plan"<sup>45</sup>. Resomation Ltd has since commissioned several studies to prove that wastewater from the process is free from DNA and safe for sewer systems and wastewater treatment plants and consent to discharge water was subsequently granted to the parent company of Resomation Ltd, LBBC Limited, in Yorkshire in 2020<sup>46</sup>.

In Ireland, a Resomation company is already in operation: <u>Pure Reflections</u> in County Meath. The service is priced at €1500, including 40 minutes' use of the onsite chapel. The company operates in partnership with funeral directors across Ireland and does not sell the Resomation service directly to the public.

As Resomation has not yet been introduced as a funerary practice in the UK it is difficult to know how religious traditions and their leaders will respond. The 'Abrahamic' traditions of Christianity, Islam, and Judaism have historically taught that the human body should be buried at the end of life in order to prepare the mortal body for a form of immortal resurrection. However, additionally, all Christian denominations, with the exception of the Orthodox Church, permit the practice of cremation<sup>47</sup>.

## 4.4. The market locally

Although the process of alkaline hydrolysis is different to that of cremation, the end product is similar and the process lends itself to a similar funeral service (or lack of one)<sup>48</sup>. Goudies report that an increasing number of Shetland residents are choosing cremation rather than burial, although still far fewer than national figures (around 20%).

SIC state in their Burial Grounds Management Policy that there was support from those consulted for either a new crematorium or alkaline hydrolysis as an alternative to burial ground expansion. Neither a new crematorium nor alkaline hydrolysis is currently under consideration by SIC, which views both as unviable given Shetland's population size, and

<sup>&</sup>lt;sup>48</sup> Robinson, Georgina: "<u>Dying to Go Green: The Introduction of Resomation in the United Kingdom"</u>, Religions, 2021, 12(2), 97.



<sup>43</sup> Harrison Funeral Home: UK's First Water Crematorium Announced for Spring 2023

<sup>44</sup> BBC: Water Cremation Plans On Hold Over Environmental Fears, 18th December 2017

<sup>&</sup>lt;sup>45</sup> The Express: Council to flush dead bodies down the drain in macabre 'liquid cremation' plan, December 18th 2017

<sup>&</sup>lt;sup>46</sup> Resomation: Successful Study of Water Cremation Completed for Yorkshire Water

<sup>&</sup>lt;sup>47</sup> Robinson, Georgina: "<u>Dying to Go Green: The Introduction of Resomation in the United Kingdom"</u>, Religions, 2021, 12(2), 97.

alkaline hydrolysis as unpromising in terms of reducing emissions while the power grid is fossil fuel-based.

Because this is a very new technology but one that is likely to become much more established, calculating the potential market can only be done in very speculative terms.

The 20-year average number of deaths per year recorded in Shetland is 216. Of these, some will die on the mainland and be cremated (or other) there. At present, somewhere between 15 and 25% choose cremation, but this is growing. Assuming a relatively steady death rate in future, given population projections, and assuming 30-40% would choose alkaline hydrolysis in Shetland given the alternatives of transport to the mainland for cremation or burial in a reducing choice of burial grounds, an alkaline hydrolysis centre on the islands would process perhaps 60-80 funerals a year.

Assuming **pricing of £700** (slightly higher than but comparable to the undiscounted fee for unattended cremation in Aberdeen), this would equate to revenue of **£42,000 to £49,000** a year.

In terms of running costs, energy will be a key one. Uswitch quotes average rates for small business using 15,000 - 25,000 KWH/yr. at 40.7 p/KWH & 116.5 p daily standing charge. Assuming 80 resomations a year, as above, this equates to £2930.40 in energy use for resomation alone + £425.23 standing charge = £3,355 a year excluding general building running costs. Shetland pricing is likely to be higher than this.

## 4.5. Competition

Existing options that people are likely to choose instead of alkaline hydrolysis are:

- Standard cremation, with the body being sent to Aberdeen. The procedure and cost for this is covered in section 3.4 on natural burial.
- If environmental concerns are particularly important to the deceased or their family, they might opt for burial without embalming and with an eco-friendly coffin (as offered by Goudies) at an SIC burial ground, for private burial on their own land, or for natural burial at one of the existing sites across Scotland and the UK – again, see section 3.4.
- If the pilot of Kindly Earth in the UK is successful, it is likely that a similar model to Pure Reflections in Ireland will emerge, with a small number of alkaline hydrolysis centres working with funeral directors regionally or nationally. In future, Shetland residents may therefore choose Resomation at a mainland Scotland site, with Goudies coordinating transport as it does now with cremation.



#### 4.6. Potential business models

Introducing Alkaline Hydrolysis in Shetland would be subject to several challenges:

- The small size of the market, as highlighted above.
- Current uncertainty as to regulations (see next section).
- High cost of entry: not just the purchase of the machinery, but also a suitable building to house it.
- Repair, maintenance and spares. It was noted by SIC that repair of any equipment
  can be particularly costly and logistically difficult in Shetland, let alone technology
  that is new to the UK. Although there may be some crossover with other sectors
  present in Shetland (e.g., work with pressure vessels in the oil and gas industry),
  this would require further investigation. Spare parts for Resomators appear to be
  supplied from the USA, although our attempts to confirm this with Kindly Earth
  have been unsuccessful.

Given the high cost of this technology, the most likely model may be a partnership with either the public or private sector (although the council has ruled out further exploration for the moment).

#### 4.7. Regulations and standards

As noted above, alkaline hydrolysis is currently legal but lacking any regulatory framework in the UK or Scotland. Section 99 of the Burial and Cremation (Scotland) Act 2016 enables Scottish Ministers to make regulations to extend the application of the Act to encompass new methods of disposal of human remains. The Scottish Government launched consultation on alkaline hydrolysis in August 2023, as part of a collection of consultations on topics relating to upcoming regulations under the 2016 Act. The consultation paper proposes that statutory requirements similar to the <a href="Cremation (Scotland) Regulations 2019">Cremation (Scotland) Regulations 2019</a>, which cover management of crematoria, record keeping and handling of ashes, be developed for alkaline hydrolysis<sup>49</sup>. The consultation closed in November 2023.

The consultation document notes that: "Any organisation proposing to offer alkaline hydrolysis will need to detail in their planning application to the local authority how they intend to dispose of the liquid and demonstrate that they have obtained the relevant consents from Scottish Water or SEPA." If the intention is to discharge to the sewer system, Scottish Water will regulate consent to discharge liquid (Trade Effluent Consent) under <a href="mailto:section 26">section 26</a> of the Sewerage (Scotland) Act 1968 and will oversee and monitor the liquid discharged. Meanwhile, if the liquid is discharged to the environment, SEPA would be the regulator - SEPA have advised that discharge to the water environment would only be considered where there is no public sewer available 50.

<sup>&</sup>lt;sup>49</sup> Scottish Government Consultation Paper: <u>Alkaline Hydrolysis ("water cremation) regulation in Scotland</u>
<sup>50</sup> Scottish Government Consultation Paper: Alkaline Hydrolysis ("water cremation) regulation in Scotland



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A report by the Health Council of the Netherlands, referenced in the Scottish Government's consultation, highlights that there may be alternatives to discharging water into the sewer system: "for example, the effluent can be treated locally, immediately after completion of the alkaline hydrolysis process. When using a purification method that preserves nutrients (such as anaerobic purification), the locally purified effluent can be used to fertilise fields, commercial forests, or places of remembrance, for example"51. The consultation document says that such methods may become available in Scotland, subject to the outcomes of the consultation.

## 4.8. Next steps

The Resomator S750 technology is expected to be available to buy via Kindly Earth in the near future. Although the price is not published by the company and they have not responded to our requests for information, media reportage puts the price of the machinery at **about £330,000**. Resomation Ltd say that they will: "help design/cost your space and the complete system requirements, assist with regulatory authorities, assist in project management, install/commission and give individual operator training". However, their website only references availability of service engineers in the USA<sup>52</sup>. The company's spare parts depot is located in Ohio. It is unclear so far what pre and post sales support will be available in the UK via Kindly Earth.

Aside from the cost of purchasing the alkaline hydrolysis unit, this would have to be installed in a suitable building, with public areas and water treatment facilities. At current construction costs, this is likely to take total startup cost to over £1 million.

The BioResponse Solutions LT-500 low temperature machine is described in their brochure as optimal for facilities with fewer than 200 cremations a year, given slower operating time. The company advertise this machine as being the lowest cost, lowest energy consumption and lowest cost per process<sup>53</sup>. An option such as this may be more suited to a small population size like Shetland than a high-temperature, high throughput machine like the Resomator, but BioResponse Solutions do not have a dealer in the UK, or any precedent of having been given permission to discharge water. The company does note that "more than half our sales are to overseas customers" and that they offer remote support.

Variations on the alkaline hydrolysis technology are likely to become more common as this option gains recognition and a legal framework in the UK. While this option does not seem viable at present, CDCN could continue to monitor the availability of technology suited for smaller facilities in future.

<sup>53</sup> Aquamation Human Brochure



<sup>&</sup>lt;sup>51</sup> Health Council of the Netherlands: The Admissibility of New Techniques of Disposing of the Dead

<sup>52</sup> Resomation: Key Attributes and Advantages

## 5. Viking-themed ceremonies

#### 5.1. What could be involved?

The suggestion of Viking-themed funerals originally arose as part of feasibility research for the Aald <u>Sk</u>ül buyout. After research by CDCN, it has been determined that this would probably involve burning a symbolic, scaled down Viking-style galley containing some or all of the ashes of the deceased.

We focus on this in this section, although there are other ways that Norse/Viking and other Shetland heritage could be incorporated into funeral and memorial ceremonies, particularly a natural burial ground with a memorial area or columbarium and links to suppliers using traditional craft methods (see section 3).

#### 5.2. Survey findings

Respondents from outside Shetland were asked whether they would be interested in a Norse/Viking funeral ceremony, either for themselves or for a loved one.

- Overall, 38.7% would consider this for themselves. The main reason for considering this option given in comments is Norse ancestry. The sample of nonresidents is not representative of the general population, as many of them had a connection to or interest in Shetland, so this figure would likely be much lower if asked at random.
- Fewer people (19.1%) would consider a Viking-themed funeral or memorial for a loved one than for themselves.
- Over half the non-residents (55.5%) would not consider this at all. Reasons why
  not included not having or feeling connected to Norse heritage, environmental
  concerns, and logistical issues.

There were significant differences between those with and without a connection to or interest in Shetland.

- Among respondents with an interest in Norse/Viking heritage, 67.7% would be interested in a Viking ceremony for themselves.
- Those with family, friends or loved ones living in Shetland were less likely to consider this option (32%).
- Among those with no connection to or interest in Shetland, only 13.9% would consider a Viking ceremony for themselves.

Although this question was targeted to non-residents, some residents said in comments elsewhere that they would be interested in this option.

Respondents from Shetland only were asked whether they supported the development of these funeral ceremonies.



- A combined 40.3% felt either strongly positive or positive.
- 41.9% felt neutral.
- A combined 17.8% felt either strongly negative or negative about this option.
- Younger residents were more likely than older ones to feel strongly positive, and the older age groups were the most likely to feel strongly negative.

#### 'Funeral tourism'

The term Funeral Tourism has been used to refer to visitors seeking to watch or participate in funeral ceremonies or related customs. Most stories on this relate to African countries, such as Ghana, where the tourism minister proposed promoting vibrant local funeral traditions as an attraction<sup>54</sup>.

At our focus group with public and private sector stakeholders, it was pointed out that Orkney funerals have been disrupted by cruise tourists entering Kirkwall cathedral despite closure notices, taking photos and reportedly even trying to remove the lid from a coffin<sup>55</sup>. These incidents were also seen as an instance of 'funeral tourism.' The participants in this session all agreed that care must be taken to avoid this kind of incident – for example, ensuring that an isolated location is chosen. Attracting spectators may be a risk with Viking-themed funeral ceremonies, and this was also noted by some survey respondents.

#### 5.3. The market

As a niche service appealing to only a subset of the 4% of people who say they want a lavish funeral for themselves<sup>56</sup>, tapping into a national and international audience will be key. The following tourism trends are relevant, as market research on other services (e.g., natural burial) indicate that people are much more likely to choose a location as a final resting place if they feel a strong connection to it. It should be noted, however, that the pool of potential clients in a given year even among Shetland visitors with such connections will be small.

#### Ancestral tourism

Ancestral tourism is a notable market in Scotland, with 2015-16 research noting that 20% of visitors nationally are visiting family and friends and 9% specifically exploring "my Scottish ancestry". This proportion grows to 29% for "long haul" visitors to Scotland. For Shetland, specifically, 24% of all visitors mention ancestors living in Scotland, higher than any other local authority area<sup>57</sup>.

<sup>&</sup>lt;sup>57</sup> Visit Scotland: Scotland Visitor Survey 2015 & 16, Connections to Scotland Extract



<sup>&</sup>lt;sup>54</sup> Pulse (Ghana): We'll provide free buses to convey tourists to funerals - Minister explains 'funeral tourism'

<sup>55</sup> SAIF Insight: Tourists Disrupt Orkney Funerals

<sup>&</sup>lt;sup>56</sup> Cost of Dying Report 2024, as cited above.

These statistics sit slightly at odds with the more recent (2019) Shetland Island visitor survey which explored the reason for visiting Shetland. It only notes 6% as visiting family and friends and there is no specific mention of ancestry, although this could account for some of the 13% covered by "other" 58.

Heritage and archaeology tourism

The same survey notes nearly half (49%) of visitors are interested in the history and culture with 17% specifically "interested in archaeology" and 10% noting "an event/festival" as the motivation.

Finding data specific to Viking heritage is difficult, as even deeper dive studies like the UHI/Institute for Northern Studies paper Viking and Norse Heritage Tourism in Scotland do not address the levels of interest, instead focusing on the provision (with Shetland featuring prominently)<sup>59</sup>. The research has shown the following:

- Anecdotally, people we spoke to in customer-facing positions in Shetland attractions said that visitors were interested in the Vikings but this usually sat alongside a broader interest in archaeology.
- Around 80,000 attended the 2019 Up Helly Aa celebrations, which draw attention
  to the area's Norse heritage and practices of burning galleys. Lerwick Up Helly Aa
  committee have had requests to have people's ashes in their replica galleys
  before, which they have turned down. During the research, some people
  mentioned rumours of this happening at Nesting Up Helly Aa. Overall, attendance
  at Up Helly Aa and awareness of the celebration has grown.

The concept is to offer premium ceremonies at the moment this is priced at an estimated  $\pm 5000$ , though further consideration will be given to this. A "budget" option will be made available where multiple people share a small portion of their assets to be added to a galleon. So this could be 20 people x  $\pm 250$  and becomes a ceremony for multiple people whereas the premium version is for one individual.

#### 5.4. Competition

Accessories available to buy online allow for a more DIY approach to Viking-style funeral memorial ceremonies. For example:

Ash caskets: <u>Viking Ship Ash Casket</u> from Cradle to Grave Willow Coffins, with sail, wooden shields and an ash urn, made from homegrown willow in Dorset.

Marketed for sending off to sea or on a lake, with images and <u>video</u> of the casket burning on water. £595, plus £15-45 for personalisation, plus P&P (around £50) to UK. The manufacturer can produce these within 2-3 weeks but asks that

<sup>&</sup>lt;sup>59</sup> Dr Steven Timoney (UHI Perth College) and Dr Alex Sanmark (UHI Institute for Northern Studies), <u>Viking</u> and Norse Heritage Tourism in Scotland



<sup>58</sup> Visit Scotland: Shetland Islands Visitor Survey 2019

customers order around 2 months in advance due to high demand. A similar Viking ship design is available in sustainable wood from Ammon Enterprises via Etsy, priced at £449.99 plus P&P. The company is based in Devon and sells a variety of memorial items.

Custom coffin designs for traditional burial by Crazy Coffins, who make wooden
coffins to almost any specification on commission. A <u>Viking ship</u> is shown on their
website as a past commission. Price is on request, but the company caters to the
upper end of the market, stating that detailed custom designs can cost several
thousand pounds. A less elaborate option for a coffin is <u>Creative Coffins</u> who offer
a Viking-themed printed cardboard design at £496 plus VAT and P&P.

None of these companies arrange ceremonies, though the first offers guidance on how to perform a ceremony using the casket, including tips on burn time and launch sites.

Given this, therefore, the most relevant source of competition is likely to be the DIY option.

#### 5.5. Partnership opportunities

This service could create demand for Shetland-made replica boats and/or ash caskets, if these can be made to burn cleanly with any possible residues being fully biodegradable.

Traditional boatbuilding activities in various coastal communities across Scotland have aimed to preserve traditional skills and build life skills, promote intergenerational working and address loneliness and isolation, for example:

- Atlas Arts and partners in Skye are hosting 'boatbuilding cafes' to build skiffs.
- <u>Portsoy Community Enterprise</u> in Moray delivers boatbuilding courses to young people.
- <u>GalGael</u> in Glasgow build boats to historic designs and have trained people in boatbuilding and restoration.
- Annan Harbour Action Group have built skiffs with young people working alongside the team of older volunteer builders, and use them to offer free sail training

One challenge is the lack of locally grown timber, although some recycled timber is available. CDCN could consider a scheme to plant a tree for each ceremonial boat burned, to go some way towards offsetting the impact.

# 5.6. See also section 3.5 for opportunities in weaving in local materials and wool felting. Potential business models

Unlike other services covered in this report, there is a low barrier to entry for members of the public, and a key question will be why people would choose to arrange such a



ceremony via CDCN (and/or its partners) rather than doing it themselves. Some ways that CDCN might do this are:

- Access to a location for interring ashes: some premium services for scattering or transforming ashes use only a 'ceremonial' amount (as little as 1g in the case of the space services set out in section 7). If the Viking funeral service was developed alongside a natural burial ground or columbarium, clients could be offered a long-term interment site.
- Making the process easier:
  - Support for landowner permissions to scatter ashes.
  - Local celebrant/host of service.
  - Local knowledge of sites with more shelter from the wind.
- Making it more authentic:
  - Local connections/story telling etc.
  - o A Shetland built long boat/urn.
  - o A local 'Viking' torchlit procession.
- Additional services for scattering which require further skills/permissions:
  - Filming of the event.
  - Boat trips to scatter ashes (with the appropriate marine license see below).

Given a small market which will naturally fluctuate, investment in capital, supplies and stock should be kept to a minimum. As with other producers of 'Viking' ash caskets, CDCN could (after some prototyping) produce these to order with a lead time.

#### 5.7. Regulations and standards

The regulations that would apply will vary depending on what exactly takes place during the ceremony, and where it happens. Our research has found that burning a galley at sea is likely to be ruled out due to regulations.

#### Burning a galley at sea

We consulted via email the Marine Directorate Licensing Operations Team, who stated that a marine license would be required to burn a galley at sea (even a replica one at small scale) and that this would not be granted for this activity.

