A Report on Romano-British Cremated Remains from York

By: Carrie L. Sulosky
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</tbody>
</table>
Abstract

This report provides an osteological evaluation of 34 Romano-British cremation burials from York. The evaluation consists of a summary of the completeness, demography, state of health, crematory attributes and burial attributes of the assemblage, followed by a statement regarding the material’s potential for further analysis. It is recommended that additional research be conducted on a positive impression of Roman cloth and that the data from the Trentholme Drive cremation burials be compared to that of the cemetery’s inhumations in order to develop a complete demographic profile of the cemetery.
Introduction

York, originally called Eboracum, was founded by the Romans. It owes its beginnings to the Ninth Legion who built a fortress at the present site of the city circa 71 A.D. Shortly afterwards, a civilian settlement, which would later become a provincial capital, was founded at the site (Ottaway, 2004).

The aim of the following report is to provide an osteological analysis of 34 Romano-British cremation burials from York. Twenty-seven cremation burials are from the cemetery at Trenholme Drive (2nd to 4th century A.D.), one is from Appletree Farm, Heworth, another is from the Catterick Bypass, two were found beneath the current railway station (2nd to 4th century A.D.), two were from the railway bridge near Holgate and the context of the last burial is unknown to the author. All 34 cremation burials are housed at Yorkshire Museum and Gardens (Morrison, pers. comm.), and for the purposes of this report, they are separated into two groups: the York group, which is composed of all burials outside of Trenholme Drive, and the Trenholme Drive group, which naturally consists of the Trenholme Drive cremation burials. By discussing the groups separately, a more accurate picture of the Trenholme Drive cemetery can be obtained.

The osteological analysis was performed in alignment with the British Association for Biological Anthropology and Osteoarchaeology protocol (McKinley, 2004a), and the resulting report consists of an assessment of the cremation burials’ completeness, demographic attributes, state of health, crematory attributes and burial attributes, followed by a statement regarding the material’s potential for further analysis.
Completeness

Total Weight of Cremated Bone

The total weights of the cremated human remains are listed in Tables 1 and 2.

Table 1: The Total Weights (in grams) of the Cremated Human Remains Found in Each Cremation Burial (excluding burials from Trentholme Drive, burials listed by YORYM number)

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Total Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABP, 3, 3</td>
<td>715.13</td>
</tr>
<tr>
<td>H1058</td>
<td>1001.04</td>
</tr>
<tr>
<td>H1059</td>
<td>410.83</td>
</tr>
<tr>
<td>H2280.1</td>
<td>665.59</td>
</tr>
<tr>
<td>HG214</td>
<td>314.18</td>
</tr>
<tr>
<td>1974.95</td>
<td>253.59</td>
</tr>
<tr>
<td>1980.54</td>
<td>1013.76</td>
</tr>
</tbody>
</table>

As can be seen in the table above, the total weights of the adult cremated human remains ranged from 314.18 g to 1013.76 g. In addition, the average total weight of cremated adult human remains was 624.87 g, which is less than what is expected from a modern adult cremation (1625.90 g) (McKinley, 1993). Furthermore, the total weights of the adult cremated human remains from Trentholme Drive (Table 2) ranged from 0.89 g to 1289.45 g with an average of 310.90 g, which is also below what is expected from a modern adult cremation.

Although one cannot make a direct comparison between modern and ancient populations because the average weight of a Romano-British adult cremation may have varied slightly from that of a modern adult, it may still be inferred that, on average, the remains of adult Romano-British cremated individuals from Yorkshire were not collected in their entirety for burial. This observation is in alignment with findings at other
Romano-British cremation cemeteries, such as Baldock Area 15, Low Borrowbridge and Caerleon Lodge Hill Cemetery (McKinley, 2004b).

Table 2: The Total Weights (in grams) of the Cremated Human Remains Found in Each Cremation Burial from Trenholme Drive (burials listed by YORYM number)

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Total Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971.303 Year 2/52</td>
<td>176.91</td>
</tr>
<tr>
<td>1971.303 4</td>
<td>304.64</td>
</tr>
<tr>
<td>1971.303 19a</td>
<td>319.45</td>
</tr>
<tr>
<td>1971.303 77</td>
<td>0.89</td>
</tr>
<tr>
<td>1971.303 85b</td>
<td>1.75</td>
</tr>
<tr>
<td>1971.303 87</td>
<td>346.4</td>
</tr>
<tr>
<td>1971.303 88</td>
<td>8.4</td>
</tr>
<tr>
<td>1971.303 89b</td>
<td>20.75</td>
</tr>
<tr>
<td>1971.303 98</td>
<td>19.82</td>
</tr>
<tr>
<td>1971.303 119</td>
<td>495.75</td>
</tr>
<tr>
<td>1971.303 124b</td>
<td>513.03</td>
</tr>
<tr>
<td>1971.303 202*</td>
<td>27.91</td>
</tr>
<tr>
<td>1971.303 203</td>
<td>529.73</td>
</tr>
<tr>
<td>1971.303 205</td>
<td>274.82</td>
</tr>
<tr>
<td>1971.303 260</td>
<td>1289.45</td>
</tr>
<tr>
<td>1971.303 262</td>
<td>721.72</td>
</tr>
<tr>
<td>1971.303 273b</td>
<td>107.73</td>
</tr>
<tr>
<td>1971.303 280</td>
<td>378.68</td>
</tr>
<tr>
<td>1971.303 293*</td>
<td>793.65</td>
</tr>
<tr>
<td>1971.303 332</td>
<td>133.28</td>
</tr>
<tr>
<td>1971.303 396b or 398b</td>
<td>285.27</td>
</tr>
<tr>
<td>1971.303 403</td>
<td>740.25</td>
</tr>
<tr>
<td>1971.303 432</td>
<td>282.45</td>
</tr>
<tr>
<td>1971.303 475</td>
<td>16.15</td>
</tr>
<tr>
<td>1971.303 493</td>
<td>279.65</td>
</tr>
<tr>
<td>1971.303 523</td>
<td>84.22</td>
</tr>
<tr>
<td>1971.303 552</td>
<td>441.35</td>
</tr>
</tbody>
</table>