Specifically, burning a replica galley would fall under Section 21 (3) of the <u>Marine</u> (<u>Scotland</u>) Act 2010, which defines as a licensable marine activity "to scuttle any vessel <u>or floating container</u> in the Scottish marine area" (emphasis ours). Under 21 (4) of the



same Act, this extends to anywhere at sea if the vessel or container has been taken there for that purpose from Scotland.

However, under the <u>OSPAR Convention</u>, which has been ratified by the UK, incineration is prohibited (defined as "any deliberate combustion of wastes or other matter in the maritime area for the purpose of their thermal destruction"). The Marine Directorate Licensing Operations Team would therefore not license the activity.

Depositing ashes from a vessel at sea

As an alternative, CDCN might operate a boat trip to scatter ashes into the sea, combined with a ceremony on land. Section 21 (1(1)) of the Marine (Scotland) Act 2010 states that it is a licensable marine activity to "deposit any substance or object within the Scottish marine area, either in the sea or on or under the seabed" from "a vehicle, vessel, aircraft or marine structure" or "a container floating in the sea". As above, this extends to anywhere at sea if the substance or object was loaded into a vessel or floating container in Scotland. The Marine Directorate Licensing Operations Team confirmed that a marine license would be needed to deposit ashes into the sea from a vessel. Licenses are generally granted for a set number of deposits a year.

The <u>application fee</u> is scaled by the likely cost of carrying out the licensable activity. Assuming that the most likely scenario is for ashes to be scattered from a small boat, the fee would be at the lower end of the scale, from £72-£212 (2023-24 pricing – yearly increases in line with consumer price index).

The decision whether or not to grant a license will consider impact on Natura sites (including Special Protected Areas, SPAs, such as the one off the eastern coast of Shetland – see section 8). The Marine Scotland Licensing Operations Team will consider whether the proposal is likely to have a significant effect on the site, and if so (with input from other relevant agencies such as NatureScot), whether it will adversely affect the integrity of the site<sup>60</sup>.

Burning a galley on land

It is generally not illegal to light a fire on private land.

If it harms or interferes with others, smoke from a fire may be viewed as a statutory nuisance under the Public Health (Scotland) Act 2008 and local authority environmental health departments may take action against regular occurrences. It is an offence to light a fire or permit a fire to spread to within 30 metres of a road if it damages the road or endangers traffic on it, under the Roads (Scotland) Act 1984, Section 100. A site should be chosen that is away from neighbours and roads.

Scattering ashes generally, including scattering at sea from land



60 Marine Scotland: Guidance for Marine License Applicants

Ashes can be scattered anywhere in Scotland with the permission of the landowner. It is also permissible to scatter them at sea from the shore and no license is required.

The Environment Agency (England) has published a policy on "protecting controlled waters from the impact of funeral practices", addressed at those organising a private ceremony and responding to the prevalence of this practice among Hindus and Sikhs. In the absence of specific SEPA policy to date, we have reviewed this as an indication of good practice.

The EA document states that there is no evidence of adverse environmental impact of individual ceremonies to spread human ashes into rivers and streams, but that accompanying traditions, such as casting tributes or other objects into the water, could harm the environment or upset other river users. To avoid this, the EA say that:

- "The site you choose should not be near any buildings, people bathing or fishing, or marinas.
- Your site should be more than 1km upstream of any abstraction of water.
- Ashes should be spread as close to the surface of the water as possible and you should avoid windy days so that ashes do not affect people living or working nearby"
- The EA also states that putting any additional items into the water should be avoided.

#### Transporting ashes by plane

Clients are likely to be travelling from outside Shetland or the UK. The UK Government advises that each country has its own rules about departing with human ashes. Travellers may be asked to show a death certificate and certificate of cremation on departure, and there may be additional requirements. A non-metallic urn which can be opened for inspection should be used to allow security screening. If developing this option, CDCN and/or its future partners should inform potential clients via its marketing material about this.

Among likely markets, the US and Canada have no requirement for permission to carry or send cremated remains to the UK. The US Embassy to the UK states that: "To travel with cremated remains from the United States to the United Kingdom, you will need a copy of the state issued death certificate plus a letter from the crematorium verifying the contents of the urn. You should use a non-metallic urn to allow screening and declare the nature of the package to U.S and U.K. customs officials" 61.

#### 5.8. Next steps

The nature of the ceremony requires further discussion, and perhaps some prototyping.

<sup>61</sup> US Embassy to the UK: Resources for US Citizens.



## 6. Pets and animals

This section covers the option of extending one of the options discussed elsewhere – initially natural burial but also potentially alkaline hydrolysis – to pets and/or livestock.

## 6.1. Survey findings

The survey asked Shetland residents whether they would be interested in reserving a plot within a natural burial ground for their pet, if available.

- 30.4% would consider this for their pet(s).
- 44.7% would rather make other plans for their pet(s). Comments mentioned the
  easy and low/no cost alternative of burying a pet in the garden/on the croft,
  although one person thought that a pet burial ground would be useful for those
  without their own land. Other people were concerned about space running out
  within a burial ground.
- 24.9% did not have a pet.
- Younger adults aged 25-34 and 35-44 were less likely than older ones to say that they did not have a pet and were more likely to say that they would consider a natural burial option for their pet(s) interest in pet burials peaks at 56.3% among those aged 25-34.

#### 6.2. The market nationally and internationally

Pet funerals

PDSA and YouGov publish statistics on pet ownership, based on a nationally representative sample of pet owners, and estimate that 53% of UK adults own a pet. 29% own a dog and 24% own a cat, but cat owners are more likely to own more than one, so the overall population of cats is likely to be similar to that of dogs – about 11 million of each. Dog ownership in particular has increased nationally since the pandemic<sup>62</sup>. Pet ownership is particularly common among Millennials (aged 28-43), who are also the most likely to prioritise spending on their pets<sup>63</sup> - this aligns with our survey results.

There is little data available on the choices pet owners make at the end of their lives. Commercial estate agency Savills cites the Association of Private Pet Cemeteries and Crematoria (APPCC, described below) as estimating that 20 per cent of pets are buried in the owner's garden and around 7 per cent are privately cremated, and most of the remainder are cremated via a veterinary practice<sup>64</sup>.

<sup>64</sup> Savills: Pet Crematoriums Are A Growing Market



<sup>62</sup> PDSA: Animal Wellbeing Report 2023

<sup>63</sup> Mintel: Pet Care Buyers Would Rather Cut Back Spending On Themselves Than On Their Pet

Some people want their pet's cremated remains or a small portion of them to be buried with them. Some natural burial grounds offer this as a service. However, the Animal and Plant Health Agency (APHA) does not allow pet burials or interment of animal ashes on natural burial grounds where livestock graze.

## 6.3. The market locally

We spoke to Shetland Vets, who say that pet ownership is high in Shetland. The options available to pet owners are to arrange cremation via the vet practice, who send pets to the mainland for cremation (see next section). Shetland Vets can also dispose of the pet's body, in which case the remains go to landfill. Burial at home is the most popular option due to people having access to land for burial and cremation being the more expensive option. They have had enquires about arranging pet burials but are not in a position to offer this service.

Of the 22,940 people living in Shetland, 82.1% are aged over 16 = 18,884 people. Assuming average rates of pet ownership as above, about 10,000 of them are pet owners.

In our survey, about 40% of Shetland residents who were pet owners (30% of Shetland residents overall) said that they would consider using a natural burial ground for their pet, although some specified that this would depend on factors like pricing. Based on our survey and other research, we anticipate that young adults and older adults would be the main market segments, as they are least likely to have long-term access to a garden for home burial.

Given average pet life expectancies, there would be about 200-300 pet funerals a year among this population (about one in 15 in a given year). The number of these who would actually choose to bury their pet or inter their ashes at a natural burial ground would likely be lower: a pet burial ground might take 20-30 pets a year.

Pricing that we were able to find from pet burial grounds ranges from about £400 for a cat or rabbit to £660 for a large dog, so taking an average of £550, income from pet burial at these levels would be around £11,000 to £16,500.

#### Livestock

Agriculture, forestry and fishing is a major industry in Shetland, the largest employment sector. According to an SIC publication from 2017, based on the Economic Report on Scottish Agriculture, livestock populations in the islands are around the following<sup>65</sup>:

- 4500 cattle
- 284,831 sheep
- 136 pigs
- 4655 poultry
- 993 horses

Shetland Funeral Options

Farm animals that die of natural causes or disease on a farm or are killed for reasons other than human consumption are classed as 'fallen stock'. In general, it is illegal to bury or burn fallen stock on a farm due to the risk of spreading disease in the soil, groundwater or air. This ban does not apply in parts of Scotland classed as remote areas, including Shetland. The Scottish Government advises that burial or burning in the open air should be a last resort even in such areas - farmers even in the designated remote areas should arrange to have fallen stock collected and disposed of, or use an incinerator on farm, wherever possible 66. However, the Orkney and Shetland waste plan acknowledges that mortalities from crofting and farming require local burial – the plan also notes "Agricultural sector preference for animal cremator" What farmers currently do and whether there's a gap for AH as an alternative to an incinerator could be further investigated, but the likely cost (including maintenance costs) and lack of regulatory framework for use of alkaline hydrolysis for fallen stock would be a barrier at present.

Shetland aquaculture producers reportedly use a mix of incineration and services which process fallen stock into products such as fish meal and oil – there appear to be various facilities catering to this industry, either on Shetland or via export<sup>68</sup>.

#### 6.4. Competition

Options Shetland residents may use for their pets are:

- Home burial of a pet is permitted in the privately owned garden of the home where the pet lived, providing that the remains are not hazardous (e.g. in the case of certain diseases)<sup>69</sup>. Burial at least three feet deep and away from water is recommended, but this is not closely regulated. In a rural area where most have gardens or crofts, it is likely that many choose this option, and it was frequently referenced in survey comments.
- Balmedie Pet Crematorium, outside of Aberdeen (around 225 miles away) has a link with Shetland Vets and is therefore most likely to be used by those who want their pet cremated. Shetland Vets use the courier Northwards to send the body to Aberdeen and the process takes between 1-2 weeks.
- Oback Pet Cremation, on South Ronaldsay, Orkney (130 miles away), state that they can arrange cremation for pets of residents of Shetland.
- If a pet dies at the vets and the owners do not pay for cremation or claim its body, it may be disposed of with general waste.
- The nearest pet burial ground to Aberdeen (there being none on Shetland or Orkney) is Rosehall Pet Cemetery. This offers eco-friendly coffins or scattering of

<sup>69</sup> SEPA: Activities Exempt from Waste Management Licensing



<sup>66</sup> Scottish Government: Prevention of environmental pollution from agricultural activity: guidance

<sup>67</sup> National Waste Strategy: Scotland - Orkney and Shetland

<sup>68</sup> The Ferret: Millions of Dead Salmon Dumped, Burnt or Destroyed, March 21st 2021

ashes with a Tree of Remembrance. Rosehall do not specifically advertise catering to Shetland and it is unlikely a Shetland resident would seek to bury their pet away from home.

Pricing for pet cremation at the two main pet crematoria serving the area is provided below, to give an idea of what Shetland residents currently pay for disposal of a pet's remains:

Service	Oback (Orkney)	Balmedie (Aberdeen)
Small pet e.g. hamster or guinea pig	£70	£90
Cat or rabbit	£120	£156
Small dog	£130	£168
Medium dog	£150	£186-216 depending on weight
Very large/extra- large dog	£200-£230 depending on weight	£234-354 depending on weight
Transport from Shetland	Not quoted	Minimum £30
Extras	Containers range from £5 for a bag, to £50+ for a handmade urn	Ash wood caskets £36 or £48 with name plaque; ornamental slate urns from £60

#### 6.5. Partnership opportunities

As with natural burial, pet burials in a natural burial setting would allow for partnership with local artists and crafters to develop products such as biodegradable coffins or shrouds and memorial plaques, and with community or environmental groups – see section 3.5.

#### 6.6. Potential business models

Natural burial area for pets

This would most likely be developed alongside a natural burial ground if space and site criteria allow. Although numbers of both human and pet burials will be low given the population size (and popularity of home burial for pets), offering both could help to create an economy of scale.



Developing working partnerships with the vet practice would be key, as they arrange for the disposal of most pets' bodies.

#### Alkaline hydrolysis

Units for disposal of animal bodies by alkaline hydrolysis are used in the United States, both for pets (see for example <u>Heavenly Paws Atlanta</u>, <u>Guardian Pet Aquamation</u>) and livestock (see for example the <u>BioResponse Solutions BioLiquidator</u>). This technology has not been trialled or regulated in the UK.

#### 6.7. Regulations and standards

Burial

Burial of pets in pet cemeteries is regulated by the Animal and Plant Health Agency (APHA).

According to <u>APHA guidance</u>, pet cemeteries must be located:

- at least 250 metres away from any well, borehole or spring supplying drinking water or water for use at farm dairies
- at least 30 metres from any other spring or watercourse
- at least 10 metres from any field drain
- more than 200 metres away from any Site of Special Scientific Interest (SSSI)

Pet cemeteries must obtain planning permission. Sites must have sufficient depth of subsoil to allow for 1m additional subsoil depth beneath the burial pit.

There is a maximum limit on average density of buried pet remains (including packing material) of 20kg per square metre.

New pet cemeteries must register with APHA by completing <u>form AB 117.</u> New sites will receive an inspection, for which fees are payable:

- Application for approval of an establishment or plant carrying out the transformation of animal by-products or derived products into compost. Includes a site visit of up to 60 minutes: £1,343.
- Inspector travel time: £22 per quarter hour, up to a maximum of 126 hours. There is no APHA office in Shetland, the nearest being in Inverness or Invertine (Aberdeenshire), so travel time could be substantial.
- The scattering or burial of animal ashes (as distinct from full burial) requires a separate permit from the Scottish Environmental Protection Agency (SEPA).



#### Alkaline Hydrolysis

There is no reference to use of alkaline hydrolysis to process pets or livestock in Scottish Government consultation on regulations referenced in section 4.6. If this is regulated in future, it is likely that at least the same requirements proposed in this document will apply, i.e., permission from Scottish Water and/or SEPA to discharge wastewater. It is likely that APHA regulations would also apply, as is the case for incinerators dealing with animal remains<sup>70</sup>.

There may be additional concerns and sensitivities as to the adoption of alkaline hydrolysis for livestock in Europe and the UK given the history of the BSE outbreak. A 2002 Opinion and Report by the EC's Scientific Steering Committee concluded that the process caused a reduction but not complete destruction of BSE infectivity<sup>71</sup>, and we were not able to find any later revisions to this. A BBC feature on alkaline hydrolysis notes that the founder of Resomation Limited "spent five years lobbying the EU" to allow the process to be used to sterilise infected carcasses, before pivoting to the funeral trade<sup>72</sup>.

Industry associations and codes of practice

The <u>Association of Private Pet Cemeteries and Crematoria</u> (APPCC) is a member-led accrediting body, with a Code of Practice for pet cemeteries and crematoria and another for pet funeral arrangers.

Alongside adherence to regulations, the <u>Code of Practice</u> is particularly concerned with ensuring that cremation and burial is individual rather than communal, addressing concern among pet owners and the industry about mixing of ashes at pet crematoria<sup>73</sup>. There is no mention of alkaline hydrolysis as an alternative to cremation, but many of the same guidance points would apply. One point to note is that "Plots must be marked in some form and clients must be made aware of their pet's final resting place". Many natural burial grounds operate without physical grave markers as these can interfere with the site being a natural woodland or meadow.

Joining the APPCC costs £720 (including VAT), covering independent validation and the first year's membership, and the membership fee is £250.80 (including VAT) thereafter for cemeteries not operating as crematoria or £444 (including VAT) for crematoria. Provisional membership costs £648 (including VAT) for prospective sites and includes advice and assistance from the APPCC.

<sup>&</sup>lt;sup>73</sup> See for example <u>The Independent: Cremating your pet may mean you get back more than just their ashes, 10th January 2020</u>



<sup>70</sup> UK Government Guidance: Animal by-products: how to burn them at an incinerator site

<sup>&</sup>lt;sup>71</sup> European Commission Health & Consumer Protection Directorate-General Scientific Steering Committee: Updated Opinion and Report on Treatment of Animal Waste by means of High Temperature and High Pressure Alkaline Hydrolysis

<sup>72</sup> BBC: Dissolving the Dead - a Radical Alternative to Burial and Cremation

Not all establishments are members – neither of the crematoria likely to be used by Shetland residents are listed by the APPCC.

## 6.8. Next steps

Site investigations could take place as part of a wider investigation into a natural burial ground – criteria are similar, though not identical.

Developments in the regulation of alkaline hydrolysis for animals in the UK should be monitored. If there is a future opportunity for a viable business in this, it would likely cater to agriculture – detailed investigation of existing routes for fallen stock has not been part of the scope of this study and would need to take place before investing.



## 7. Space funerals

The Saxa Vord spaceport site is designed for small rockets delivering payloads into low earth orbit and is licensed for up to 30 launches per year. Given the site's high profile, scattering ashes in space is another service that has been suggested for consideration. There are two main ways of scattering ashes in or near space – via balloon and rocket launch – which are detailed in section 7.2 below.

#### 7.1. Survey findings

Respondents from outside Shetland only were asked whether they would be interested in scattering ashes in space from Shetland, either for themselves or for a loved one.

- Most of the non-residents (67.8%) would not consider this at all this is a higher percentage than the Viking-themed memorial idea and rose to 91.9% among those with no connection to Shetland. Reasons given in comments as to why not include the environmental impact (both on earth and in space/the outer atmosphere), the cost and having other preferences.
- 28.7% would consider this for themselves. The group most likely to consider this was those who had visited Shetland in the past (44.1%). Reasons why included an interest in space and the idea of being among the stars.
- Fewer people (13.8%) would consider a space memorial for a loved one than for themselves, in common with all of the 'unconventional' options explored in the survey.

Respondents from Shetland only were asked whether they supported scattering ashes in space being offered as a service in Shetland. More residents felt negative than positive about this.

- A combined 28% felt either strongly positive or positive about space ceremonies. Comments in favour of premium offerings generally highlighted the potential to generate income.
- 41.1% felt neutral.
- A combined 30.9% felt either strongly negative or negative about this option. Comments against this option highlighted environmental concerns, the high cost, feeling 'tacky', 'gimmicky' or 'cartoonish'.

Younger residents were the most likely to feel strongly positive and older ones were the most likely to feel strongly negative:

• 22.9% of survey respondents aged 25-34 were strongly positive, compared to 7.4% of those aged 65-74.



• 10.4% of those aged 25-34 were strongly negative, compared to 25.6% of those aged 65-74.

#### 7.2. The market and competition

There are three main types of 'space burial' or 'space funeral' offerings available: scattering at the upper edge of the atmosphere using a balloon, carrying capsules of ashes on short flights into space using reusable, retrievable spacecraft, then returning them to the family, and sending capsules of ashes into earth orbit or beyond as secondary payload on a satellite launch.

#### Stratospheric balloon flight

At the lower end of the market but with presence in the UK, Aura Flights offer memorial flights using stratospheric balloons filled with hydrogen, promoted as space flight – the company owns the domain ashesinspace.co.uk. The company have conducted 1000 of these flights since 2011. The balloon launches do not require spaceport infrastructure – the company uses various permanent launch sites across the UK, which are selected to avoid restricted air space. Low wind speeds are needed for launch. Customers' loved ones are not present for the launch itself but instead receive a memorial video capturing the moment when the ashes are scattered into the stratosphere.

Launches are dedicated to a single individual. Ashes are transported in a patent-pending 'intelligent scatter vessel', which the company manufactures itself. These have been developed to scatter the ashes in a controlled stream. A monitoring system allows the ground team to cancel or delay the scattering in case of adverse weather at high altitudes. The balloon bursts after scattering, and the assemblage falls back to earth and is retrieved for reuse.

When scattered from a stratospheric balloon, ashes do not go into orbit or burn up but drift through the atmosphere and ultimately descend back to earth, as described in romantic terms by Aura:

"The passenger spreads out across the entire planet, travelling the world on an incredible final journey. Their ashes are picked up by the stratospheric winds which encircle the globe, carrying them around the planet. Over the next three to six months, they become one with these winds, traversing the globe many times and spreading out until their presence touches every part of the world. Finally, their ashes seed raindrops and snowflakes, returning to Earth and becoming one with nature again. Little by little, the ashes will descend into the lower portions of the atmosphere..."

Scattering from a stratospheric balloon costs £2950 with Aura Flights, including personalised memorial video and an online memorial on their website 'passenger list'. A cheaper Voyager Launch with Aura costs £495: this is a monthly flight carrying a small portion of the ashes of multiple individuals, which are not scattered but returned with a certificate noting the details of the "space flight" and altitude reached.



The presence of a spaceport offers no advantage for a stratospheric balloon launch, which can be carried out without much infrastructure. Similarly, Shetland's visitor appeal and ancestral connections are not relevant, as launches of this type take place without the family present. In any case, stratospheric balloon launches using recoverable equipment are unlikely to be possible on Shetland, which has high windspeeds and is surrounded by ocean which would make it very difficult to retrieve vessels. If there is a gap in the market, therefore, it will be at the higher end.

#### Earth orbit, and beyond

Elysium Space and Celestis Memorial Spaceflight (both US-based) will send ashes outside the atmosphere as additional payload on rockets used to launch satellites, lunar orbiters or deep space probes. Both companies take a 'ceremonial' quantity of ashes (approximately 1 gram), and transport multiple capsules containing the ashes of different individuals – images of the 'spacecraft module' on <a href="Elysium Space's website">Elysium Space's website</a> show at least 60 individual capsules. Individual space 'missions' are available to book well in advance.

Celestis pricing starts at US\$2,995 for the <u>'Earth Rise'</u> service, where a ceremonial portion of ashes is transported into space on a dedicated vehicle provided by UP Aerospace, before coming back down to earth and being retrieved. The next tier of pricing starts at US\$4,995 for <u>'Earth Orbit'</u>, where the ashes are transported as secondary payload on a satellite that will orbit earth for other <u>missions</u> including defence, research and commercial purposes, then burn up on re-entry: "harmlessly vaporizing like a shooting star in final tribute". A newer entrant based in New Zealand, <u>Stardustme</u>, advertises journeys into orbit on board SpaceX Falcon 9 rockets starting at US\$1995 plus tax.

Celestis also offers lunar orbit, lunar landing and deep space launches from US\$12,995. These services are also advertised by Elysium space. The Shetland space port appears not to be targeting this type of space flight, so any service would need to focus either on launch and re-entry or earth orbit.

Celestis uses the SpacePort Vertical Launch Facility in New Mexico, while Elysium modules have launched from sites in California, Florida and Hawaii. Both companies host launch experience packages, including site tours and receptions, which are priced separately. With this kind of space funeral the launch location can itself be an attraction. Launches are also filmed and webcast. Various memorabilia and optional extras are offered by Celestis, including a service where the rest of the deceased's ashes can be scattered near the launch site by a licensed funeral director.

At the time of writing, we could not find any UK company offering to take ashes into orbit (or transport ashes to a US facility for launch, as in the case of the New Zealand-based Stardustme). In 2013, The Herald reported that Glasgow-based Alba Orbital intended to send ashes on small satellites "about the size of a Rubix Cube", which "would hold the



ashes of around 40 people"<sup>74</sup>. Pricing of £600 per gram of ashes for a short trip into space and back down, and £2000 to orbit the earth for a month, is discussed in the article. A further blog article by the founder of the same company on scattering-ashes.co.uk, apparently from around the same time, invites expressions of interest in an earth orbit launch, with pricing between £2,000 and £5,000 (ten years ago)<sup>75</sup>. Although Alba Orbital is still operating, the company has abandoned the idea of taking ashes into space, now selling its PocketQube satellites and launch services. A Guardian article from later in 2013 reports that the founder "was forced to change his plans when his application for a launch license was rejected by the UK Space Agency"<sup>76</sup>.

#### 7.3. Next steps

Each space funeral company uses proprietary capsules contained in modules, some of which incorporate technology such as tracking devices and all of which must be approved by a launch provider. This is likely to be a high barrier to entry. Stardustme's website reveals something of the process to develop these:

"All components have been designed and engineered for the space environment. The structure and token are made of space-grade materials, using modern processes such as CNC machining and 3D printing. All components and materials meet SpaceX requirements and have been used in past NASA flights".

There may be potential to either develop or license such capsules for use at the Shetland Spaceport, given that in the UK there appears to be no company offering to truly send ashes to space. However, there is not an obvious niche for CDCN in this, as a community-based organisation based elsewhere in Shetland.

<sup>&</sup>lt;sup>76</sup> The Guardian: Glasgow Start-up Enters The Space Race With Tiny, Cheap Satellite



<sup>74</sup> The Herald: Rest In Space - Funeral Plan is Out Of This World, 22nd February 2013

<sup>75</sup> Scattering Ashes: Ashes Into Space - A British Company At Your Service!

## 8. Criteria for selection of potential sites

To summarise and compare options, CDCN would need to seek a site or sites with the following characteristics for the services covered in this report (excluding space funerals, which could take place only at the Saxa Vord Spaceport):

	Necessary	Positive	Avoid
Natural	-Over 250m from spring, well or	-Scenic	-Long access roads, which will be
burial	borehole for drinking water.	-Heritage value.	subject to a Maintenance Plan under upcoming Regulations linked to the
	-Over 50m from other spring, well or borehole.	-Fairly easy access.	2016 Act.
	-Over 10m from field drain (these can be moved, however).		-Too many paths and built structures requiring maintenance, for the same reason. NB a barrow or burial mound
	-No ground water in burial pits (1m depth).		used solely for the ashes of the deceased is unlikely to be classed in itself as a burial ground if developed
	-1m min subsoil depth beneath burial pit, i.e. 2m min total subsoil depth.		separately.
	-secure tenure (ownership or very long lease).		
	-For building of a barrow or burial mound type structure (if desired), usual planning criteria would apply.		

	T		T
Pet burial	-Over 250m from well or borehole for	-Scenic.	-Grazing.
and	drinking water (as above) – or for farm	-Easy access.	
interment of	dairy water supply.	-Lasy access.	
pets' ashes	-Over 30m from other spring, well or borehole.	-secure tenure (ownership or very long lease).	
	-Over 10m from field drain, as above.		
	-Over 200m from SSSIs (see below).		
	-1m min subsoil depth beneath burial		
	pit.		
Viking	Permission from landowner (if not	Scenic, secluded location.	Very easy access – may encourage
funeral	CDCN), if taking place on land.		uninvited viewing ('funeral tourism').
ceremonies		Connection to Viking sites: see list	
	A degree of shelter, to minimise the	compiled by Dr. Shane Macleod, UHI	Marine SPA off the Eastern coast and
(burning a	number of days when windy	Inst. for Northern Studies <u>HERE</u> . Sites	SSSIs. Possible impacts on birds,
galley on	conditions would prevent ceremonies.	are on Unst, Fetlar and Mainland	otters or seals, or on shellfish
land and/or scattering	At least 30m from a road.	(Weisdale, Whiteness, Scatness).	harvesting grounds.
ashes from	Cufficient distance from neighbours		Per Environment Agency Guidelines
land onto	Sufficient distance from neighbours		(as an indication of good practice
water)	that smoke does not cause a		rather than statutory in Scotland):
,	nuisance.		-1km upstream of any drinking water supply.
			-Bridges over watercourses used by boaters and canoeists.



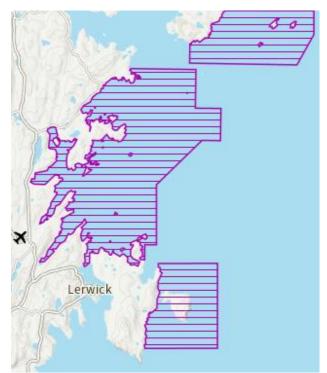
Alkaline	Suitable building in an accessible	Resomation advertises its technology	-MarinasAngling or bathing sites.
hydrolysis	location with power supply.	as being particularly suited to families	
(humans, pets or other livestock)	Permission from Scottish Water to discharge effluent to sewer system, if relevant: otherwise (and only in the absence of sewerage options), permission from SEPA to discharge to the environment.  If seeking SEPA permissions, similar criteria relating to groundwater would likely apply. There could be concerns about disrupting ecosystems by fertilising and over-promoting growth of certain species.	attending, in which case design and accessibility of the building will be relevant.	



A <u>map of some potential sites identified</u> for natural/pet burials and other relevant geographical features has been shared with CDCN, although detailed mapping of potential sites is not part of the scope of this report.

Relevant environmental characteristics of the Nesting, Girlsta and Wadbister area

Although a prospective site would not necessarily be within CDCN's home communities, these are the starting point for the search, so information on protected areas in and around Nesting, Girlsta and Wadbister is summarised here.



A Marine Special Protection Area (SPA) has been established for the East Mainland Coast, which covers the coastline and offshore waters of Girlsta, Wadbister, South Nesting and most of North Nesting. This is shown in purple on the map below.

4 Marine SPA off Shetland east coast near Nesting, Girlsta and Wadbister<sup>77</sup>

Under the <u>EU Birds Directive</u>, SPAs protect rare, threatened or vulnerable bird species. SPAs protected under EU law retain their status in Scotland after the UK's exit from the European Union<sup>78</sup>. In these sites:

 "damaging activities are avoided that could significantly disturb the species or

deteriorate the habitats for which the site is designated; and

 positive conservation measures are taken, where necessary, to maintain and restore the species present and their habitats, taking account of the economic, social and cultural requirements and regional and local characteristics of the area concerned".

Under the EU Birds Directive, there is also:

• "an obligatory permitting procedure for any plans or projects that are likely to have a significant effect on one or more Natura 2000 sites [a wider grouping of protected habitats, including SPAs], either individually or in combination with other plans and projects" 79.

<sup>77</sup> NatureScot Sitelink map

<sup>78</sup> Scottish Government: EU Exit - Habitats Regulations In Scotland

<sup>&</sup>lt;sup>79</sup> European Commission: The Birds Directive

NatureScot is a partner in the protection and management of SPA sites and a consultee on planning applications involving them. Marine Licensing decisions also take into account impact on Natura 2000 sites such as SPAs.

Boat use for both commercial and recreational activities is considered one of the "activities capable of affecting the protected features" of the SPA covering Shetland's east coast. NatureScot guidance is to reduce or limit pressure on the protected species, their habitat and prey species resulting from boat use in this area.

In addition to the SPA, there are three Sites of Special Scientific Interest (SSSIs) in and near the Nesting, Girlsta and Wadbister area covered by CDCN, shown in red on the map below:



5 SSSIs in and around Nesting, Girlsta and Wadbister

As covered in section 6.7, pet burial grounds must be at least 200 metres away from any SSSI. In addition, SSSIs may have specific characteristics which mean that specific activities taking place within them require consent from NatureScot. Among the three SSSIs in/near CDCN's home

#### community:

- Loch of Girlsta is classified as an SSSI due to presence of Arctic Charr. Specific
  activities requiring consent from NatureScot relate to fishing/recreation on the
  loch itself and not to the surrounding land. "Use of craft" is among these, so the
  loch is likely to be ruled out as a Viking funeral location<sup>80</sup>.
- Sandwater SSSI is a mesotrophic loch with open water transition fen. Activities that will destroy, displace, remove or cut aquatic plants and rushes require

community

<sup>80</sup> NatureScot Sitelink map

NatureScot Consent, along with use of craft likely to damage aquatic vegetation. As above, this is relevant to Viking funeral ceremonies.

 An area near the road at Catfirth is classified as an SSSI due to presence of woodland. NatureScot consent is required for activities introducing or releasing plants/seeds, for application of pesticides, and for destruction, displacement, removal or cutting of trees – this is unlikely to be relevant to the activities covered in this report.

## 9. Financial viability

#### Introduction

We have considered the financial viability in some detail to ascertain which model is most sustainable. Each of these models can be seen in detail at appendix 4. Initially we tested what each of these models would look like but then created a consolidated model of which enterprise were likely to generate the most sustainable income. The scale of the operation has a bearing on the financial viability.

#### Green burials

There is an estimate of 2 burials and 3 ashes internment per month. This is slightly higher than the current national average to reflect a growth in the market. In this model, due to the inability to graze, there is a part time grave digger and grounds-keeper (could be more than one post and could be out-sourced) as well as a part time Development Officer to oversee the business. This results in a profit of £5491 or circa £13,000 if pets are included. If there is a need for loan finance, this puts the enterprise into deficit but this is partly because the cost of staffing vs the scale of the venture is a challenge.

#### Alkaline Hydrolysis

The cost of capital outlay (which can only be funded from loans) is a challenge with this model and there is a projected loss of circa £80,000 in the context of a £1m loan for capital infrastructure.

#### Viking Funerals

Working up to an average of one ceremony per month, which can either be a premium ceremony for one individual or a merger of smaller fees for multiple people, the profit is around £30,000 with an additional surplus of £10,800 for the sale of caskets. Charging £10,000 rather than £5000 if the market will bear this increases the surplus to £88,000.

#### Consolidated

If Alkaline Hydrolysis is removed as unsustainable and the Viking funerals and green burials are retained in a single budget with shared fixed costs of staffing and so on, there is a notional profit of around £60,000.

In summary the merging of green burials and Viking Funerals, with the resultant reduction in fixed costs vs variable costs increase the financial resilience of the enterprise and is the most sustainable way forward.

## 10. Legal model

#### 10.1 Legal and governance review

CDCN is a charity, registered in 2018 (SC048164) and a limited company (SC589570) The potential to develop a new enterprise focused on various end of life services needs to fit in with the current legal structure. Several options are considered below, each with advantages and disadvantages:

- The Status quo, with some improvements to processes.
- Establishment of a new legal entity which controls the end of life work alongside the Trust.
- Establishment of a trading subsidiary beneath the core charity.

#### 10.2 Current charitable objectives

- a) The advancement of **community development and resilience** (including the advancement of rural regeneration) by designing and delivering a range of services, including volunteering and learning opportunities, which will help Nesting (as defined in 2(a)) and the wider community to be a vibrant, sustainable and inclusive community for all who live and work here.
- (b) The advancement of **heritage and culture** through raising awareness and understanding of the Nesting community, its historic and natural environment, and its traditions and culture.
- (c) The provision of **recreational facilities** and the organisation of recreational activities and services, with the object of improving the conditions of life for the those who live and work in the area, so as to encourage people to settle and remain in the community.
- (d) The **relief of those in need** by reason of age, ill-health, disability, financial hardship or other disadvantage through the provision of accessible and freely available services to bring the members of the community together to reduce social isolation and improve community cohesion.

#### 10.3 Appraisal of options

There is a need to select the right legal and governance structure to take the project forward, which:

- provides protection to the core charity (CDCN)
- creates a separate entity that can focus on the different task with a different skillset
- · opens up access to funding
- enables partnership



- reflects the aspirations of the organisation and the ethos
- allows profit to be distributed in a tax efficient way

This report considers whether a subsidiary is needed. It then outlines the common legal structures for such subsidiaries, along with advantages and disadvantages for each.

## 10.4 Trading within the charity

The selling of new products and services outwith the core CDCN charitable objects may have a tax liability. The following is the position for trading in charities.

Primary purpose trading is trading carried out by a charity to fulfil its objects e.g., a care home charging fees; a nursery charging weekly fees.

Ancillary trading is also allowed e.g. a drug rehabilitation programme runs a café to provide work experience for those on the programme. Income from the café is ancillary trading which is allowable.

Non-charitable purpose trading

Total sales from the trade are less than £5,000 per annum

Charities Annual Income Maximum Non-primary Purpose Trading

Under £32,000 £8,000

£32,000 - £320,000 25% of your charity's total annual turnover

Over £320,000 £80,000

Above these limits, it is deemed to be non-charitable trading and could be liable for tax. At that point you would need a trading subsidiary.

There may be some heritage interest but the key reason for these enterprise ideas is to sell commercially and make an income. It is not likely therefore to be considered charitable/primary purpose trading.

#### 10.5 Options

Option 1: Legal status quo with new advisory board	
Pros	Cons
Legal simplicity.	Significant limits to trading.
Saves legal fees.	Lack of clarity of separate activity.
Saves accountancy fees.	Lack of single focus for financial     management
Administratively simple.	management.
	Potential for mission drift from the core charity.



- Advisory board brings different skills set.
- Separate entity could be branded with a different cost centre while sitting in the core charity.
- Strong separate entity could attract support and investment.

Option 2: Separate trading subsidiary	
Pros	Cons
Clear separate entity can attract funding and support.	May not attract individuals who would not want to commit to formal directorship.
<ul> <li>Current model will struggle to generate profit so hard to create self-generated funding for core costs.</li> </ul>	Separate admin, minutes, bank account, reporting to companies house etc.
Clear purpose of separate entity.	
<ul> <li>Legal and direct links to the core charity.</li> </ul>	Can create unnecessary distance from the charity.
• If things go wrong, this reduces the risk to the charity.	

## 10.6 Possible structures for a subsidiary

If a subsidiary becomes necessary or desirable, the following are the likely structures.

Community Interest Company		
Pros	Cons	
Focused on trading and enterprise –     business model rather than a charity	Harder to attract funding than a charity.	
model.	<ul> <li>More controversial model for the third sector.</li> </ul>	
Same protection as a company or SCIO.	As they are not a charity, they pay full	
• Some profit can be distributed (35%).	corporation tax.	
<ul> <li>Directors can be paid – removes the distinction between paid staff and voluntary trustees.</li> </ul>	Report to CIC Regulator and Companies House.	
<ul> <li>Asset locked but not profit locked.</li> </ul>	As well as producing accounts which comply with companies' legislation requirements, they have to produce a	
	Community Interest Statement and	

- Small, focused board –can be very commercial.
- Can be a trading subsidiary and transfer all profits Doesn't have to be two tier.
- Easier to attract funding than a company limited by shares.