*denotes subadult individual

Skeletal Inventory (skeletal regions present)

Cremation burial is a selective process, as an individual or group of individuals must take responsibility for collecting the cremated remains and depositing them in an
urn (McKinley and Bond, 2001). Consequently, cremated remains are rarely (if ever) collected in their entirety for burial. Signs of this selectivity were displayed in the cremation burials from both York and Trentholme Drive (Tables 3 and 4), as some of the burials did not include elements from every human skeletal region (skull, axial skeleton, upper limb, lower limb).

**Table 3: Skeletal Regions Missing from the Cremation Burials (excluding the burials from Trentholme Drive)**

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Skeletal Region(s) Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABP, 3, 3</td>
<td>None</td>
</tr>
<tr>
<td>H1058</td>
<td>None</td>
</tr>
<tr>
<td>H1059</td>
<td>None</td>
</tr>
<tr>
<td>H2280.1</td>
<td>Lower Limb</td>
</tr>
<tr>
<td>HG214</td>
<td>Lower Limb</td>
</tr>
<tr>
<td>1974.95</td>
<td>Upper Limb</td>
</tr>
<tr>
<td>1980.54</td>
<td>None</td>
</tr>
</tbody>
</table>

**Table 4: Skeletal Regions Missing from the Trentholme Drive Cremation Burials**

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Skeletal Region(s) Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971.303 Year 2/52</td>
<td>Upper Limb</td>
</tr>
<tr>
<td>1971.303 4</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 19a</td>
<td>Upper Limb/Lower Limb</td>
</tr>
<tr>
<td>1971.303 77</td>
<td>All Bone Unidentified</td>
</tr>
<tr>
<td>1971.303 85b</td>
<td>All Bone Unidentified</td>
</tr>
<tr>
<td>1971.303 87</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 88</td>
<td>Axial/Upper and Lower Limb</td>
</tr>
<tr>
<td>1971.303 89b</td>
<td>Axial/Upper and Lower Limb</td>
</tr>
<tr>
<td>1971.303 98</td>
<td>Axial/Upper and Lower Limb</td>
</tr>
<tr>
<td>1971.303 119</td>
<td>Upper Limb</td>
</tr>
<tr>
<td>1971.303 124b</td>
<td>Upper Limb</td>
</tr>
<tr>
<td>1971.303 202</td>
<td>Upper Limb/Lower Limb</td>
</tr>
<tr>
<td>1971.303 203</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 205</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 260</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 262</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 273b</td>
<td>Upper Limb</td>
</tr>
<tr>
<td>1971.303 280</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 293</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 332</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 396b or 398b</td>
<td>Upper Limb/Lower Limb</td>
</tr>
<tr>
<td>1971.303 403</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 432</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 475</td>
<td>All Bone Unidentified</td>
</tr>
<tr>
<td>1971.303 493</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 523</td>
<td>Upper Limb</td>
</tr>
<tr>
<td>1971.303 552</td>
<td>None</td>
</tr>
</tbody>
</table>
Non-Human Skeletal Elements Present

The non-human bone present in the cremation burials is tabulated in Tables 5 and 6.

Table 5: The Non-Human Bone Present in Each Cremation Burial (excluding the burials from Trentholme Drive)

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Non-Human Bone Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABP, 3, 3</td>
<td>None</td>
</tr>
<tr>
<td>H1058</td>
<td>Pig, Bird, Unidentified Mammal</td>
</tr>
<tr>
<td>H1059</td>
<td>None</td>
</tr>
<tr>
<td>H2280.1</td>
<td>Bird</td>
</tr>
<tr>
<td>HG214</td>
<td>None</td>
</tr>
<tr>
<td>1974.95</td>
<td>None</td>
</tr>
<tr>
<td>1980.54</td>
<td>None</td>
</tr>
</tbody>
</table>

Table 6: The Non-Human Bone Present in Each Cremation Burial from Trentholme Drive

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Non-Human Bone Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971.303 Year 2/52</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 4</td>
<td>Bird</td>
</tr>
<tr>
<td>1971.303 19a</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 77</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 85b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 87</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 88</td>
<td>Unburnt Chicken</td>
</tr>
<tr>
<td>1971.303 89b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 98</td>
<td>Bird</td>
</tr>
<tr>
<td>1971.303 119</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 124b</td>
<td>Bird</td>
</tr>
<tr>
<td>1971.303 202</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 203</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 205</td>
<td>Cow</td>
</tr>
<tr>
<td>1971.303 260</td>
<td>Unidentified Mammal/Bird</td>
</tr>
<tr>
<td>1971.303 262</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 273b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 280</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 293</td>
<td>Unburnt Shrew (intrusive)</td>
</tr>
<tr>
<td>1971.303 332</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 396b or 398b</td>
<td>Pig</td>
</tr>
<tr>
<td>1971.303 403</td>
<td>Galliform Bird/Unburnt Shrew</td>
</tr>
<tr>
<td>1971.303 432</td>
<td>Bird/Galliform Bird</td>
</tr>
<tr>
<td>1971.303 475</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 493</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 523</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 552</td>
<td>None</td>
</tr>
</tbody>
</table>
Two of the cremation burials from York and ten of the burials from Trentholme Drive contained traces of non-human bone. Of those twelve burials, three from Trentholme Drive contained bone that was not cremated. In the first instance (1971.303 88), unburned chicken bone was recovered. This bone was either intrusive or the remnants of a grave good (a funerary offering buried with the human remains). The other burials (1971.303 293 and 1971.303 403) contained intrusive shrew bones. Since the colour of these remains (brown) revealed that the bones were archaeological, it is likely that the lid of the urn was disturbed in the past, which allowed the shrew bones to fall into the urn and become commingled with the human remains.