Report detailing how they are delivering benefit for the community.

 No need for social impact statement as this is already included in the charity.

## Company Itd by Shares

#### Pros

- A company undertakes all its activities in its own right, including entering into contracts, being sued taking loans, owning property etc.
- · Robust and limits liability.
- Wholly owned subsidiary entirely controlled by CDCN (all shares owned by CDCN).
- In theory can gain equity by releasing shares outwith the charity (can keep a controlling interest).
- Can be a small, focused board or mostly existing board. No need to find new members or new individual directors.
- Can have separate directors if needs different skill set.
- Can have CDCN paid officer on the board.
- Registration of a limited company will protect the company name.
- Can be a full subsidiary.

## Cons

- Limited independence.
- Not a charity and not community controlled so limited potential to secure grants.
- There is a lack of privacy. Information on a company's activities is submitted to the Registrar of Companies and is available for public scrutiny.
- There are additional costs registration fee and possibly legal fees for help setting up the company; plus, recurring fees for submitting the Annual Return, and administrative costs, including accounting/auditing fees to comply with the Companies Acts.



Co-ops/IPOs - Community Benefit Societies	
Pros	Cons
Run for the benefit of the community – asset locked.	Harder to make decisions due to co- operative ethos.
Same limited liability as companies.	Harder to secure grant funding.
<ul> <li>One member one vote so it is very democratic.</li> </ul>	Gaining charitable status is challenging.
<ul> <li>Community Shares can be issued so money can be generated.</li> <li>Members can receive interest on share capital – which can be locked in for, say 5</li> </ul>	<ul> <li>Must register with FCA so greater regulation.</li> <li>Low levels of profit and liquidity would limit ability to issue shares.</li> </ul>
<ul><li>Can gain charitable status .</li></ul>	
New guidance sets out relationship with the core charity.	

## 10.7 Recommendation

On balance we believe the simplest route is a company limited by shares with all the shares owned by CDCN. Due to the small trading limits this is not something that needs to be done immediately but can be put in place when the time is right.

A community benefit society may also be attractive in any option where profit can be generated, e.g. particularly the natural burial ground.

## **Appendix 1: Promotion and awareness raising**

#### Press:

 CDCN press release resulting in article published in the Shetland News on January 8th: "Study to explore potential for alternative funeral and burial services."

#### Email:

- Link to press release and communications pack sent by email to:
  - All Shetland community councils.
  - o All Shetland councillors, MPs and MSPs.
  - o Various Shetland-wide charities and education organisations.
  - All SIC community development workers.
  - o Shetland.org / Promote Shetland.
  - Shetland and Orkney societies around the world.

#### Social media:

- Facebook Ads by Community Enterprise, targeting 1) people in Shetland and 2) international audiences.
  - We ran 5 paid adverts over February, each with a different message so that we could reach different audiences. We had 3 adverts that were aimed at Shetland residents and 2 adverts that were aimed at attracting a national and international audience.
  - In March we are running another 5 paid adverts to drive survey responses, highlighting some of the findings to date and reminding people that their opinions are needed.
- Ann Cleeves, author of Shetland book series, reposted on Twitter/X post about the survey resulting in 1247 views and 92 link clicks.
- Posted in Shetland TV Show Fan Group (15K followers, many from the US and Canada) which led to 270 link clicks.
- Shared by 4 micro-influencers in the areas of Norse/Viking heritage and sustainable living put out stories with a link to the survey. These averaged 60 link clicks, 240 total.
- Direct messages sent to BBC Alba, BBC Scotland, The Herald, The Scotsman, The National, The Independent, Visit Scotland, Visit Outer Hebrides, Visit Shetland, Visit Orkney. Sharing the Shetland news story and marketing packs.



- Marketing Packs sent to 4 international Viking centres.
- Community Enterprise Newsletter about the project sent to 480 recipients.
- Social Enterprise Scotland shared the project on social media with their 21,700 followers.
- Shetland (22k followers) and Orkney Libraries (87k followers) shared the project for us
- 2 Direct mailings sent to Orkney and Shetland International Societies.

Local promotion in Nesting, Girlsta and Wadbister:

- CDCN has publicised the project via its own Facebook page.
- A flyer was sent to all households in CDCN's constituent communities of Nesting,
   Girlsta and Wadbister.



## **Appendix 2: Full survey analysis**

## Scope and limitations

The survey took place between January and early March 2024, targeting both:

- Shetland residents in general.
- People from the rest of the world with a potential interest in the services being investigated.

There are limitations to how this data can be used to draw conclusions about the populations above. Sampling was by convenience rather than any randomised method. Respondents who have a preexisting interest in funerals and options for after death are more likely to give up their time to participate in and complete a survey on this topic. This is particularly true of those outside Shetland, who have less reason than residents to be interested in new developments for the islands.

Due to the scope and timescale of the survey, it was distributed online only using SurveyMonkey, with various paid and organic promotion methods used to raise awareness – see Appendix 1 for details. Online-only distribution limits participation among those less likely to have access to digital devices or be on social media, which has limited the amount of data collected from the youngest and oldest age groups (discussed further under Respondent Characteristics below).

## Sample size

We received 990 responses containing enough data to analyse. Just under 80% of respondents who gave their place of residence were Shetland residents – in total, we heard from at least 736 people in Shetland, a response rate of about 3% of the islands' population.

Due to the sensitive subject matter, the survey began with an explanation of the topics covered and an opt-in question.

Q1: "this survey includes discussion of death and description of the disposal of bodies after death. Please only take part if that is something you're comfortable thinking about just now"



Of the 1,231 who responded to this question:

- 99.2% (1221) opted to continue the survey.
- 0.8% (10) opted out and ended the survey at this point no further data was gathered from these respondents.
- 231 (19%) opted in but did not submit any further data. The other 81% of respondents (990) submitted an answer to at least one other question, and 74% (911) submitted answers to all questions shown to all respondents.

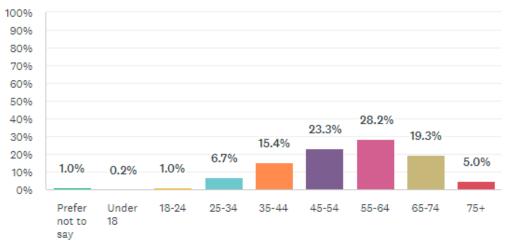
It is typical in an online survey with multiple questions and no incentive for completion for some respondents to skip questions or stop partway through. Despite the initial warning, some people may also have been put off by the subject matter once they began the survey.

Some of the questions later in the survey targeted either Shetland residents or non-residents, so respondents answered a different set of questions depending on their answer to Q12: "Please tell us where you live: this will help us ask you relevant questions in the last part of this survey."

Because of question targeting and partial responses, we note the number of respondents for each individual question below: response numbers vary between 911 and 990 for questions shown to all survey respondents.

#### Respondent characteristics

## Q11: "Please tell us your age"



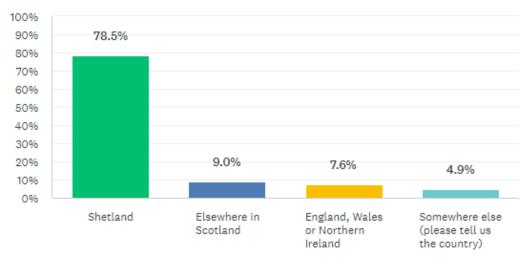
## 924 people provided their age.

- Most responses were from people in the 45-64 age bracket, which also makes up the largest proportion of Shetland residents.
- No responses were received from under 18s, who were not a target for the survey, and only 9% were in the 18-24 age group. People in their late teens and early twenties are underrepresented also in the Shetland population, which makes up most of the sample, but other studies show that they are less likely to have thought about their funeral or what they want to happen after they die.
- Relatively few responses were received from over 75s: 5% of total responses, likely due to the choice of online-only distribution. Unlike any other age group, more responses in this age group were received from people outside Shetland than Shetland residents.

We have compared responses between age groups and have noted differences below where statistically significant and relevant to the research.

For questions specific to Shetland residents, the small number of responses from residents in the age groups at each end of the scale, 18-24 and 75+, means that meaningful comparisons cannot be made involving these groups. For the same reason, we have not compared age groups in the questions specific to non-residents.

Q12: "Please tell us where you live: this will help us ask you relevant questions in the last part of this survey"



The survey targeted both Shetland residents and non-residents from elsewhere in Scotland, the UK or the world. This question was used to determine which set of questions respondents were shown in the remainder of the survey, so unlike others it was obligatory.

- 78.5% of respondents (736) were from Shetland.
- 9% of respondents (84) were from elsewhere in Scotland.
- 7.6% of respondents (71) were from England, Wales or Northern Ireland.
- 4.9% of respondents (46) were from elsewhere in the world.
- 50.0% of international respondents (23) were from Canada.
- 15.2% of international respondents (7) were from the USA.
- 6.5% of international respondents (3) were from Iceland.
- Only 1 person was from each of these countries:
   Australia, Bulgaria, Germany, Isle of Man, New Zealand, Norway, Poland, Romania and Spain.

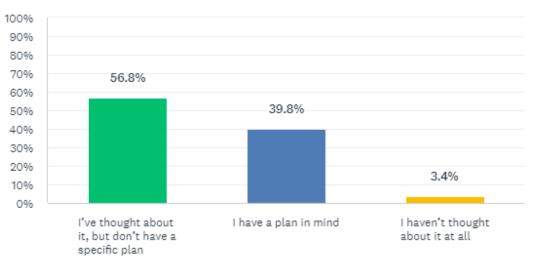
We have compared responses from Shetland residents and non-residents and have noted differences below where statistically significant and relevant to the question.



#### Section 1: Funeral preferences

All respondents were asked about their planning for what they would like to happen to their body and their funeral.





All respondents were asked this question. The responses show that most people have done some thinking about what they want to happen to their body after they die – this rises in older survey participants.

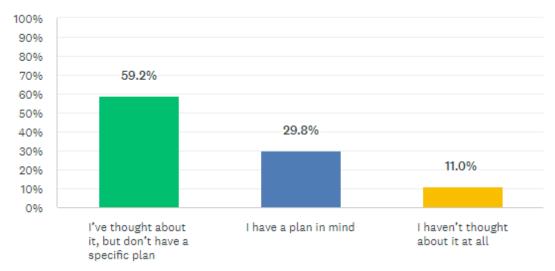
- Only 3.4% have not thought about what should happen to their body after their death at all.
- The largest group among all respondents, 56.8%, have thought about what should happen to their body but don't have a specific plan.
- 39.8% have a plan in mind.

As national surveys have also found (see section 2.4 in the main Research Report), the extent of people's thinking about what should happen to their body after their death increases with age:

- Among those aged 25-34 in our survey, 9.7% have not thought at all about what should happen to their body; this drops to 4.9% among those aged 35-44. By age 65-74, only 1% have not thought about this, and among those aged 75+ the percentage falls to zero.
- Conversely, among those aged 25-34, 21% have a plan in mind, rising to 33.8 in those aged 35-44. By age 65-74, almost half (49.2%) have a plan in mind, and among those aged 75+, this percentage reaches 65.2%.



# Q3: How much have you thought about what should happen at your funeral (the event itself – e.g. type of ceremony, music or readings)?

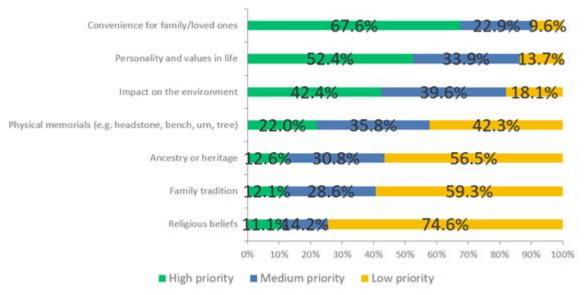


All respondents were asked this question.

- 11% have not thought about what should happen at their funeral at all a minority, but more than those who had not thought at all about what should happen to their body.
- Again, the largest group, 59.2%, have thought about their funeral, but don't have a specific plan.
- 29.8% have a plan in mind for their funeral fewer than those who have planned specifically for what should happen to their body.

As in the previous question, the percentage of people who have a specific plan in mind for their funeral ceremony increases with age, although it remains lower than the percentage who have a plan for what they want to happen to their body, peaking at 50% among over 75s.

Q4: "If you were to consider options for your own funeral, which of the following would be important to you?



All respondents were asked to rate a list of 7 suggested factors as either High Priority, Medium Priority or Low Priority with regards to their own funeral. Cost was not included among these, as it was covered separately in Q5 (see below).

- Convenience for family was the highest rated priority, with over 90% considering
  this to be either high or medium priority. Prioritisation of convenience seems to
  drop off in older age groups, perhaps as some have planned further and see a
  funeral as less of an unexpected shock for their family and loved ones: 79% of 2534s see convenience as high priority, versus 51% of those aged 75+.
- Next highest priority overall was the person's personality and values in life, which 86.3% overall considered to be high or medium priority. Personality and values were emphasised more by younger adults than older ones: among those aged 75+, 41.5% rated this factor as low priority, compared to only 6.5% of 25-34s and 5% of 35-44s.
- This was followed by impact on the environment, rated as high or medium priority by 81.9% overall. This factor appears less influenced by age.
- With regards to physical memorials such as a headstone, bench, urn or tree, there was a more even split of responses: 57.7% considered these high or medium priority but 42.3% saw them as low priority. The percentage who prioritise physical memorials decreases with age 32% of both the 25-34 and 35-44 age groups see this as low priority. On the other hand, 49% of 55-64s, 48.3% of 65-74s and 58.1% of over 75s see memorials as low priority.
- Shetland residents were also more likely to prioritise a physical memorial than people in the rest of Scotland or the UK.



Ancestry and heritage, family tradition and religious beliefs were all rated as low
priority by over half the survey respondents. Religious belief is rated low priority by
more of the younger respondents, although in every age group a majority rates it
as low priority. There was no significant difference between people from Shetland,
the rest of Scotland or the rest of the UK with regards to religion.

There was an option for respondents to suggest other factors that would be high priority for their own funeral. 121 comments were received. Some were happy to leave the decision with family and friends, and others would like their wishes fulfilled. Some of the comments expanded on the options listed as priorities in the question such as "Impact of the environment", "Convenience for family/loved ones" and "Physical memorials". Below is a summary of the other factors that would be a high priority:

Preference for burial, cremation or other: of the comments, 36.4% related to options for the disposal of bodies after death, particularly cremation and burial. 19.0% of comments mentioned cremation as their preference for how they would like their body to disposed of and 13.2% mentioned burial as their preference. Among the comments made in relation to burials, some examples of burials were vertical burial, a natural burial ground and types of coffins associated with natural burials such as woollen, willow and cardboard coffins.

Comments relating to cremation acknowledged the constraints of this preference as there is no crematorium in Shetland currently. Some examples of comments are below.

- "Funeral type, i.e., being Shetland and the only realistic option is burial.
   Having to send away for a cremation is daunting but I do not want a burial funeral."
- "I wish to use a crematorium but there is no such thing in Shetland."
- "Cremation needs to be explored to look at sustainable options, yet not environmentally friendly but the airmiles of transporting body to mainland and back to Shetland surely exceeds – this should be included in the study."
- "Don't think folk should be sent south for cremation, surely an alternative can be found here."

A couple of comments suggested alternatives to burial and cremation as options for the disposal of bodies after death:

- "I don't want to be buried or have a normal cremation and have always preferred the idea of a pyre or Viking burning type boat of funeral."
- "I fancy being freeze-dried a proposal in Sweden and Ireland some years ago, but apparently still not available."



<u>Family/Loved ones</u>: Although the question offered "Convenience for family/loved ones" as one of the priorities to choose from, 12.4% of the additional comments referred to family and loved ones particularly in relation to funeral arrangements, convenience and proximity to deceased family members. Below is a selection of comments reflecting the main points.

- o "Any celebration of life should be done by those left in the way they want."
- "I feel like my family should decide what would happen to me because death is really for the living e.g., If I was buried, would you regularly visit me grave or if I was cremated and scattered somewhere, would you visit there more?"
- "I think family members should have the opportunity to drive the coffin to the church and resting place. It's also a family tradition to carry the coffin into the church and not be wheeled in."
- "Being near other deceased family members."
- "Cut out all the old fashioned painful funeral stuff for my loved ones."

<u>Type of ceremony/service</u>: celebration, humanist, Buddhist, dramatic send-off – comments relating to religious/spiritual services.

- "Religious beliefs are very important to me in considering my funeral arrangements as I'm an atheist and wouldn't want any religious beliefs to be reflected at all."
- "I absolutely do not want any form of religious input/celebrant. I want a humanist/atheist goodbye."
- "Celebrating life is a personal value so funeral should reflect that. I have lots of distant relatives so how best to include them is a thought at the moment."
- "Ability to have individual, unique and bespoke elements e.g., Spiritual rather than religious focus or more based on hobbies and personality."

<u>Physical memorials:</u> examples being types of keepsake for ashes for loved ones, planting a tree, memorial wall for those cremated (plaque for family), permanent ground markers and GPS coordinates rather than being marked by stone, headstones.

<u>Critique of current provision:</u> "Being able to have a funeral without time constraints and the usual 'conveyor belt' system."

Other frequent topics mentioned in the comments included:

o Location - 4.1%



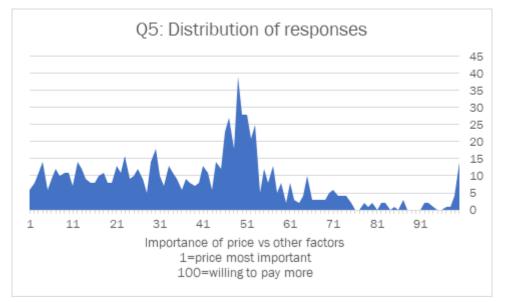
- Medical donation 3.3%
- Cost 9.1%
- Environmental impact 12.4%
- Simplicity 10.7%

Q5: Some people would prefer a simple and affordable funeral for themselves. Others are prepared to set aside more money for the option that's right for them (for example, one that fits with the other priorities mentioned above). Where do you fall on this scale?

All respondents were shown a sliding scale, with "price is most important" on the left, and "willing to pay more" on the right. Depending on the position chosen on the sliding scale, responses were assigned a number from 0 (price is most important) to 100 (willing to pay more), to facilitate analysis - this number was not shown to respondents.

The mean number is 35, just over a third of the way along the scale, suggesting that on average, people consider price to be important but not the only factor to consider.