The rest of the burials contained cremated unidentified mammal, bird, galliform bird, pig and cow bones. These bones were either the remnants of the funerary feast that were thrown on the burning pyre or were funerary offerings that were incinerated with the corpse (pyre goods).

Minimum Number of Individuals (MNI)

A MNI was assigned to each cremation burial after the human skeletal remains were examined for age-related discrepancies in bone size and development, and for duplications of skeletal elements. At the conclusion of the examination, it was found that each burial contained at least one individual.
Demography

Age Estimation

The ages of the cremated individuals were estimated using unerupted tooth crowns (Smith, 1991), epiphyseal fusion (Schwartz, 1995), cranial suture closure (Meindl and Lovejoy, 1985), pubic symphyses (Brooks and Suchey, 1990) and auricular surfaces (Lovejoy et al., 1985).

Table 7: Estimated Ages (in years) of the Cremated Individuals (excluding burials from Trentholme Drive)

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Estimated Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABP, 3, 3</td>
<td>Adult 20+ years</td>
</tr>
<tr>
<td>H1058</td>
<td>Old Adult 50+ years</td>
</tr>
<tr>
<td>H1059</td>
<td>Mid to Late Adult 35+ years</td>
</tr>
<tr>
<td>H2280.1</td>
<td>Adult 21+ years</td>
</tr>
<tr>
<td>HG214</td>
<td>Adult 21 + years</td>
</tr>
<tr>
<td>1974.95</td>
<td>Adult 21 + years</td>
</tr>
<tr>
<td>1980.54</td>
<td>Adult 21 + years</td>
</tr>
</tbody>
</table>

Table 8: Estimated Ages (in years) of the Cremated Individuals from Trentholme Drive

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Estimated Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971.303 Year 2/52</td>
<td>Adult 21+ years</td>
</tr>
<tr>
<td>1971.303 4</td>
<td>Undetermined</td>
</tr>
<tr>
<td>1971.303 19a</td>
<td>Undetermined</td>
</tr>
<tr>
<td>1971.303 77</td>
<td>Undetermined</td>
</tr>
<tr>
<td>1971.303 85b</td>
<td>Undetermined</td>
</tr>
<tr>
<td>1971.303 87</td>
<td>Adult 20+ years</td>
</tr>
<tr>
<td>1971.303 88</td>
<td>Undetermined</td>
</tr>
<tr>
<td>1971.303 89b</td>
<td>Undetermined</td>
</tr>
<tr>
<td>1971.303 98</td>
<td>Undetermined</td>
</tr>
<tr>
<td>1971.303 119</td>
<td>Adult 21+ years</td>
</tr>
<tr>
<td>1971.303 124b</td>
<td>Adult 20+ years</td>
</tr>
<tr>
<td>1971.303 202</td>
<td>Subadult &lt; 8 years</td>
</tr>
<tr>
<td>1971.303 203</td>
<td>Adult 20+ years</td>
</tr>
<tr>
<td>1971.303 205</td>
<td>Old Adult 50+ years</td>
</tr>
<tr>
<td>1971.303 260</td>
<td>Mid Adult 35+ years</td>
</tr>
<tr>
<td>1971.303 262</td>
<td>Mid Adult 35+ years</td>
</tr>
<tr>
<td>1971.303 273b</td>
<td>Adult 21+ years</td>
</tr>
<tr>
<td>1971.303 280</td>
<td>Adult 20+ years</td>
</tr>
<tr>
<td>1971.303 293</td>
<td>Subadult &lt; 16-17 years</td>
</tr>
<tr>
<td>1971.303 332</td>
<td>Adult 20+ years</td>
</tr>
<tr>
<td>1971.303 396b or 398b</td>
<td>Adult 21+ years</td>
</tr>
<tr>
<td>1971.303 403</td>
<td>Adult 21+ years</td>
</tr>
<tr>
<td>1971.303 432</td>
<td>Mid Adult 32+ years</td>
</tr>
<tr>
<td>1971.303 475</td>
<td>Undetermined</td>
</tr>
<tr>
<td>1971.303 493</td>
<td>Adult 21+ years</td>
</tr>
<tr>
<td>1971.303 523</td>
<td>Undetermined</td>
</tr>
<tr>
<td>1971.303 552</td>
<td>Adult 20+ years</td>
</tr>
</tbody>
</table>
As Tables 7 and 8 show, all of the York cremation burials were adults, while two of the Trentholme Drive burials (1971.303 202 and 1971.303 293) were subadults and the rest were adults.

Sex Estimation

The sexes of the individuals were assigned (where possible) using morphological observations (Bass, 2005). Unfortunately, the difficulties that are inherent in assigning sex to cremated remains (i.e. the differential shrinkage of metric variables allows for the misclassification of cremated material) (Thompson, 2002) complicated the determination of the sex of most of the burials. Therefore, the possible (not definite) sex of only one individual (1971.303 403) could be ascertained, and based on its robust muscle attachments, it is estimated that the individual was a possible male.
Health and Disease

Skeletal (non-dental) Health

The pathological lesions present on the cremated remains reveal the state of the individuals’ health at the time of death, and are not accurate indicators of the individuals’ entire medical histories (Roberts and Cox, 2003). Hence, the conclusions drawn here focus on the diseases’ perimortem presence or absence and not on their severity or duration. Furthermore, because cremated remains are incomplete and heavily fragmented, it is difficult to detect all instances of pathological lesions; therefore, it is probable that the total number of affected individuals is under-represented, and that some of the affected individuals were afflicted with additional pathologies (McKinley, 2004a).

With that in mind, the cremated human skeletal remains were examined for evidence of trauma and infection as well as joint, congenital, metabolic and neoplastic diseases. The results of the pathological analysis (Tables 9 and 10) revealed that at the time of death three individuals from York and nine individuals from Trenholme Drive were afflicted with degenerative joint disease, one additional individual from Trenholme Drive was afflicted with periostitis of an unidentified long bone, and another individual from Trenholme Drive was afflicted with both degenerative joint disease and periostitis of an unidentified long bone.

Table 9: Inventory of the Skeletal Health of the Cremation Burials (excluding those from Trenholme Drive)

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Skeletal Pathology</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABP, 3, 3</td>
<td>None</td>
</tr>
<tr>
<td>H1058</td>
<td>Degenerative Joint Disease</td>
</tr>
<tr>
<td>H1059</td>
<td>None</td>
</tr>
<tr>
<td>H2280.1</td>
<td>Degenerative Joint Disease</td>
</tr>
<tr>
<td>HG214</td>
<td>None</td>
</tr>
<tr>
<td>1974.95</td>
<td>None</td>
</tr>
<tr>
<td>1980.54</td>
<td>Degenerative Joint Disease</td>
</tr>
</tbody>
</table>
Table 10: Inventory of the Skeletal Health of the Cremation Burials from Trenholme Drive

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Skeletal Pathology</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971.303 Year 2/52</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 4</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 19a</td>
<td>Periostitis on unidentified long bone</td>
</tr>
<tr>
<td>1971.303 77</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 85b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 87</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 88</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 89b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 98</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 119</td>
<td>Degenerative Joint Disease</td>
</tr>
<tr>
<td>1971.303 124b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 202</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 203</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 205</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 260</td>
<td>Degenerative Joint Disease</td>
</tr>
<tr>
<td>1971.303 262</td>
<td>Degenerative Joint Disease</td>
</tr>
<tr>
<td>1971.303 273b</td>
<td>Degenerative Joint Disease</td>
</tr>
<tr>
<td>1971.303 280</td>
<td>Degenerative Joint Disease</td>
</tr>
<tr>
<td>1971.303 293</td>
<td>Degenerative Joint Disease</td>
</tr>
<tr>
<td>1971.303 332</td>
<td>Degenerative Joint Disease</td>
</tr>
<tr>
<td>1971.303 396b or 398b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 403</td>
<td>DJD/Periostitis on unident. long bone</td>
</tr>
<tr>
<td>1971.303 432</td>
<td>Degenerative Joint Disease</td>
</tr>
<tr>
<td>1971.303 475</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 493</td>
<td>Degenerative Joint Disease</td>
</tr>
<tr>
<td>1971.303 523</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 552</td>
<td>None</td>
</tr>
</tbody>
</table>

DJD = Degenerative Joint Disease

Dental Health

Only one individual (Trenholome Drive 1971.303 262) displayed signs of dental pathology. Prior to death, this individual had lost a mandibular tooth (antemortem tooth loss), and at the time of death the individual’s jaw was completely healed (alveolar resorption). However, as is the case with skeletal health, it is probable that the total number of affected individuals is under-represented, and that the affected individual was afflicted with additional dental pathologies (McKinley, 2004a).
Crematory Attributes

_Efficacy of Cremation_

Colour is a macroscopic indicator of oxidization, as brown or orange bones are unburned and black ones are charred (c. 300°C), while hues of blue and grey are indicative of incomplete oxidization (up to c. 600°C), and white bones are completely oxidized (c. >600°C) (McKinley, 2004a). Therefore, based on its range of colours, the burials were assigned an efficacy of cremation score on a scale of 0-4, which included increments of 0.5 to indicate when a burial’s level of oxidization fell between two established categories (e.g. a score of 2.5 would mean that the oxidization of the burial was between categories 2 and 3). The scoring system was devised by the author and is described in Figures 1-5.
The colour scores of the cremation burials can be seen in Tables 11 and 12. The York scores ranged from 2 to 3 with an average of 2.5, while the Trenholme Drive scores ranged from 1.5 to 3.5 with an average of 2. These scores indicate that both assemblages were incompletely oxidized. Incomplete oxidization (which is typical of
Romano-British cremation burials) is caused by the restriction of a cremation’s burning time, oxygen supply or temperature (McKinley, 2004b).