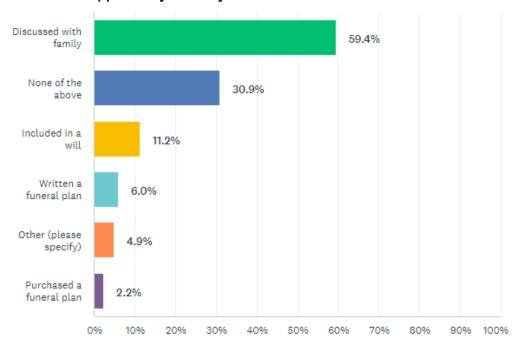
Many answers clustered around the midpoint on the scale, but few people selected points on the upper end of the scale, as shown below.



The survey suggests that people's willingness to pay more for a funeral aligned with their priorities increases slightly with age. Among those aged 25-34, the mean is 31.7, while among those aged 65-74 it is 35.7 and among those aged 75+ it is 39.1.

Respondents in Shetland emphasised price slightly more than people elsewhere in Scotland or the rest of the UK, but this is likely to be due to the targeting of the survey – those who responded from outside Shetland are more likely to have a specific interest or preference regarding their funeral.

Q6: Have you taken any action to let other people know about your wishes either for your funeral or what happens to your body?



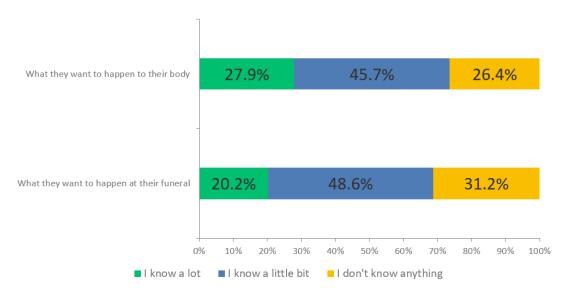
All respondents were asked about actions they may have taken to make their wishes known or put their plans for their funeral and after their death into action. Respondents could select one or more choices including an 'other' option with write-in field, but "none of the above" could only be chosen as the sole answer choice.

- The only action taken by a majority of respondents was "discussed with family/loved ones"- 59.5% of all respondents had done this.
- 11.24% had included their wishes for their funeral or what should happen to their body in their will and 6% had written down their funeral plan.
- Only 2.3% had purchased a funeral plan, but most respondents who had done
  this were non-residents. Among Shetland residents, only 1% said that they had
  purchased a funeral plan. Goudies, the funeral director on the islands, does not
  offer this option, so the few Shetland residents who chose this option may have
  been referring to having reserved a burial lair, which did not appear as an option
  but was mentioned by many in the comments (see below).
- Unsurprisingly, the youngest age groups were more likely to have taken no action to let other people know about their wishes (if any) than the oldest.
- 4.9% specified that they had taken other action. There was the option for
  respondents to write in other actions that they had taken to let people know about
  their wishes for their funeral or what happened to their body. 48 comments were
  received and below is a summary of other actions taken.



- Reserved a plot/lair: 35.4% of comments mentioned that had reserved or purchased a plot or lair.
- <u>Discussed with family/loved ones:</u> 16.7% of comments.
- Other actions: indicated preference of disposal of body (cremation), a couple have created playlists, one had spoken to a solicitor.

## Q7: Thinking about your family/loved ones, how much do you know about their wishes for after their death?



All respondents were asked about their knowledge of their family or loved ones' wishes for both what happens to their body and their funeral.

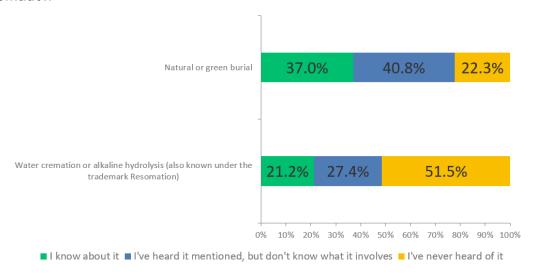
Echoing the questions above on people's planning for themselves, this question showed people were more likely to know about their family members or loved ones' wishes regarding what happens to their body than their funeral service or ceremony. Most people felt that they knew something about both.

- 27.9% of all respondents knew a lot about what their loved ones wanted to happen to their bodies and a further 45.7% knew a little, while 26.4% knew nothing.
- 20.2% of all respondents knew a lot about what their loved ones wanted to happen at their funerals and a further 48.6% knew a little, while 31.2% knew nothing.



## Section 2: Knowledge and perception of Natural Burial and Alkaline Hydrolysis

## Q8: Please tell us whether you are aware of the following alternatives to traditional burial or cremation



All respondents were asked about their awareness of "natural or green burial" and "water cremation or alkaline hydrolysis" as alternatives to traditional burial or cremation.

Generally, there was much wider awareness in general of natural burial than of water cremation<sup>81</sup>.

- 37% of all respondents knew about natural burial, and a further 40.1% had heard about it but didn't know what it involved, while 22.3% had never heard of it.
- 21.2% of respondents knew about water cremation or alkaline hydrolysis, and a further 27.4% had heard about it but didn't know what it involved, while 51.5% had never heard of it.
- Shetland respondents were less likely than respondents in the rest of Scotland and the rest of the UK to say that they knew about natural burial, and more likely to say that they had never heard of it, perhaps due to the lack of available options locally. On the other hand, the percentage who know about water cremation is similar in Shetland to the rest of Scotland, but both are lower than the rest of the UK.
- With regards to natural burial, respondents aged 65-74 were more likely to know about this option than some of the younger age groups, perhaps because, as this and other surveys have highlighted, they were more likely to have thought about their funeral preferences. For water cremation, the survey does not show any significant relationship between age and knowledge of this option.

<sup>&</sup>lt;sup>81</sup>Elsewhere in the report we have used alkaline hydrolysis as the generic term. In this appendix we refer to water cremation as this was the term used in the survey.

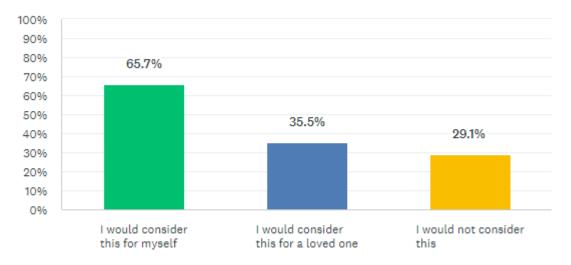


Shetland Funeral Options

Respondents were also asked to share any other alternatives to traditional burial or cremation of which they were aware. There were 75 comments and below is a summary of alternatives suggested:

- 33.3% of the comments mentioned eco/greener burials. Examples included human composting, alternative coffins such as tree pods, wicker and fungus coffins, and a mushroom burial suit.
- Burial at sea was another popular alternative, mentioned in 25.3% of the comments.
- This was followed by sky burial mentioned in 14.7% of the comments.
- Other alternatives included promession (freeze drying), diamond cremation, body donation to science and Viking/Norse funeral.
- 14.7% also commented that they did not know of other alternatives to traditional burial or cremation.

Q9: Natural burial involves using a biodegradable coffin and no embalming fluid and takes place in a green area such as a woodland or meadow rather than a burial ground. There are no headstones, though some natural burial grounds plant trees as markers. Please tell us what you think about this option:



This question asked all respondents whether they would consider natural burial for themselves and/or a loved one, after a brief explanation of what it entails. Respondents could choose either or both of these, or neither.

Overall, well over half would consider natural burial for themselves.

- 65.7% would consider natural burial for themselves.
- Fewer people would consider it for a loved-one: 35.5%.



• 30.1% would not consider natural burial at all, either for themselves or for a loved-one.

There was a relationship with age:

- Adults aged 25-34 were the least likely to say that they would not consider natural burial (19.4%), and those aged 65-74 were most likely to rule this option out (31.8%).
- Conversely, those aged 25-34 were most likely to consider natural burial for themselves (74.2%), and those aged 65-74 were least likely (60.2%).
- The older age groups were also less likely to consider natural burial for a loved one than younger adults.

There was also a relationship with place of residence:

• Fewer people in Shetland (64.7%) say that they would consider natural burial for themselves than people elsewhere in Scotland (77.1%) or elsewhere in the UK (77.9%), perhaps due to this not being an established option locally.

People were given an opportunity to comment on why they would or would not consider this option. Reasons for considering natural burial given were:

#### **Environmental impact:**

- o "I want to [be] disposed with no lasting effect on the environment."
- "I think this would be a fantastic option. Plant a tree on top and give back to the planet."

#### Lower cost:

- "This would be my preferred burial method, even before our move to Shetland. In part to hopefully save on the expensive 'pomp' and costs incurred for those close to me."
- "Low cost, low impact. What a waste of money a traditional coffin is."

#### Natural process:

"It's in line with the natural cycle of life and death."

Reasons for not considering natural burial given were:

#### Have already made other arrangements/want to be buried with family:

- o "I already have a plot & headstone, my son is there."
- o "All my family who have died are in the local kirkyard and there's plenty of room. I want to be with them."

## <u>Preference for options other than burial:</u>

o "Don't want to be buried. Ashes to be scattered."



 $\circ$  "I would like my body to go to science with family having no expenses."

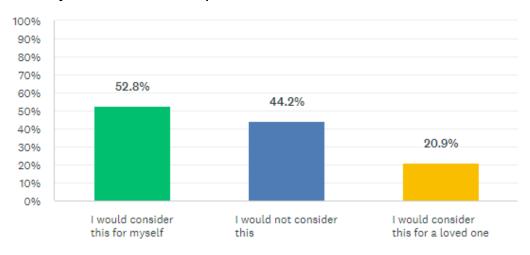
#### Want a headstone / place for family to visit:

- "I would want my family to be able to help place a headstone and be at a place of my own choice."
- "I strongly feel that those who come after us (me) need a physically marked place to visit to remember and even research ancestry."
- "I feel I would need a place to go, like a grave provides/headstone provides."

## No current provision of green burials in Shetland/location:

- "I want to be buried in Shetland so don't see this as an option that'll be viable in my lifetime."
- "I do not see this being applicable to Shetland due to the shortage of land."

Q10: Water cremation, also known as alkaline hydrolysis or under the trademark Resomation, involves using water and a potassium hydroxide solution to dissolve all parts of the body except for the bones, which are turned into a fine white powder. Please tell us what you think about this option:



This question asked all respondents whether they would consider water cremation for themselves and/or a loved one, after a brief explanation of what it entails. Respondents could choose either or both options, or neither.

Overall, water cremation was less popular than natural burial. More than half would nonetheless consider this option for themselves, but people were less likely to consider it for a loved-one.

- 52.8% would consider water cremation for themselves.
- Fewer people would consider it for a loved-one than for themselves: 20.9%.



• 44.2% would not consider natural burial either for themselves or for a loved-one.

The survey does not show any significant relationship between people's age and the likelihood of them choosing water cremation for themselves, but younger people are more likely to consider it for their loved ones than older people:

- 29% of those aged 25-34 and 29.6% of those aged 35-44 would consider water cremation for a loved one.
- Only 9.1% of those aged 75+ would consider this for a loved one.

On water cremation, there was no significant relationship with place of residence – people from Shetland were about as likely as those elsewhere in Scotland or the UK to consider this option.

Respondents were also given the opportunity to comment on why they would or would not consider water cremation and 176 comments were provided.

 44.3% of the comments were in favour of water cremation. It is important to note some comments in favour of the option also wanted more information regarding cost and environmental impact. Reasons for considering this option include:

## **Environmental:**

- "Sounds greener than a traditional cremation."
- "It's the gentlest and most environmentally-friendly method of disposing of a body."

## Saves space

- "Space saving and less impact on the environment."
- "I welcome the idea for anything that would reduce the pressure on the quickly diminishing availability of burial spaces in our Shetland graveyards."
- "Takes up less physical space on a crowded planet."

#### Convenience:

- "Easier/less hassle than an Aberdeen cremation."
- "I had planned to be cremated and scattered but didn't like the idea of cost & time of going to the mainland for the cremation. I would definitely consider this as an alternative."
- 41.5% of the comments were against water cremation. Reasons for not considering this option include:

#### Cost:

"Sounds expensive."



"It seems expensive and is a lot of hassle compared to green burial."

## **Environmental Concerns:**

- "Downside...lack of clarity around true energy use and impact on the environment."
- Potassium hydroxide is a strong alkali which is hazardous. I don't know how it would be handled or disposed of."
- "We don't need to use chemicals not environmentally friendly to produce, transport or release."

## Preference for other:

- o "Would rather go for a natural woodland burial."
- o "I want it to be a traditional funeral and be laid to rest with my family."
- "Already have a burial plot."

## Uncomfortable with the idea:

- o "I find this idea incredibly traumatic and brutal."
- o "Sounds cold and clinical."
- o "I don't like the idea of my flesh being dissolved, it is unsettling."
- "It is not natural."

Additionally, 14.2% of the comments were unsure about water cremation due to a lack of knowledge and information. Examples of comments include:

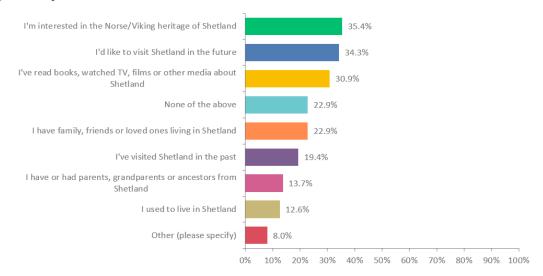
- "Not sure without more information."
- "I don't know enough about this."
- "I don't know enough about potassium hydroxide to know if it has lingering effects on the water table, etc."

Section 3: Questions for non-residents: interest in funerals in Shetland

Q13 – Q16 were shown to respondents who stated that they did not live in Shetland in Q12, whether they lived elsewhere in Scotland, in the rest of the UK or in another country. These questions aimed to gauge interest in the premium funeral and memorial ceremonies proposed.



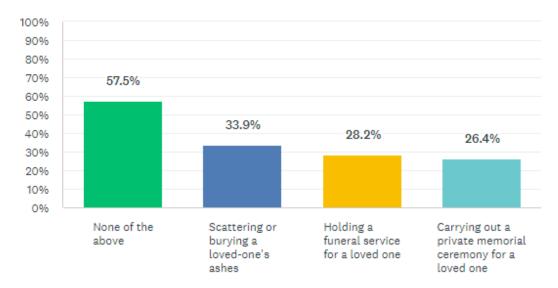
## Q13: Do you have a connection to Shetland?



As described elsewhere in the report, we expect the market for services such as Vikingthemed funerals or memorial ceremonies to be primarily among non-residents who feel a connection to Shetland. Q13 asked about these connections: respondents could select one or more.

- The top answer among our survey respondents was "I'm interested in the Norse/Viking heritage of Shetland" (35.4%). This should not be taken as an indication of the level of interest in the population in general, as the survey targeted potential customer segments.
- Nearly as frequent was "I'd like to visit Shetland in the future".
- Many respondents also had a family or personal connection: 22.9% "have family, friends or loved ones living in Shetland", 13.7% "have or had parents, grandparents or ancestors from Shetland" and 12.6% "used to live in Shetland".
- 22.1% of respondents did not have any of the above connections to Shetland.

Q14: Would you consider doing any of the following in Shetland (either travelling there specifically, or as part of a longer trip)?



Non-residents were asked whether they would consider scattering or burying a lovedone's ashes, holding a funeral service for a loved one, or carrying out a private memorial ceremony for a loved one in Shetland.

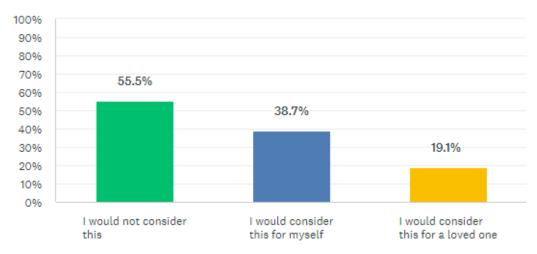
- Over half the non-residents (57.5%) would not consider doing any of these.
- The option that the largest number would consider was scattering or burying ashes (33.9%).
- 28.16% would consider holding a funeral service for a loved one in Shetland.
- 26.4% would consider carrying out a private memorial ceremony for a loved one in Shetland.

The difference between those with and without a connection to or interest in Shetland (as per Q13) was stark:

- 97% of survey respondents with no connection would not be interested in any of the above.
- Most of those with connections were significantly more likely to consider all
  options than those with no connection. The exceptions were those who used to
  live in Shetland and those who have or had parents/grandparents/ancestors from
  Shetland.
- 50% of respondents with an interest in Viking/Norse heritage would consider scattering a loved-one's ashes in Shetland (half, versus a third of non-residents overall).



Q15: The Community Development Company of Nesting is considering offering memorial ceremonies that draw on our Norse heritage in Shetland. These could include burning a replica Viking longboat containing the ashes of the deceased or incorporating Norse symbols into grave markers. Please tell us what you think about this:



Non-residents were asked about whether CDCN's concept of Viking-themed funeral or memorial ceremonies would be of interest for themselves and/or a loved one. Respondents could choose either or both options, or neither.

- As above, over half the non-residents (55.5%) would not consider this at all.
- 38.7% would consider this for themselves again, this sample is not representative of the general population so this figure would likely be much lower if asked at random.
- Fewer people (19.1%) would consider a Viking-themed funeral or memorial for a loved one than for themselves.

As in the previous question, there were significant differences between those with and without a connection to or interest in Shetland (as per Q13).

- Among respondents with an interest in Norse/Viking heritage, 67.7% would be interested in a Viking ceremony for themselves.
- Those with family, friends or loved ones living in Shetland were less likely to consider this option (32%).
- Among those with no connection to or interest in Shetland, only 13.9% would consider a Viking ceremony for themselves.

Respondents could also expand on their answer of whether they would consider this option for themselves and/or a loved one or not by leaving a comment. 37 comments were provided and below is a summary of the reasons why respondents would or would not consider a Viking-themed funeral or memorial ceremony for themselves or a loved one.



Of those that would consider a Viking-themed funeral or memorial ceremony for themselves or a loved one, the main reason for considering this option was association with Viking and/or Norse heritage. Some examples are below:

- "My ancestors were Vikings."
- "I am actually half North Friesan so close to Viking [heritage]...yes I might consider this."
- "I think it would be a great offering for those of Norse heritage who could afford it, especially if it helps subsidize more basic options for residents."

Most of the comments were against the option of a Viking-themed funeral or memorial ceremony for themselves or a loved one. The main reasons for this were associated with environmental concerns, no relation to Viking and/or Norse heritage and the location in terms of the long distance for friends and family to travel or having no connection to Shetland. Some examples are below:

#### Heritage:

- "I don't feel any connection to Viking/Norse heritage."
- "It's not part of my history."

## **Environmental**

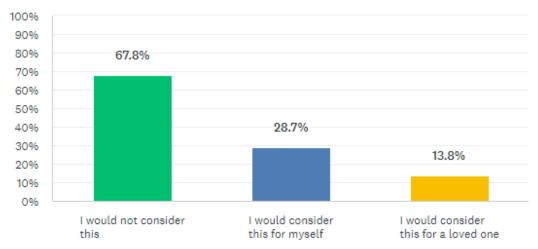
- "Environmental considerations re burning other structures for disposal of cremated remains!"
- o "Concerned about the sustainability of this practice."
- "Interesting idea that doesn't seem to align with the previous focus on environmentally conscious options."

#### Location

- "This sounds amazing but realistically I wouldn't take a deceased loved one all the way to Shetland!"
- o "I have links elsewhere in Scotland."
- o "Only because I have no connection to the location."



Q16: With the recent development of new spaceports in the UK, including at Saxavord in Unst, the chance to scatter ashes near the edge of space could also be explored. Please tell us what you think about this:



Non-residents were also asked about the idea of scattering ashes in space. As above, respondents were asked whether they would consider this for themselves and/or a loved one, and could choose either or both options, or neither.

- Most non-residents (67.8%) would not consider this at all this is a higher percentage than the Viking-themed memorial idea.
- 28.7% would consider this for themselves.
- Fewer people (13.8%) would consider a space memorial for a loved one.

As in the previous two questions, there were significant differences between those with and without a connection to or interest in Shetland (as per Q13).

- 91.9% of those with no connection to or interest in Shetland would not consider this at all.
- Respondents with family, friends or loved-ones in Shetland, people interested in Norse/Viking heritage, people who have consumed media about Shetland, past and future visitors were all more likely to consider this option for themselves – the group most likely to consider this was those who had visited Shetland in the past (44.1%).

Respondents could also expand on their answer of whether they would consider this option if not by leaving a comment. 33 comments were provided and below is a summary of the reasons why respondents would or would not consider scattering ashes near space.

Of those that would consider scattering their ashes or a loved one's ashes near the edge of space, the comments reflected interest in the option, especially for those with an



interest in space but also a lack of knowledge and information about it. Some examples are below:

- "Not heard of this. Very interesting, requires thought and research."
- "Spread across the galaxy, beside the stars, I'd love this as my sister is one of those stars as is my dad."
- "It's a bit weird but I have space-mad friend who might go for it!"

Most of the comments were against the idea of scattering their ashes or a loved one's ashes near the edge of space. The main reasons for this were associated with environmental concerns, the cost and a preference to be buried or have ashes scattered on earth rather than near space. Some examples are below:

#### Environmental

- "High energy, environmentally damaging. Scattering ashes has an environmental impact and can inhibit plant growth, livestock grazing and future land use."
- "We have polluted the earth, I don't want to pollute space as well."

#### Cost

- o "It sounds expensive."
- "I would rather have the funds that this sort of thing involves be directed to community needs."

## Preference of Location

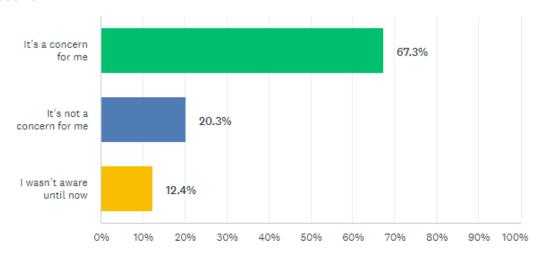
- "I want my ashes interred in the gardens of Rochester Cathedral if possible."
- "I have never flown so would like to keep 'on Earth'"

## Section 4: Questions for residents

Q17 - Q20 were shown to respondents who stated that they lived in Shetland in Q12. These asked about people's attitude to developing funeral services for Shetland, and services which could be marketed more widely.



## Q17: How do you feel about the lack of a crematorium and shortage of burial plots in Shetland?



This question was shown only to Shetland residents.

- Most (67%) felt that the lack of a crematorium and shortage of burial plots in Shetland was a concern.
- 12.4% were not aware until now. Younger people aged 25-34 and 35-44 were more likely to have been unaware of the issue than older people.
- 20.3% felt that it was not a concern.

## 147 people made comments on this question.

<u>Thoughts on the lack of a crematorium:</u> of the comments relating specifically to cremation, many stated that cremation would be their preferred way of disposing their body and/or a loved ones' body. There were mixed opinions regarding Shetland's lack of a crematorium, see some examples below:

- "I don't think it's feasible to build a crematorium in Shetland the population isn't big enough."
- "It's a shame none exists here, I feel it should have been instigated many years ago. Having to ship the deceased south, then back again seems like a lot of stress for families to me."
- "The cost of shipping a body south for cremation is of concern."

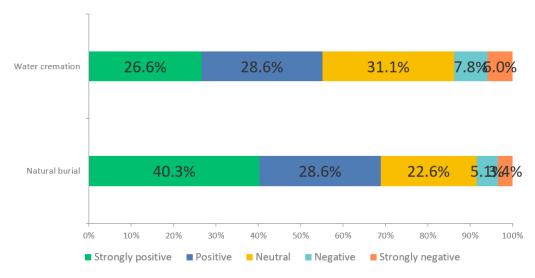
## Thoughts on shortage of burial plots:

- $\circ$  "I was aware of no crematorium but not aware of shortage of burial plots."
- "There's a lot of green space in Shetland, don't think they are running out of burial sites."



- "There is plenty of room to extend existing graveyards and/or create new ones."
- "It's not a concern but it is a shame that we effectively have no option locally other than burial in a SIC run graveyard."

Q18: How do you feel about the development of alternatives to traditional burial and cremation (as described previously in this survey) in Shetland?



Shetland residents were asked about their attitude to the possible development of water cremation and natural burial in Shetland. This question was included in this section to gauge local support or opposition for these options.

Overall, natural burial had higher levels of positive feelings than water cremation:

- 26.6% were strongly positive about water cremation and a further 28.6% were positive.
- 31.1% were neutral on water cremation.
- 6% were strongly negative and a further 7.8% were negative on water cremation.

#### Whereas:

- 40.3% were strongly positive about natural burial and a further 28.6% were positive.
- 22.6% were neutral on natural burial.
- 3.4% were strongly negative and a further 5.12% were negative on natural burial.

The only significant pattern apparent from the survey in terms of age is that older people aged 65 or older are more likely to feel strongly negative about water cremation than younger adults aged 25-34 and 35-44. The survey does not show any such pattern with regards to natural burial.



Examples of comments on this question are given below:

#### Water cremation

o "I wouldn't want a water cremation centre near my house."

## Natural burial: concern about availability of space/ground

- "Very large graveyards would be needed if every natural grave was to have its own tree. Maybe 4 or 6 graves could encircle one tree. Trees are not ideal for Shetland. Shrubs, if they survive and thrive would become something of a jungle."
- "Natural burial is still taking up space in the ground. I see no benefit in it whatsoever."
- "Again, don't see the natural burial idea as a viable solution as it will be using up more land."
- o "We have lots of natural space that could be used for natural burial."
- "As long as natural burials are confined to specific areas and don't become an invasive feature of the landscape."

#### More information required:

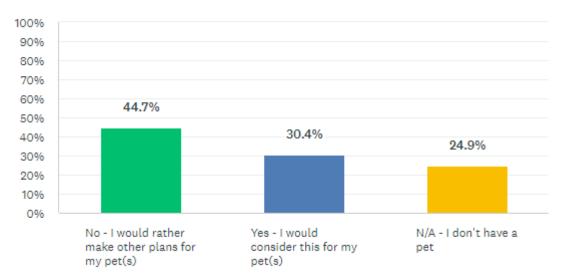
- "While I'm generally in favour of these alternatives being available, it would be useful to have more information about costs and practicalities of providing same."
- o "I would need more information. But feel it is both better than burial."

## Need for more options:

- "I feel the alternatives are a little pointless when the 2nd more common way to deal with a body, cremation, isn't even a thing in Shetland."
- o "We need options in Shetland."
- "The possibility of options is always attractive because everyone is unique."
- "Each to their own, choice must be given."



Q19: Some natural burial grounds offer pet burials or allow pets' ashes to be laid to rest. If a natural burial ground were developed in Shetland, would you consider purchasing a burial plot for your pet(s)?



Shetland residents were asked about whether they would consider using pet burials if developed as part of a natural burial ground. This question was included in the section of the survey for Shetland residents as this service is expected to be of interest only to residents.

- 30.4% would consider this for their pet(s).
- 44.7% would rather make other plans for their pet(s).
- 24.9% did not have a pet.

Younger adults aged 25-34 and 35-44 were less likely than older ones to say that they did not have a pet and were more likely to say that they would consider a natural burial option for their pet(s) – interest in pet burials peaks at 56.3% among those aged 25-34.

Examples of comments given in favour of this option include:

#### Cost:

"Might be persuaded if the price was right."

#### Access to land:

"It would be useful for people without their own land."

#### Benefits of more options:

- "I'd be very interested in this, as the options for disposal of pets is even more limited than those for people and it's something that has already caused me distress when grieving for a lost pet."
- "I think it would be nice for people if it was both and knowing when you pass, your remains could be laid to rest with all of your pet remains."



Examples of comments given against a pet burial option include:

## Relative ease of disposing of pets' bodies elsewhere:

- "Absolutely ridiculous. Pets can be buried in a garden or disposed of by vets."
- "Usually bury them on the croft."
- o "I just dig a hole in the garden and stick a rock on top of them."

## Land use/ constraints:

- o "I'm not sure we need to give over already scarce space for pets."
- "If we are running out of space for Grandma, why take up space with Fido?"
- "I would not want to take up burial space so would not consider this for a pet either."
- "All burial plots have a finite amount of space, and with the much shorter life spans of animals compared to humans, a burial ground for pets would fill very quickly. I say this as somebody who has and has had multiple and varied types of pets; we have to be realistic about this things."

#### Environmental concerns:

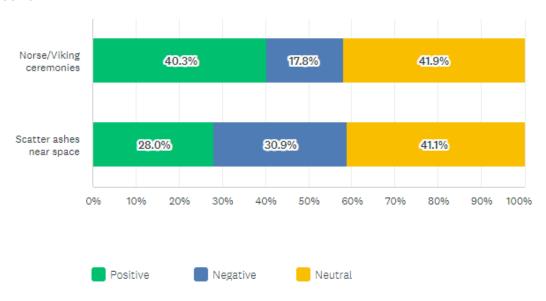
 "Can't believe, when considering alternatives using fewer resources & looking to make things more environmentally friendly, that this option is even being included!"

## Cost:

- "Cost would potentially be prohibitive though. If it was pricey, I'd just continue to use my garden."
- "Even though I have pets, I will bury them naturally. Human funerals cost a fortune without having to worry about my pet ones too."



Q20: How do you feel about the development of premium memorial ceremonies in Shetland?



Shetland residents were asked about their attitude to the possible development of Viking/Norse-themed and space memorials in Shetland. This question was included in this section to gauge local support or opposition for these options.

Neither of these options had a majority feeling positive. However, Norse/Viking ceremonies had more positive and fewer negative responses than space funerals:

- A combined 40.3% felt either strongly positive or positive about Norse/Viking ceremonies.
- 41.9% felt neutral about Norse/Viking ceremonies.
- A combined 17.8% felt either strongly negative or negative about this option.

#### Whereas:

- A combined 28% felt either strongly positive or positive about space ceremonies.
- 41.1% felt neutral.
- A combined 30.9% felt either strongly negative or negative about this option.

The weighted average for Norse/Viking ceremonies was 0.31 whereas, the weighted average for space ceremonies was -0.1.

Younger residents were more likely to feel positive about both of these developments than older ones:

- 27.1% of residents aged 25-34 felt strongly positive about Viking/Norse themed ceremonies.
- Only 9% of those aged 64-75 felt strongly positive (and none of those aged 75+, although there was a much smaller number of Shetland respondents in this age group). Older age groups were most likely to feel strongly negative.



The same pattern can be seen for space ceremonies:

- 22.9% of survey respondents aged 25-34 were strongly positive, compared to 7.4% of those aged 65-74.
- 10.4% of those aged 25-34 were strongly negative, compared to 25.6% of those aged 65-74.

Examples of comments that felt negatively about the development of premium memorial ceremonies include:

## Environmental concerns (mostly associated with scattering ashes near space):

- "Scattering ashes near the edge of space just seems like messing up the o-zone faster, not to mention the transport emissions it would take to do that, wouldn't be good for the plant."
- "Impact on the environment is irresponsible."

#### Cost:

- o "I wouldn't associate funerals with a premium."
- "Premium tells me it's going to be more expensive. It's already unaffordable to die for most families."
- "Feels a bit tacky and a bit exploitative to target people with money at a time of grieving."

#### Tourism:

- "I can see that this might have global interest and be a good source of income but I wouldn't like to see Shetland become a sort of destination for 'funeral tourism'. I would cautiously support it in the longer term but initially, I do think the priority focus should be new, achievable funeral options for local residents."
- "This will only increase morbid death tourism to the Isles. If this does go ahead then I think very strongly it should only be for residents."

#### Preference for alternatives:

 "Neither of these are appealing to me, I can see that they could prove popular but a more affordable and less gimmicky alternative to burial interest me more."

#### Perceptions:

- "But unless you happen to be a Trekkie...I would think that the Space idea would be 'a step too far'?"
- "I can see that they could prove popular but a more affordable and less gimmicky alternative to burial interest me more."



"Seems a bit cartoonish."

Examples of comments that felt positive about the development of premium memorial ceremonies include:

- "I think that all sounds great and might pull in revenue from all over to sustain the business."
- "Would be good if premium options like this could lower the cost of burial options for residents of Shetland."
- "With the connections to our Viking Heritage, that would be an almost natural progression."
- "I am a pagan and would love a Norse themed funeral."

Examples of comments that felt neutral about the development of premium memorial ceremonies include:

- "I have no strong feelings about these one way or the other, though if the cost of these was used to keep down the expenses of green burial options for Shetlanders then that would be a great way to support the local community."
- "Norse themed is not for me but I'm sure there will be plenty of interest in it within the local community. Space sounds cool but would need to know about the environmental impacts of this before I would consider."
- "Personally, I wouldn't want this but I see no reason why this couldn't be offered to anyone who was interested, if done in an efficient and professional manner."

#### Section 5: Final comments

# Q21: Please use the space below if you have any final comments on the topics mentioned in this survey.

This question was shown to all survey respondents on the end page. 175 people provided a final comment. Where relevant to other questions, these have been included above.

#### Positive about the project:

- "I think this is a very interesting idea and I will be interested to see how this progresses in the future even though it isn't for me."
- In favour of more options.
- "There should be more opportunities for alternative celebration ceremonies, and more options for what should become of your remains. Even how death notices are presented could be changed to be more representative of the person and who they were."



 "It would be nice to have some options for end of life beyond what is currently available."

#### Topic of death/dying:

- "I think this is such an important topic to raise. No one want to think of their death but it is inevitable and we should hope to have a funeral that reflects us – my family would be upset on my behalf if they couldn't follow my wishes."
- "This has raised a lot of interesting issues for me and made me realise I do need to think about it for my husband and me."
- "We should be talking more about this subject all of us, wherever we live."

#### Concerns/Criticism:

- "Not enough of this survey gives options or questions on the option most use in Shetland at present, burial and headstone. The option we have been using in Shetland for hundreds of years, mostly when the population was larger, the birth rate higher and by default death rate higher."
- "The council should know why there is no crematorium here and what plans there are to build one. Council should be doing this, not CDCN but glad someone is."
- "Funerals should not be money making, we should give back to the plant we are destroying."



#### **Appendix 3: List of stakeholders consulted**

- Shetland Islands Council:
  - Executive Manager
  - o Estates Team Lead
  - o Burial Services officer
  - o Economic Development officers
- Highlands and Islands Enterprise
- Visit Scotland
- Goudies Funeral Directors
- Up Helly Aa committee, Lerwick
- Shetland-based celebrants:
  - o Hazel Anderson, 60 North
  - o Tom Morton
- Businesses in the funeral sector, UK-wide:
  - o Leedam Natural Burial, operator of multiple natural burial grounds.
  - Sacred Stones, builder and operator of long barrows for interment of ashes.
- Artists and makers, Shetland:
  - Eve Eunson, Designer-Maker in wood and straw, specialising in Fair Isle chair making, a critically endangered Heritage Craft
  - Samantha Dennis, Designer-Maker in straw, specialising in coiled straw basketmaking, a critically endangered Heritage Craft
  - Helen Hart, crofter and producer of 'vegan sheepskin' rugs using a felted backing



# **Appendix 4 : Financial Models**

## Staffing

Salary	NI	pension	FTE	Total
£30,000	£2,949	£1,500	0.5	£17,224
£24,000	£2,121	£1,200	0.3	£8,196
£54,000	£5,070	£2,700		£25,421
F600x 24 Jaiu	rs = £14 400	<u> </u>		
_000X Z4 Idii	3 – 114,400			
Salary	NI	pension	FTE	Total
£30,000	£2,949	£1,500	0.5	£17,224
£30,000	£2,949	£1,500		£17,224
Salary	NI	pension	FTE	Total
£30,000	£2,949	£1,500	0.5	£17,224
£30,000	£2,949	£1,500		£17,224
	£30,000 £24,000 £54,000 £600x 24 lain Salary £30,000 £30,000	£30,000 £2,949 £24,000 £2,121 <b>£54,000 £5,070</b> E600x 24 lairs = £14,400 Salary NI £30,000 £2,949 <b>£30,000</b> £2,949	£30,000 £2,949 £1,500 £24,000 £2,121 £1,200 £54,000 £5,070 £2,700 £600x 24 lairs = £14,400 Salary NI pension £30,000 £2,949 £1,500 £30,000 £2,949 £1,500	£30,000 £2,949 £1,500 0.5 £24,000 £2,121 £1,200 0.3 <b>£54,000 £5,070 £2,700</b> E600x 24 lairs = £14,400  Salary NI pension FTE £30,000 £2,949 £1,500 0.5 <b>£30,000</b> £2,949 £1,500 0.5