**Table 11: Colour Scores of the Cremation Burials (excluding those from Trentholme Drive)**

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Colour Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABP, 3, 3</td>
<td>2</td>
</tr>
<tr>
<td>H1058</td>
<td>3</td>
</tr>
<tr>
<td>H1059</td>
<td>3</td>
</tr>
<tr>
<td>H2280.1</td>
<td>2.5</td>
</tr>
<tr>
<td>HG214</td>
<td>2</td>
</tr>
<tr>
<td>1974.95</td>
<td>3</td>
</tr>
<tr>
<td>1980.54</td>
<td>2.5</td>
</tr>
</tbody>
</table>

**Table 12: Colour Scores of the Trentholme Drive Cremation Burials**

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Colour Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971.303 Year 2/52</td>
<td>1.5</td>
</tr>
<tr>
<td>1971.303 4</td>
<td>1.5</td>
</tr>
<tr>
<td>1971.303 19a</td>
<td>2</td>
</tr>
<tr>
<td>1971.303 77</td>
<td>Too few bone fragments</td>
</tr>
<tr>
<td>1971.303 85b</td>
<td>Too few bone fragments</td>
</tr>
<tr>
<td>1971.303 87</td>
<td>1.5</td>
</tr>
<tr>
<td>1971.303 88</td>
<td>3.5</td>
</tr>
<tr>
<td>1971.303 89b</td>
<td>3</td>
</tr>
<tr>
<td>1971.303 98</td>
<td>2</td>
</tr>
<tr>
<td>1971.303 119</td>
<td>2.5</td>
</tr>
<tr>
<td>1971.303 124b</td>
<td>1.5</td>
</tr>
<tr>
<td>1971.303 202</td>
<td>2</td>
</tr>
<tr>
<td>1971.303 203</td>
<td>3</td>
</tr>
<tr>
<td>1971.303 205</td>
<td>1.5</td>
</tr>
<tr>
<td>1971.303 260</td>
<td>2.5</td>
</tr>
<tr>
<td>1971.303 262</td>
<td>2.5</td>
</tr>
<tr>
<td>1971.303 273b</td>
<td>3.5</td>
</tr>
<tr>
<td>1971.303 280</td>
<td>2.5</td>
</tr>
<tr>
<td>1971.303 293</td>
<td>1.5</td>
</tr>
<tr>
<td>1971.303 332</td>
<td>1.5</td>
</tr>
<tr>
<td>1971.303 396b or 398b</td>
<td>2.5</td>
</tr>
<tr>
<td>1971.303 403</td>
<td>2.5</td>
</tr>
<tr>
<td>1971.303 432</td>
<td>3</td>
</tr>
<tr>
<td>1971.303 475</td>
<td>2.5</td>
</tr>
<tr>
<td>1971.303 493</td>
<td>2.5</td>
</tr>
<tr>
<td>1971.303 523</td>
<td>2</td>
</tr>
<tr>
<td>1971.303 552</td>
<td>2</td>
</tr>
</tbody>
</table>
Dehydration during the process of cremation causes bones to shrink, fissure and warp in characteristic patterns (McKinley, 2004a: 11). Since this generally happens in a uniform way, it is only necessary to record abnormal cases of each.

**Table 13: Dehydration Abnormalities Found in Cremated Remains (excluding those from Trentholme Drive)**

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Shrinkage</th>
<th>Fissuring</th>
<th>Warping</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABP, 3, 3</td>
<td>Very little shrinkage</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>H1058</td>
<td>None</td>
<td>None</td>
<td>Long Bones/Skull</td>
</tr>
<tr>
<td>H1059</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>H2280.1</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>HG214</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1974.95</td>
<td>Less shrinkage on femur/pelvis</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1980.54</td>
<td>Sternal clavicle larger than acromial/ Acromial end of clavicle more fissured than sternal end</td>
<td>None</td>
<td>Long Bones/Skull</td>
</tr>
</tbody>
</table>

**Table 14: Dehydration Abnormalities Found in Cremated Remains From Trentholme Drive**

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Shrinkage</th>
<th>Fissuring</th>
<th>Warping</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971.303 Year 2/52</td>
<td>One rib exhibits very little shrinkage</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1971.303 4</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1971.303 19a</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1971.303 77</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 85b</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 87</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 88</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 89b</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 98</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1971.303 119</td>
<td>None</td>
<td>None</td>
<td>Long Bones/Skull</td>
</tr>
<tr>
<td>1971.303 124b</td>
<td>None</td>
<td>None</td>
<td>Long Bones/Skull</td>
</tr>
<tr>
<td>1971.303 202</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 203</td>
<td>None</td>
<td>None</td>
<td>Long Bones/Skull</td>
</tr>
<tr>
<td>1971.303 205</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1971.303 260</td>
<td>None</td>
<td>None</td>
<td>Long Bones/Skull</td>
</tr>
<tr>
<td>1971.303 262</td>
<td>None</td>
<td>None</td>
<td>Long Bones/Skull</td>
</tr>
<tr>
<td>1971.303 273b</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1971.303 280</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1971.303 293</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1971.303 332</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1971.303 396b or 398b</td>
<td>None</td>
<td>None</td>
<td>Long Bones/Skull</td>
</tr>
<tr>
<td>1971.303 403</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1971.303 432</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1971.303 475</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 493</td>
<td>None</td>
<td>None</td>
<td>Long Bones</td>
</tr>
<tr>
<td>1971.303 523</td>
<td>None</td>
<td>None</td>
<td>Skull</td>
</tr>
<tr>
<td>1971.303 552</td>
<td>None</td>
<td>None</td>
<td>Long Bones/Skull</td>
</tr>
</tbody>
</table>
As Tables 13 and 14 show, there were three cases of abnormal shrinkage in the cremation burials from York and one case in the burials from Trentholme Drive. The first instance from York (ABP 3,3) implies that the corpse was not burned at a high temperature, since the cremated remains displayed very little shrinkage. In addition, the differential shrinkage of certain skeletal elements in burials 1974.95 and 1980.54 suggests that the bones which possessed a higher degree of shrinkage were burned at a higher temperature than their counterparts. Likewise, the one example of abnormal shrinkage from Trentholme Drive (1971.303 Year 2/52) also insinuates that one rib was burned at a lower temperature than the rest of the body, causing it to exhibit less shrinkage. These varying temperatures may have been due to airflow restriction, for as the pyre burns down, body parts tend to shift position and burn unevenly.