Nesting Green burials														
Financial model														
	Assumptions	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Totals
	Price of burial	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	
	Number of burials per month	2	2	2	2	2	2	2	2	2	2	2	2	24
	Price of interring ashes	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	
	Number of ashes interred	3	3	3	3	3	3	3	3	3	3	3	3	36
	Number of memorials (% of internments)	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	
INCOME														
Burial Plots income		£2,800	£2,800	£2,800	£2,800	£2,800	£2,800	£2,800	£2,800	£2,800	£2,800	£2,800	£2,800	£33,600
Ashes internment income		£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£12,600
Memorials income (NB this can accumulate over years as														
this is often not a one off payment but a licence to use for														
a period of time	£100.00	£100	£100			£100							£100	£1,200
Total Income		£3,950	£3,950	£3,950	£3,950	£3,950	£3,950	£3,950	£3,950	£3,950	£3,950	£3,950	£3,950	£47,400
Emana														
Expenses Cost of memorials	50%	£50	£50	050	050	050	050	050	050	050	050	050	050	0000
			£2.118	£50	£50 £2,118	£50 £2,118	£50 £2,118		£50 £2,118		£50	£50 £2,118	£50	£600
Staffing (includes digging of lairs and grounds-keeping)	Link to staffing sheet	£2,118 £100	£2,118 £100	£2,118 £100					£2,118 £100		£2,118 £100		£2,118 £100	£25,421
Staff training and expenses Payroll		£100	£100	£100			£30		£100		£100	£100 £30	£100	£1,200 £360
Advertising	Estimate	£200	£200	£200	£200		£200		£200		£200	£200	£200	£2.400
Water Rates	Contingency - check with Council	£200 £100	£200 £100	£200	£200				£200 £100		£200	£200 £100	£200 £100	£2,400 £1,200
Phone and internet	Mobile	£100	£100	£100	£100		£100		£100 £50		£100	£100 £50	£100	£1,200 £600
		£1.500	100	1.50	1.50	1.50	£30	1.50	1.50	100	1.50	1.50	1.50	£1.500
Insurance	Needs quote	£1,500 £25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£1,500
Stationery, postage & Printing  Membership of Association of Natural Burial Grounds (ANBG)	Based on plot sales	528		£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£300 £528
	'	520					00.000						04.000	
Professional and accountancy fees	Estimate for software licence	0000	0000	0000	0000	0000	£2,000		0000	0000	0000	0000	£1,000	,
Digital systems for chipping	Estimate Materials and tools	£200 £100	£200 £100	£200 £100	£200 £100		£200 £100		£200 £100		£200 £100	£200 £100	£200 £100	£2,400
Site upkeep and Maintenance	Materials and tools	£100	£100									£100 £50		£1,200
Security alarm and other contracts	Estimate	£50	£50	£50			£50		£50 £50		£50 £50	£50	£50 £50	£600
Misc				£50										
Total Expenditure		£5,101	£3,073	£3,073	£3,073	£3,073	£5,073	£3,073	£3,073	£3,073	£3,073	£3,073	£4,073	£41,909
Operating Profit		-£1,151	£877	£877	£877	£877	-£1,123	£877	£877	£877	£877	£877	-£123	£5,491
Balance		-£1,151	-£275	£602	£1,478	£2,355	£1,232	£2,108	£2,985	£3,862	£4,738	£5,615	£5,491	
NB : Additional income possible from pet funerals	50 pets x £150 average = £7500													



Nesting Green burials														
Financial model with loan repayment														
	Assumptions	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Totals
	Price of burial	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	
	Number of burials per month	2	2	2	2	2	2	2	2	2	2	2	2	24
	Price of interring ashes	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	
	Number of ashes interred	3	3	3	3	3	3	3	3	3	3	3	3	36
	Number of memorials (% of internments)	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	
INCOME														
Burial Plots income		£2,800	£2,800		£2,800		£2,800	£2,800	£2,800		£2,800	£2,800	£2,800	£33,600
Ashes internment income		£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£1,050	£12,600
Memorials income (licence fee)	£50.00	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£600
Total Income		£3,900	£3,900	£3,900	£3,900	£3,900	£3,900	£3,900	£3,900	£3,900	£3,900	£3,900	£3,900	£46,80
Expenses														
Cost of memorials	50%	£25	£25	£25	£25	£25		£25	£25			£25	£25	£300
Staffing (includes digging of lairs and grounds keeping)	Link to staffing sheet	£2,118	£2,118	£2,118	£2,118	£2,118	£2,118	£2,118	£2,118				£2,118	£25,42
Staff training and expenses		£100	£100	£100	£100	£100	£100	£100	£100		£100	£100	£100	£1,20
Payroll		£30	£30	£30	£30	£30		£30	£30			£30	£30	£360
Advertising	Estimate	£200	£200	£200	£200	£200	£200	£200	£200			£200	£200	£2,400
Water Rates	Contingency - check with Council	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£1,200
Phone and internet	Mobile	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£600
Insurance	Needs quote	£1,500												£1,500
Stationery, postage & Printing		£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£300
Membership of ANBG	Based on plot numbers	528											£1,800	£2,32
Professional and accountancy fees	Estimate for software licence					£2,000							£1,000	£3,000
Digital systems for chipping	Estimate	£200	£200	£200	£200	£200	£200	£200	£200	£200	£200	£200	£200	£2,400
Site upkeep and Maintenance	Materials and tools	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£1,200
Security alarm and other contracts	Estimate	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£600
Misc		£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£600
Loan repayments for landscaping	£100,000 over 10 years at 8%	£1,199	£1,199	£1,199	£1,199	£1,199	£1,199	£1,199	£1,199	£1,199	£1,199	£1,199	£1,199	£14,383
Total Expenditure		£6,275	£4,247	£4,247	£4,247	£6,247	£4,247	£4,247	£4,247	£4,247	£4,247	£4,247	£7,047	£57,792
Operating Profit		-£2,375	-£347	-£347	-£347	-£2,347	-£347	-£347	-£347	-£347	-£347	-£347	-£3,147	-£10,992
Polomoo		CO 27E	-£2.722	-£3.069	-£3.416	-£5.763	-£6,110	-£6.457	-£6.804	-£7.151	-£7.498	-£7.845	-£10.992	
Balance		-£2,375	-£2,/22	-£3,069	-£3,416	-£5,763	-£6,110	-£0,45/	-£0,804	-£/,151	-£7,498	-£7,845	-£10,992	



Nesting Alkaline hydrolysis														
Financial model with loan repayment														
	Assumptions	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Totals
	Price of AH	£700	£700	£700	£700	£700	£700	£700	£700	£700	£700	£700	£700	
	Number of AH per month	5	5	5	5	5	5	5	5	5	5	5	5	60
INCOME	·													
AH income		£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£42,000
Total Income		£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£3,500	£42,000
Expenses														
Staffing	Link to staffing sheet	£1,435	£1,435	£1,435	£1,435	£1,435	£1,435	£1,435	£1,435	£1,435	£1,435	£1,435	£1,435	£17,224
Staff training and expenses		£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£1,200
Payroll		£30	£30	£30	£30	£30	£30	£30	£30	£30	£30	£30	£30	£360
Advertising	Estimate	£200	£200	£200	£200	£200	£200	£200	£200	£200	£200	£200	£200	£2,400
Utilities	Estimate	£300	£300	£300	£300	£300	£300	£300	£300	£300	£300	£300	£300	£3,600
	Depends on rateable value - could be much													
Rates	higher. Unlikely to get charitable discount.	£500	£500	£500	£500	£500	£500	£500	£500	£500	£500	£500	£500	£6,000
Building running costs	Compliance, repairs etc	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	£4,200
Water Rates	Contingency - check with Council	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£1,200
Phone and internet	Mobile	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£600
Insurance	Needs quote	£2,500												£2,500
Stationery, postage & Printing		£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£300
Professional and accountancy fees	Estimate for software licence												£1,000	£1,000
Site upkeep and Maintenance	Materials and tools	£250	£250	£250	£250	£250	£250	£250	£250	£250	£250	£250	£250	£3,000
Security alarm and other contracts	Estimate	£50	£50	£50	£50	£50	£50	£50		£50	£50	£50	£50	£600
Misc		£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£600
	£330k for equipment plus small building and water treatment - say £1m (could be higher)													
Loan repayments for equipment and construction	over 25 years at 6%	£6,443	£6,443	£6,443	£6,443	£6,443	£6,443	£6,443	£6,443	£6,443	£6,443	£6,443	£6,443	£77,316
Total Expenditure		£12,383	£9,883	£9,883	£9,883	£9,883	£9,883	£9,883	£9,883	£9,883	£9,883	£9,883	£10,883	£122,100
Operating Profit		-£8,883	-£6,383	-£6,383	-£6,383	-£6,383	-£6,383	-£6,383	-£6,383	-£6,383	-£6,383	-£6,383	-£7,383	-£80,100
Balance		-£8,883	-£15,267	-£21,650	-£28,033	-£34,417	-£40,800	-£47,184	-£53,567	-£59,950	-£66,334	-£72,717	-£80,100	



Nesting Viking funerals														
Financial model with loan repayment														
. ,	Assumptions	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Totals
	Price of viking cermony. NB casket purchased													
	by the customer separately. NB, some of these													
International market not dependent on Shetland	can be for individuals, others for groups, say 20													
population. Needs higher marketing budget.	people paying £250	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	
	Number of cermonies per month	1	1	1	1	1	1	1	1	1	1	1	1	12
INCOME														
Viking ceremony income		£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£60,000
Total Income		£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£60,000
Expenses														
Staffing	Link to staffing sheet	£1.435	£1.435	£1.435	£1,435	£1,435	£1.435	£1.435	£1,435	£1.435	£1.435	£1.435	£1.435	£17,224
Celebrant cost per ceremony	£250	£250	£250	£250	£250	£250						£250	£250	£3,000
Staff training and expenses	ALCO .	£100	£100	£100	£100							£100	£100	£1,200
Payroll		£30	£30	£30	£30							£30	£30	£360
Advertising	Higher due to international market	£500	£500	£500	£500	£500						£500	£500	£6,000
Phone and internet	Mobile	£50	£50	£50	£50	£50						£50	£50	£600
Insurance	Needs quote	£1,000	2.50	230	2.50	200	230	200	200	200	2.00	200	2.00	£1,000
Stationery, postage & Printing	Needs quote	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£300
Professional and accountancy fees	Estimate for software licence	223	223	223	LZJ	LZJ	LZJ	123	LZJ	223	LZJ	223	£1,000	
Misc	Estimate for software licence	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£600
Total Expenditure		£3.440	£2.440	£2.440	£2,440	£2,440	£2.440	£2,440						
Total Experiulture		23,440	22,440	22,440	22,440	22,440	22,440	22,440	£2,440	£2,440	22,440	22,440	23,440	231,26
Operating Profit		£1,560	£2,560	£2,560	£2,560	£2,560	£2,560	£2,560	£2,560	£2,560	£2,560	£2,560	£1,560	£28,716
Balance		£1,560	£4,119	£6,679	£9,239	£11,798	£14,358	£16,917	£19,477	£22,037	£24,596	£27,156	£28,716	:
Sales of hand made casks	Link to up helly aa workshop													
Income														
Cost per per casket	Based on ash caskets in report	600	600	600	600	600	600	600	600	600	600	600	600	7200
Numbers purchased		3	3	3	3	3	3	3	3	3	3	3	3	36
Income		1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	21600
Cost to commission a resident to make this	Say 15 hours x £20 per hour?	300	300	300	300							300	300	3600
Total cost		900	900	900	900	900	900	900	900	900	900	900	900	10800
Profit		900	900	900	900	900	900	900	900	900	900	900	900	10800
			1	1	1					1		1		1



## Increased price

Nesting Viking funerals														
Financial model with loan repayment														
, ,	Assumptions	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Totals
International market not dependent on Shetland population. Needs higher marketing budget.	Price of viking cermony. NB casket purchased by the customer separately. NB, some of these can be for individuals, others for groups, say 20 people paying £250	£10.000	£10,000	£10,000	£10,000		£10,000	£10,000	£10,000	£10,000	£10,000	£10,000	£10,000	
population. Needs higher marketing budget.	Number of cermonies per month	1	1	1	1	1	1	1	1	1	1	1	1	12
INCOME	Number of cermonies per month	1		ı	1	'	ı	'			ı		'	14
Viking ceremony income		£10.000	£10.000	£10,000	£10,000	£10,000	£10,000	£10,000	£10,000	£10,000	£10,000	£10,000	£10 000	£120,00
Total Income		£10,000	£10,000	£10,000			£10,000						£10,000	£120,00
Total Income		210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	210,000	2120,00
Expenses														
Staffing	Link to staffing sheet	£1,435	£1,435	£1,435	£1,435	£1,435	£1,435	£1,435	£1,435	£1,435	£1,435	£1,435	£1.435	£17.22
Celebrant cost per ceremony	£250	£1,435	£1,435	£1,435		£1,435	£1,435					£1,435 £250	£1,435	£17,22
Staff training and expenses	1230	£100	£100	£100		£100	£100					£100	£100	£1,20
Payroll		£30	£30	£30		£30	£30	£30				£30	£30	£1,20
Advertising	Higher due to international market	£500	£500	£500		£500	£500					£500	£500	£6,00
Phone and internet	Mobile	£500	£500	£500		£500	£500	£500				£500	£500	£6,00
Insurance	Needs quote	£1.000	200	200	1.50	130	200	130	100	100	200	LOU	100	£1.00
Stationery, postage & Printing	Needs quote	£1,000	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£1,00
Professional and accountancy fees	Estimate for software licence	123	1.25	1.20	1,25	1,20	1.23	1,20	1.20	1.20	1,20	1,20	£1.000	
,	Estimate for software licence	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£1,000	, , , , , ,
Misc		£3,440	£2,440	£2,440		£2,440								£60
Total Expenditure	+	23,440	£2,440	£2,440	£2,440	£2,440	£2,440	£2,440	£2,440	£2,440	£2,440	£2,440	£3,440	£31,28
Operating Profit		£6,560	£7,560	£7,560	£7,560	£7,560	£7,560	£7,560	£7,560	£7,560	£7,560	£7,560	£6,560	£88,71
Balance		£6,560	£14,119	£21,679	£29,239	£36,798	£44,358	£51,917	£59,477	£67,037	£74,596	£82,156	£88,716	
Sales of hand made casks	Link to up helly aa workshop													
Income	·													
Cost per per casket	Based on ash caskets in report	600	600	600	600	600	600	600	600	600	600	600	600	7200
Numbers purchased		3	3	3	3	3	3	3	3	3	3	3	3	36
Income		1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	21600
Cost to commission a resident to make this	Say 15 hours x £20 per hour?	300	300	300			300						300	3600
Total cost		900	900	900	900	900	900	900	900	900	900	900	900	10800
Profit		900	900	900	900	900	900	900	900	900	900	900	900	10800



## Option with fewer Viking Funerals

Nesting Green burials													
Financial model													
	Assumptions	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
	Price of burial	£1,400	£1.400	£1,400	£1,400	£1.400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400
	Number of burials per month	2	2	2	2	2	2	2	2	2	2	2	2
	Price of interring ashes	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350
	Number of ashes interred	3	3	3	3	3	3	3	3	3	3	3	3
	Number of memorials (% of internments)	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
INCOME	(10000000000000000000000000000000000000												
Burial Plots income		£2,800	£2,800	£2,800	£2,800	£2,800	£2,800	£2,800	£2,800	£2.800	£2,800	£2,800	£2,80
Ashes internment income		£1,050			£1,050		£1,050	£1,050	£1,050	£1,050		£1,050	£1,05
Memorials income (NB this can accumulate over years as		21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,00
this is often not a one off payment but a licence to use for													
a period of time	£100.00	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£10
Total Income for Green burials	2100.00	£3,950	£3,950	£3,950	£3,950	£3,950	£3,950		£3,950	£3,950	£3,950		£3,950
Total income for Green burials		23,930	23,930	23,930	23,930	23,930	23,930	23,930	23,930	23,930	23,930	23,930	23,930
	Price of viking cermony. NB casket purchased												
	by the customer separately. NB, some of these												
International market not dependent on Shetland population.	can be for individuals, others for groups, say 20												
Needs higher marketing budget.	people paying £250	05.000	05.000	05.000	05.000	05.000	05.000	05.000	05.000	05.000	05.000	05.000	05.000
Needs riigher marketing budget.		£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000
	Number of cermonies per month	1				1				1			
INCOME													
Viking ceremony income		£5,000	£C				£0		£0	£5,000	£0		£
Total Income for Viking Funerals		£5,000	£0	£0	£0	£5,000	£0	£0	£0	£5,000	£0	£0	£0
Pets	Estimate	£625	£625	£625	£625	£625	£625	£625	£625	£625	£625	£625	£625
Sales of hand made casks	Link to up helly aa workshop												
Income													
Cost per per casket	Based on ash caskets in report	600	600	600	600	600	600	600	600	600	600	600	600
Numbers purchased		3	3	3	3	3	3	3	3	3	3	3	3
Income		1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
moonio .		1000	1000		1000	1000	.000	.000	1000	1000	1000	1000	1000
Cost to commission a resident to make this	Say 15 hours x £20 per hour?	300	300	300	300	300	300	300	300	300	300	300	300
Total cost	Say 13 flours x 220 per flour?	900	900	900	900	900	900	900	900	900	900	900	900
Total cost		900	900	900	900	900	900	900	900	900	900	900	900
D64		900	900	900	900	900	900	900	900	900	900	900	900
Profit		900	900	900	900	900	900	900	900	900	900	900	900
		040 475	05.475	05 475	05.455	040 475	05.475	05.475	05.475	040 475	05.455	05 435	05.435
Total income		£10,475	£5,475	£5,475	£5,475	£10,475	£5,475	£5,475	£5,475	£10,475	£5,475	£5,475	£5,475
Expenses													
Cost of memorials	50%	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50
Staffing (includes digging of lairs and grounds-keeping)	Link to staffing sheet	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554
Staff training and expenses		£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100
Payroll		£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50
Advertising	Estimate	£600	£600	£600	£600	£600	£600	£600	£600	£600	£600	£600	£600
Water Rates	Contingency - check with Council	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100
Phone and internet	Mobile	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50
Insurance	Needs quote	£1,500	1	1	1	1			T		1	1.7	
Stationery, postage & Printing		£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25
Membership of Association of Natural Burial Grounds (ANBG)	Based on plot sales	528		-20	-20	~20					-20		~=0
		320	1	<del>                                     </del>	<del>                                     </del>	<del>                                     </del>	£2,000		-		<del>                                     </del>		£1,00
						1		1		0000	1	£200	£1,00
Professional and accountancy fees	Estimate for software licence	£300	£300	6200	£200	ເລດດ	5200	COUC	LOOO				
Professional and accountancy fees Digital systems for chipping	Estimate for software licence Estimate	£200	£200	£200	£200	£200	£200	£200	£200	£200	£200		
Professional and accountancy fees Digital systems for chipping Site upkeep and Maintenance	Estimate for software licence Estimate Materials and tools	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100
Professional and accountancy fees Digital systems for chipping Site upkeep and Maintenance Security alarm and other contracts	Estimate for software licence Estimate	£100 £50	£100 £50	£100 £50	£100 £50	£100 £50	£100 £50	£100 £50	£100 £50	£100 £50	£100 £50	£100 £50	£50
Professional and accountancy fees Digital systems for chipping Site upkeep and Maintenance Security alarm and other contracts Misc	Estimate for software licence Estimate Materials and tools	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£50 £50
Professional and accountancy fees Digital systems for chipping Site upkeep and Maintenance Security alarm and other contracts	Estimate for software licence Estimate Materials and tools	£100 £50	£100 £50	£100 £50	£100 £50	£100 £50	£100 £50	£100 £50	£100 £50	£100 £50	£100 £50 £50	£100 £50 £50	£50 £50
Professional and accountancy fees Digital systems for chipping Site upkeep and Maintenance Security alarm and other contracts Misc	Estimate for software licence Estimate Materials and tools	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£50 £50
Professional and accountancy fees Digital systems for chipping Site upkeep and Maintenance Security alarm and other contracts Misc Total Expenditure	Estimate for software licence Estimate Materials and tools	£100 £50 £50 £6,957	£100 £50 £50 £4,929	£100 £50 £50 £4,929	£100 £50 £50 £4,929	£100 £50 £50 £4,929	£100 £50 £50 £6,929	£100 £50 £50 £4,929	£100 £50 £50 £4,929	£100 £50 £50 £4,929	£100 £50 £50 £4,929	£100 £50 £50 £4,929	£50 £50 £5,92
Professional and accountancy fees Digital systems for chipping Site upkeep and Maintenance Security alarm and other contracts Misc Total Expenditure	Estimate for software licence Estimate Materials and tools	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£100 £50 £50	£50 £50
Professional and accountancy fees Digital systems for chipping Site upkeep and Maintenance Security alarm and other contracts Misc Total Expenditure  Operating Profit	Estimate for software licence Estimate Materials and tools	£100 £50 £50 £6,957 £3,518	£100 £50 £50 £4,929 £546	£100 £50 £50 £4,929 £546	£100 £50 £50 £4,929 £546	£100 £50 £50 £4,929 £5,546	£100 £50 £50 £6,929 -£1,454	£100 £50 £50 £4,929 £546	£100 £50 £50 £4,929 £546	£100 £50 £50 £4,929 £5,546	£100 £50 £50 £4,929 £546	£100 £50 £50 £4,929 £546	£50 £50 £5,929 -£454
Professional and accountancy fees Digital systems for chipping Site upkeep and Maintenance Security alarm and other contracts Misc Total Expenditure	Estimate for software licence Estimate Materials and tools	£100 £50 £50 £6,957	£100 £50 £50 £4,929	£100 £50 £50 £4,929	£100 £50 £50 £4,929	£100 £50 £50 £4,929	£100 £50 £50 £6,929	£100 £50 £50 £4,929 £546	£100 £50 £50 £4,929 £546	£100 £50 £50 £4,929 £5,546	£100 £50 £50 £4,929 £546	£100 £50 £50 £4,929 £546	£50 £50 £5,92