For the most part, the fissuring and warping displayed by the cremation burials were not out of the ordinary. First, only one of the cremation burials (1980.54) exhibited any abnormal instances of fissuring, which is directly related to the differential shrinkage of the cremated remains (i.e. the acromial end of the clavicle, which was more thoroughly burned, was also more thoroughly fissured). Additionally, even though many of the burials contained warped remains, it is common to find examples of abnormal warping within any given cremation burial.

**Degree of Fragmentation**

Degree of fragmentation, represented by the percentage of bone sieved into a 10 mm fraction, was recorded in Tables 15 and 16 along with the length of the largest bone fragment.
### Table 15: Degree of Fragmentation and Length of the Largest Bone Fragment of the Cremation Burials (excluding those from Trentholme Drive)

[DoF= Degree of fragmentation (a percentage); LLBF= Length of the largest bone fragment (in millimetres)]

<table>
<thead>
<tr>
<th>YORYM</th>
<th>DoF (%)</th>
<th>LLBF (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABP, 3, 3</td>
<td>78%</td>
<td>92.7 mm</td>
</tr>
<tr>
<td>H1058</td>
<td>77%</td>
<td>84.8 mm</td>
</tr>
<tr>
<td>H1059</td>
<td>56%</td>
<td>87 mm</td>
</tr>
<tr>
<td>H2280.1</td>
<td>43%</td>
<td>53.1 mm</td>
</tr>
<tr>
<td>HG214</td>
<td>19%</td>
<td>37 mm</td>
</tr>
<tr>
<td>1974.95</td>
<td>88%</td>
<td>94.6 mm</td>
</tr>
<tr>
<td>1980.54</td>
<td>69%</td>
<td>79.1 mm</td>
</tr>
</tbody>
</table>

### Table 16: Degree of Fragmentation and Length of the Largest Bone Fragment of the Cremation Burials from Trentholme Drive

[DoF= Degree of fragmentation (a percentage); LLBF= Length of the largest bone fragment (in millimetres)]

<table>
<thead>
<tr>
<th>YORYM</th>
<th>DoF (%)</th>
<th>LLBF (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971.303 Year 2/52</td>
<td>68%</td>
<td>53.8 mm</td>
</tr>
<tr>
<td>1971.303 4</td>
<td>76%</td>
<td>65 mm</td>
</tr>
<tr>
<td>1971.303 19a</td>
<td>34%</td>
<td>28.6 mm</td>
</tr>
<tr>
<td>1971.303 77</td>
<td>Data not sufficient</td>
<td>Data not sufficient</td>
</tr>
<tr>
<td>1971.303 85b</td>
<td>Data not sufficient</td>
<td>Data not sufficient</td>
</tr>
<tr>
<td>1971.303 87</td>
<td>71%</td>
<td>57.4 mm</td>
</tr>
<tr>
<td>1971.303 88</td>
<td>11%</td>
<td>22.4 mm</td>
</tr>
<tr>
<td>1971.303 89b</td>
<td>17%</td>
<td>28.4 mm</td>
</tr>
<tr>
<td>1971.303 98</td>
<td>69%</td>
<td>38.1 mm</td>
</tr>
<tr>
<td>1971.303 119</td>
<td>60%</td>
<td>53.6 mm</td>
</tr>
<tr>
<td>1971.303 124b</td>
<td>65%</td>
<td>73.2 mm</td>
</tr>
<tr>
<td>1971.303 202</td>
<td>68%</td>
<td>38.4 mm</td>
</tr>
<tr>
<td>1971.303 203</td>
<td>63%</td>
<td>61.9 mm</td>
</tr>
<tr>
<td>1971.303 205</td>
<td>67%</td>
<td>56.3 mm</td>
</tr>
<tr>
<td>1971.303 260</td>
<td>71%</td>
<td>92.4 mm</td>
</tr>
<tr>
<td>1971.303 262</td>
<td>55%</td>
<td>37.3 mm</td>
</tr>
<tr>
<td>1971.303 273b</td>
<td>93%</td>
<td>59.1 mm</td>
</tr>
<tr>
<td>1971.303 280</td>
<td>67%</td>
<td>64.4 mm</td>
</tr>
<tr>
<td>1971.303 293</td>
<td>50%</td>
<td>49.2 mm</td>
</tr>
<tr>
<td>1971.303 332</td>
<td>66%</td>
<td>38.6 mm</td>
</tr>
<tr>
<td>1971.303 396b or 398b</td>
<td>63%</td>
<td>40 mm</td>
</tr>
<tr>
<td>1971.303 403</td>
<td>68%</td>
<td>101 mm</td>
</tr>
<tr>
<td>1971.303 432</td>
<td>75%</td>
<td>89.8 mm</td>
</tr>
<tr>
<td>1971.303 475</td>
<td>8%</td>
<td>28.1 mm</td>
</tr>
<tr>
<td>1971.303 493</td>
<td>87%</td>
<td>65.8 mm</td>
</tr>
<tr>
<td>1971.303 523</td>
<td>44%</td>
<td>24.2 mm</td>
</tr>
<tr>
<td>1971.303 552</td>
<td>64%</td>
<td>72.9 mm</td>
</tr>
</tbody>
</table>
The average degree of fragmentation of the York cremation burials was 61% and the average length of the largest bone fragment was 75.5 mm, while the Trenholme Drive average degree of fragmentation was 59% and the average length of the largest bone fragment was 53.6 mm. However, as McKinley cautions, post-depositional contact with soil will cause additional fragmentation due to the soil’s moisture levels and freeze/thaw cycles (2004b) and the ‘fragment sizes presented in reports should be regarded as post-excavation fragment sizes, rather than a reliable indicator of the size of bone fragments at time of deposition’ (1994b: 339). Consequently, it is probable that the cremation burials experienced further fragmentation not only while they were still buried, but also during excavation and post-excitation handling; therefore concrete conclusions cannot be drawn from this data.
Burial Attributes

_Type of Cremation Burial/Deposit_

As Table 17 shows, all but one of the York cremation burials were urned. Burial 1974.95, however, was unurned. Additionally, seven of the Trenholme Drive cremation burials were urned, one was unurned, and the context of 19 were unknown (Table 18).