## Option with Fewer Viking Funerals but higher price

Prince of Limitage   Prince	Necting Creen buriels	T				1	1	1				1			
Macrost   Macr	Nesting Green burials	+													
Proceed parallel   15,450	rinanciai modei	Accumptions	Anr	May	lun	11	Δα	Con	Oct	Mov	Doo	lan	Eob	Mar	Totals
Price of Internal paties   1906   1															TOLAIS
Proce of sterring alters   \$3.00   \$3.00   \$2.00   \$															2
Morbard of ashes intermed 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3															
Moderal memorals (% of interments)    Number of memorals (% of interments)   S276   S2															3
Part															-
Part	INCOME	Number of memorials (70 of internments)	2070	2070	2070	2070	2070	2070	2070	2070	2070	2070	2070	2070	
Author of Polyment (No. 10) and Control (No. 10) an			£2 800	£2 800	£2 800	62 800	62.800	£2 800	£2 800	62 800	£2 800	£2 800	£2 800	£2 800	£33 EU
Price of Windows Services   Ser				£1,000			£1,000	£1,000	£1,000						
This is offern of a one of payment but allocate to all scene to use for payment but allocate to all scene to use for payment but allocate to all scene to use for payment but allocated to all scene to the payment but allocated to all scene to to			21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	21,000	2.2,00
a period of time  10,000  10,990  10,3950  10,39															
Columber	a period of time	£100.00	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£1.20
Price of viking cermony. NS casket purchased by the castoner separately. NS, some of free reviews and the reviews of the remonstration anniver not dependent on Shettland population (viking furnished business).  **RECOME***  **Name of cermonies per morth**  **Investigation of the state of th	Total Income for Green burials														£47,40
by the Customer separately. NB, some of these hearth production (seeds higher marketing budget. NB production (seeds higher marketing budget. NB production) apople paying £2500 seeds higher marketing budget. NB production (seeds higher marketing budget. NB production) and the first of the first-wide, and production (seeds higher marketing budget. NB production) apople paying £2500 seeds higher production. NB production (seeds higher production) and the first of the fir	Total modific for Groon barials		20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	241,40
by the Customer separately. NB, some of these hearth production (seeds higher marketing budget. NB production (seeds higher marketing budget. NB production) apople paying £2500 seeds higher marketing budget. NB production (seeds higher marketing budget. NB production) and the first of the first-wide, and production (seeds higher marketing budget. NB production) apople paying £2500 seeds higher production. NB production (seeds higher production) and the first of the fir		Price of viking cermony. NB casket purchased													
International market of dependent on Shetland population. Can be for Individuals, offiers for groups, say 20 per location in an expert of the product of the															
Needs legisler marketing budget.  Needs	International market not dependent on Shetland population.														
Namber of cermonies per morth    1			£10,000	£10 000	£10 000	£10,000	£10,000	£10,000	£10 000	£10,000	£10,000	£10,000	£10,000	£10,000	
No.				210,000	210,000	210,000		210,000	210,000	210,000		210,000	210,000	210,000	
\$10,000   \$0   \$0   \$0   \$0   \$0   \$0   \$0	INCOME	Number of cermonics per month													
Total Income for Viking Funerals  Estimate  Estimate  E625 6625 6625 6625 6625 6625 6625 6625		+	610.000		60		£10.000	60	£0	50	610.000	60	60	60	£20 00
Estimate															
Sales of hand made casks  Unik to up helly as workshop  Cost per per casket  Based on ash caskets in report  Based on ash cask	Total income for viking runerals	<del>                                     </del>	£10,000	ŁU	ŁU	ŁU	£10,000	ŁU	ŁU	ŁU	210,000	ŁU	ŁU	ŁU	£30,00
Sales of hand made casks  Unik to up helly as workshop  Cost per per casket  Based on ash caskets in report  Based on ash cask	D-t-	Fatimete	CCOE	C7 E0											
Income	rets	Estimate	£023	1023	1023	1.023	1023	£023	1020	1020	1020	1023	2020	2020	£1,50
Income	Outro of London London	L'at a sur talle as madel as													
Cost per casket   Based on ash caskets in report   600 600 600 600 600 600 600 600 600 6		Link to up nelly aa worksnop										ļ			
Numbers purchased income   3   3   3   3   3   3   3   3   3															
1800   1800		Based on ash caskets in report	600	600	600			600	600	600	600	600	600		
Cost to commission a resident to make this  Say 15 hours x £20 per hour?  300 300 300 300 300 300 300 300 300 30			3	3	3			3	3	3	3	3	3		
Second cost	Income		1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	21600
Second cost															
Profit    900   90		Say 15 hours x £20 per hour?													
Total income  E15,475 E5,475 E	Total cost		900	900	900	900	900	900	900	900	900	900	900	900	10800
Total income  E15,475 E5,475 E															
Expenses Cost of memorials Soft ESO	Profit		900	900	900	900	900	900	900	900	900	900	900	900	10800
Expenses Cost of memorials Soft ESO															
Cost of memorials   S0%   E50   E5	Total income		£15,475	£5,475	£5,475	£5,475	£15,475	£5,475	£5,475	£5,475	£15,475	£5,475	£5,475	£5,475	£95,70
Cost of memorials   S0%   E50   E5															
Cost of memorials   S0%   E50   E5															
Cost of memorials   S0%   E50   E5															
Staffing (includes diagoing of lairs and grounds-keeping) Link to staffing sheet E3.554 E3.55	Expenses														
Staff training and expenses   E100	Cost of memorials	50%	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£60
Payroll	Staffing (includes digging of lairs and grounds-keeping)	Link to staffing sheet	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554	£3,554	£42,64
Advertising Estimate	Staff training and expenses		£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£1,20
Water Rates         Confingency - check with Council         £100 <td>Payroll</td> <td></td> <td>£50</td> <td>£60</td>	Payroll		£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£60
Water Rates   Confingency - check with Council   £100	Advertising	Estimate	£600	£600	£600	£600	£600	£600	£600	£600	£600	£600	£600	£600	£7.20
Phone and intermet    Mobile   E50	Water Rates	Contingency - check with Council	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£1,20
Insurance Needs quote £1,500 £25 £25 £25 £25 £25 £25 £25 £25 £25 £25	Phone and internet			£50	£50	£50	£50	£50			£50				£60
Stationery, postage & Printing    E25   E2	Insurance	Needs quote	£1,500												£1,50
Membership of Association of Natural Burial Grounds (ANBG)   Based on plot sales   528		1		£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£25	£30
Estimate for software licence		Based on plot sales													£52
Digital systems for chipping   Estimate   E200			1					£2 000						£1 000	
Site upkeep and Maintenance			£200	£200	£200	£200	£200		£200	£200	£200	£200	£200		£2,40
Security alarm and other contracts															
Misc   E50											£50				
Total Expenditure £6,957 £4,929 £4,92		Louisano													
Operating Profit £8,518 £546 £546 £546 £10,546 -£1,454 £546 £546 £10,546 £546 £546 £546 £546 £31,527 £8,518 £9,064 £9,611 £10,157 £20,703 £19,249 £19,796 £20,342 £30,888 £31,434 £31,981 £31,527															
E8,518 E9,064 E9,611 £10,157 £20,703 £19,249 £19,796 £20,342 £30,888 £31,434 £31,981 £31,527	Misc	<del> </del>			4,343	4,323	4,323	20,329	14,329	1,4,329	24,929	24,329	14,529	10,529	204,17
E8,518 E9,064 E9,611 £10,157 £20,703 £19,249 £19,796 £20,342 £30,888 £31,434 £31,981 £31,527			£6,957	24,323											
E8,518 E9,064 E9,611 £10,157 £20,703 £19,249 £19,796 £20,342 £30,888 £31,434 £31,981 £31,527	Misc		£6,957	14,929											
	Misc Total Expenditure			,	£546	£546	£10.546	-£1.454	£546	£546	£10.546	£546	£546	-£454	£31,52
	Misc			,	£546	£546	£10,546	-£1,454	£546	£546	£10,546	£546	£546	-£454	£31,52
NB : Additional income possible from pet funerals 50 pets x £150 average = £7500	Misc Total Expenditure Operating Profit		£8,518	£546											£31,52
THE - PRODUCTION PROTECTION OF THE PROTECTION OF	Misc Total Expenditure		£8,518	£546											£31,52
	Misc Total Expenditure  Operating Profit  Balance	Electry ESED common a CTTO	£8,518	£546											£31,52



## Consolidated : Green Burials and Viking Funerals with Increased ceremonies

Staff posts: Green burial					
	Salary	NI	pension	FTE	Total
Development Officer / Co-ordinator	£30,000	£2,949	£1,500	0.5	£17,224
Groundskeeper and Gravedigger	£24,000	£2,121	£1,200	0.3	£8,196
Marketing Officer / Co-ordinator	£30,000	£2,949	£1,500	0.5	£17,224
Total	£84,000	£8,018	£4,200	£1	£42,645



Nesting Green burials														
Financial model													1	
Financial model	Assumptions	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Totals
	Price of burial	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	£1,400	701415
	Number of burials per month	2	2	2	2	2	2	2	2	2	2	2	2	
	Price of interring ashes	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	£350	
	Number of ashes interred	3	3	3	3	3	3	3	3	3	3	3	3	
	Number of memorials (% of internments)	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	· '
INCOME	Number of memorials (% of interninents)	2076	2076	2070	2070	2070	2070	2076	2070	2076	2070	2070	2070	
Burial Plots income		£2,800	£2,800	£2.800	£2.800	£2.800	£2,800	£2,800	£2.800	£2,800	£2.800	£2,800	£2,800	£33,60
Ashes internment income		£1,050		£1,050					£1,050	£1,050				
Memorials income (NB this can accumulate over years as		£1,030	£1,000	£1,030	£1,030	£1,030	£1,000	£1,030	£1,030	£1,000	£1,030	£1,030	£1,030	212,0
this is often not a one off payment but a licence to use for														
a period of time	£100.00	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£100	£1,2
•	£100.00	£3,950	£3,950	£3,950	£3,950	£3,950		£3,950	£3,950	£3,950	£3,950	£3,950	£3,950	£47,4
Total Income for Green burials		23,930	23,930	23,930	23,950	23,930	23,950	23,950	23,950	23,930	23,930	23,930	23,950	247,40
	Drice of viking cormony. ND cooket numbered												-	
	Price of viking cermony. NB casket purchased													
	by the customer separately. NB, some of these													
International market not dependent on Shetland population.	can be for individuals, others for groups, say 20	05.000	05.000	05.000	05.000	05.000	05.000	05.000	05.000	05.000	05.000	05.000	05.000	
Needs higher marketing budget.	people paying £250	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	
	Number of cermonies per month	1	1	1	1	1	1	1	1	1	1	1	1	
INCOME														
Viking ceremony income		£5,000		£5,000			£5,000		£5,000					£60,00
Total Income for Viking Funerals		£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£5,000	£60,0
Pets	Estimate	£625	£625	£625	£625	£625	£625	£625	£625	£625	£625	£625	£625	£7,5
Sales of hand made casks	Link to up helly aa workshop													
Income														
Cost per per casket	Based on ash caskets in report	600	600	600	600	600	600	600	600	600	600	600	600	7200
Numbers purchased	·	3	3	3	3	3	3	3	3	3	3	3	3	36
Income		1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	21600
Cost to commission a resident to make this	Say 15 hours x £20 per hour?	300	300	300	300	300	300	300	300	300	300	300	300	3600
Total cost	edy to floure x 220 per flour.	900	900	900	900	900	900	900	900	900	900	900	900	10800
Total coot		500	500	500	500	500	500	500	500	500	500	300	300	10000
Profit		900	900	900	900	900	900	900	900	900	900	900	900	10800
TIOIL		300	300	300	300	300	300	300	300	300	300	300	300	10000
Total income									040 475	040 475	1			
Total income			C40 47E	C40 47E	C40 47E	C40 47E	C40 47E	C40 47E			C40 47E	C40 47E	C40 47E	C42E 7
		£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£125,7
		£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£125,7
		£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	10,475	£10,475	£10,475	£10,475	£125,70
		£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	£10,475	10,475	£10,475	£10,475	£10,475	£125,7
Expenses				,										
Expenses Cost of memorials	50%	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£50	£60
Expenses Cost of memorials Staffing (includes digging of lairs and grounds-keeping)	50% Link to staffing sheet	£50 £3,554	£50 £3,554	£50 £3,554	£50 £3,554	£50 £3,554	£50 £3,554	£50 £3,554	£50 £3,554	£50 £3,554	£50 £3,554	£50 £3,554	£50 £3,554	£6 £42,6
Expenses Cost of memorials Staffing (includes digging of lairs and grounds-keeping)		£50 £3,554 £100	£50 £3,554 £100	£50 £3,554 £100	£50 £3,554 £100	£50 £3,554 £100	£50 £3,554 £100	£50 £3,554 £100	£50 £3,554 £100	£50 £3,554 £100	£50 £3,554 £100	£50 £3,554 £100	£50 £3,554 £100	£60 £42,64 £1,20
Expenses Cost of memorials Staffing (includes digging of lairs and grounds-keeping) Staff training and expenses Payroll	Link to staffing sheet	£50 £3,554 £100 £50	£50 £3,554 £100 £50	£50 £3,554 £100 £50	£50 £3,554 £100 £50	£50 £3,554 £100 £50	£50 £3,554 £100 £50	£50 £3,554 £100 £50	£50 £3,554 £100 £50	£50 £3,554 £100 £50	£50 £3,554 £100 £50	£50 £3,554 £100 £50	£50 £3,554 £100 £50	£6 £42,6 £1,2 £6
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Expenses Cost of memorials Staffing (includes digging of lairs and grounds-keeping) Staff training and expenses Payroll Advertising Water Rates	Link to staffing sheet  Estimate	£50 £3,554 £100 £50 £600	£50 £3,554 £100 £50 £600	£50 £3,554 £100 £50 £600	£50 £3,554 £100 £50 £600	£50 £3,554 £100 £50 £600	£50 £3,554 £100 £50 £600	£50 £3,554 £100 £50 £600	£50 £3,554 £100 £50 £600	£50 £3,554 £100 £50 £600	£50 £3,554 £100 £50 £600	£50 £3,554 £100 £50 £600	£50 £3,554 £100 £50 £600	£66 £42,6- £1,2- £66 £7,2- £1,2-
Expenses Cost of memorials Staffing (includes digging of lairs and grounds-keeping) Staff training and expenses Payroll Advertising Water Rates Phone and internet	Link to staffing sheet  Estimate  Contingency - check with Council	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£66 £42,6- £1,2- £66 £7,2- £1,2-
Expenses Cost of memorials Staffing (includes digging of lairs and grounds-keeping) Staff training and expenses Payroll Advertising Water Rates Phone and internet Insurance	Link to staffing sheet  Estimate  Contingency - check with Council  Mobile	£50 £3,554 £100 £50 £600 £100 £50	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£66 £42,6 £1,2 £66 £7,2 £1,2 £60 £1,5
Expenses Cost of memorials Staffing (includes digging of lairs and grounds-keeping) Staff training and expenses Payroll Advertising Water Rates Phone and internet Insurance Stationery, postage & Printing	Link to staffing sheet  Estimate  Contingency - check with Council  Mobile	£50 £3,554 £100 £50 £600 £100 £50 £100 £50 £1,500	£50 £3,554 £100 £50 £600 £100 £50	£50 £3,554 £100 £50 £600 £100 £50	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £100 £50	£50 £3,554 £100 £50 £600 £100 £50	£50 £3,554 £100 £50 £600 £100 £50	£50 £3,554 £100 £50 £600 £100 £50	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£50 £3,554 £100 £50 £600 £100	£6 £42,6 £1,2 £6 £7,2 £1,2 £6 £1,5
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Expenses Cost of memorials Staffing (includes digging of lairs and grounds-keeping) Staff training and expenses Payroll Advertising Water Rates Phone and internet Insurance Stationery, postage & Printing Membership of Association of Natural Burial Grounds (ANBG) Professional and accountancy fees	Link to staffing sheet  Estimate Contingency - check with Council Mobile Needs quote  Based on plot sales Estimate for software licence	£50 £3,554 £100 £50 £600 £100 £50 £1,500 £25 £25	£50 £3,554 £100 £50 £600 £100 £50	£50 £3,554 £100 £50 £600 £100 £50 £25	£50 £3,554 £100 £50 £600 £100 £50	£50 £3,554 £100 £50 £600 £100 £50	£50 £3,554 £100 £50 £600 £100 £50 £25	£50 £3,554 £100 £50 £600 £100 £50 £25	£50 £3,554 £100 £50 £600 £100 £50 £25	£50 £3,554 £100 £50 £600 £100 £50 £25	£50 £3,554 £100 £50 £600 £100 £50	£50 £3,554 £100 £50 £600 £100 £50	£50 £3,554 £100 £50 £600 £100 £50 £25	£66 £42,6 £1,2 £66 £7,2 £1,5 £30 £55 £3,00
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