Table 17: Type of Cremation Burial/Deposit of Each Burial (excluding those from Trenholme Drive)

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Type of Cremation Burial/Deposit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABP, 3, 3</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>H1058</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>H1059</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>H2280.1</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>HG214</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>1974.95</td>
<td>Unurned Burial</td>
</tr>
<tr>
<td>1980.54</td>
<td>Urned Burial</td>
</tr>
</tbody>
</table>

Table 18: Type of Cremation Burial/Deposit of Each Burial from Trenholme Drive

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Type of Cremation Burial/Deposit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971.303 Year 2/52</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 4</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>1971.303 19a</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>1971.303 77</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 85b</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 87</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 88</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>1971.303 89b</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 98</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 119</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>1971.303 124b</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 202</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 203</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>1971.303 205</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 260</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 262</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>1971.303 273b</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 280</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 293</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 332</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 396b or 398b</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 403</td>
<td>Urned Burial</td>
</tr>
<tr>
<td>1971.303 432</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 475</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 493</td>
<td>Unknown</td>
</tr>
<tr>
<td>1971.303 523</td>
<td>Unurned Burial</td>
</tr>
<tr>
<td>1971.303 552</td>
<td>Unknown</td>
</tr>
</tbody>
</table>
The Presence of Pyre Debris

Pyre debris is commonly recovered from Romano-British cremation burials (McKinley, 2004b), and it was present, in the form of charcoal, in four burials from York (Table 19) and 13 burials from Trenholme Drive. Additionally, two burials from Trenholme Drive possessed only slag, while another two contained both charcoal and slag.

Table 19: Type of Pyre Debris Present in the Cremation Burials (excluding those from Trenholme Drive)

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Type of Pyre Debris Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABP, 3, 3</td>
<td>None</td>
</tr>
<tr>
<td>H1058</td>
<td>Charcoal</td>
</tr>
<tr>
<td>H1059</td>
<td>Charcoal</td>
</tr>
<tr>
<td>H2280.1</td>
<td>Charcoal</td>
</tr>
<tr>
<td>HG214</td>
<td>None</td>
</tr>
<tr>
<td>1974.95</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1980.54</td>
<td>None</td>
</tr>
</tbody>
</table>

Table 20: Type of Pyre Debris Present in the Trenholme Drive Cremation Burials

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Type of Pyre Debris Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971.303 Year 2/52</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 4</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 19a</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1971.303 77</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1971.303 85b</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1971.303 87</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1971.303 88</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1971.303 89b</td>
<td>Charcoal/Slag</td>
</tr>
<tr>
<td>1971.303 98</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 119</td>
<td>Slag</td>
</tr>
<tr>
<td>1971.303 124b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 202</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 203</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1971.303 205</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1971.303 260</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1971.303 262</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1971.303 277b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 280</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1971.303 293</td>
<td>Charcoal/Slag</td>
</tr>
<tr>
<td>1971.303 332</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1971.303 396b or 398b</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1971.303 403</td>
<td>Charcoal</td>
</tr>
<tr>
<td>1971.303 432</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 437</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 493</td>
<td>Slag</td>
</tr>
<tr>
<td>1971.303 523</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 552</td>
<td>None</td>
</tr>
</tbody>
</table>
The Presence of Pyre Goods

Tables 21 and 22 list the pyre goods present in the cremation burials from York and Trentholme Drive respectively.

Table 21: Type of Pyre Goods Present in the Cremation Burials (excluding those from Trentholme Drive)

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Type of Pyre Goods Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABP, 3, 3</td>
<td>None</td>
</tr>
<tr>
<td>H1058</td>
<td>Ceramic/Nails/Glass/Metal</td>
</tr>
<tr>
<td>H1059</td>
<td>Metal</td>
</tr>
<tr>
<td>H2280.1</td>
<td>Ceramic</td>
</tr>
<tr>
<td>HG214</td>
<td>Ceramic</td>
</tr>
<tr>
<td>1974.95</td>
<td>None</td>
</tr>
<tr>
<td>1980.54</td>
<td>Glass</td>
</tr>
</tbody>
</table>

Table 22: Type of Pyre Goods Present in the Cremation Burials from Trentholme Drive

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Type of Pyre Goods Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971.303 Year 2/52</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  4</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  19a</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  77</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  85b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  87</td>
<td>Ceramic, lead ball, game piece</td>
</tr>
<tr>
<td>1971.303  88</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  89b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  98</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  119</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  124b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  202</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  203</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  205</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  260</td>
<td>Metal (iron?), ceramic</td>
</tr>
<tr>
<td>1971.303  262</td>
<td>Nails (from wooden box?)</td>
</tr>
<tr>
<td>1971.303  273b</td>
<td>Ceramic</td>
</tr>
<tr>
<td>1971.303  280</td>
<td>Ceramic</td>
</tr>
<tr>
<td>1971.303  293</td>
<td>Ceramic</td>
</tr>
<tr>
<td>1971.303  332</td>
<td>Ceramic</td>
</tr>
<tr>
<td>1971.303 396b or 398b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  403</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  432</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  475</td>
<td>Sea shell</td>
</tr>
<tr>
<td>1971.303  493</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  523</td>
<td>None</td>
</tr>
<tr>
<td>1971.303  552</td>
<td>Mortar</td>
</tr>
</tbody>
</table>
Pyre goods are offerings to and personal belongings of the corpse which are placed on the pyre and burned along with the body. These objects range from perishable (e.g. wooden objects, amber or foodstuffs) to non-perishable goods (e.g. ceramic, glass, metal, stone, worked animal bone). Non-perishable pyre goods are identifiable because they show signs of exposure to heat (e.g. charring, melting), whereas perishable goods are generally destroyed by the fire. As a result, the amount of pyre goods is typically underestimated because it does not account for the presence of perishable pyre goods (McKinley, 1994a). Therefore, even though the individuals were most likely burned with additional goods that were not preserved in the archaeological record, the York cremation burials contained traces of glass, metal (including nails that may have come from shoes or a wooden box) and ceramic pyre goods, while the Trentholme Drive burials possessed pyre goods which consisted of ceramic, metal (including nails), a lead ball, a gaming piece made from the cortical bone of an animal (Figure 6) and sea shell.

Figure 6  A pyre good: a Roman gaming piece fashioned from the cortical bone of an animal and found in a cremation burial 1971.303 87 (Photography by Carrie Sulosky)

The Presence of Grave Goods

The grave goods found with the cremation burials are recorded in Tables 23 and 24.
### Table 23: Type of Grave Goods Present in the Cremation Burials (excluding those from Trentholme Drive)

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Type of Grave Goods Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABP, 3, 3</td>
<td>Ceramic</td>
</tr>
<tr>
<td>H1058</td>
<td>Positive impression of shrouding? cloth, ceramic</td>
</tr>
<tr>
<td>H1059</td>
<td>None</td>
</tr>
<tr>
<td>H2280.1</td>
<td>None</td>
</tr>
<tr>
<td>HG214</td>
<td>Glass--from urn?</td>
</tr>
<tr>
<td>1974.95</td>
<td>None</td>
</tr>
<tr>
<td>1980.54</td>
<td>None</td>
</tr>
</tbody>
</table>

### Table 24: Type of Grave Goods Present in the Cremation Burials from Trentholme Drive

<table>
<thead>
<tr>
<th>YORYM</th>
<th>Type of Grave Goods Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971.303 Year 2/52</td>
<td>Ceramic</td>
</tr>
<tr>
<td>1971.303 4</td>
<td>Ceramic--from urn?</td>
</tr>
<tr>
<td>1971.303 19a</td>
<td>Ceramic</td>
</tr>
<tr>
<td>1971.303 77</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 85b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 87</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 88</td>
<td>Ceramic--from urn?</td>
</tr>
<tr>
<td>1971.303 89b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 98</td>
<td>Ceramic</td>
</tr>
<tr>
<td>1971.303 119</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 124b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 202</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 203</td>
<td>Ceramic</td>
</tr>
<tr>
<td>1971.303 205</td>
<td>Ceramic</td>
</tr>
<tr>
<td>1971.303 260</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 262</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 273b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 280</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 293</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 332</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 396b or 398b</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 403</td>
<td>Glass</td>
</tr>
<tr>
<td>1971.303 432</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 475</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 493</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 523</td>
<td>None</td>
</tr>
<tr>
<td>1971.303 552</td>
<td>Ceramic</td>
</tr>
</tbody>
</table>
Grave goods are objects that are buried with the cremated remains either inside of outside of the urn. None of the cremation burials possessed intact grave goods; on the contrary, there were only fragments of unburned ceramic and glass in the York burials, while the Trentholme Drive burials contained fragments of ceramic and glass. Although it is very likely that these are the remnants of grave goods, it is also possible that they were intrusive or that some of the ceramic sherds were from the urn itself.

Furthermore, burial H1058 yielded a finding that was of particular interest. Within this burial was soil, specifically a clump of dried mud, which contained the positive impression of a finely-woven Roman cloth (Figure 7). Therefore, at the time of burial, there was a piece of cloth which either shrouded the cremated remains inside the urn or was placed inside the urn as a grave good. At some point, the lid of the urn was disturbed and mud fell inside. This mud pressed against the cloth and created a negative impression of it. The mud then dried, and essentially became a mould. Thus, as the cloth deteriorated (no traces of it were found in the cremation burial) and new mud pressed against the ‘mould,’ a positive impression of the cloth was created. This impression provides not only an example of a Roman textile, but also the possibility that the cremated remains of some burials were shrouded when they were placed inside of the urn.

Figure 7 A positive impression (in dried mud) of a finely-woven Roman cloth which may have shrouded the cremated remains inside the urn. Found in burial H1058. (Photography by Shane Eales)
Potential for Further Analysis

Although this report provides a complete osteological analysis of the assemblage, the research potential of the cremation burials has not been exhausted. First, it is recommended that the data from the Trenholme Drive cremation burials be examined together with the cemetery’s inhumation data in order to create a complete demographic profile of the cemetery. This would be useful because it would not only increase our understanding of Romano-British cemeteries, but also allow us a further glimpse into the lives (and deaths) of the people who inhabited Yorkshire. Furthermore, the discovery of the positive impression of a cloth (burial H1058) raises some interesting questions. For example: Did the Romans commonly shroud their cremated remains, or was it a regional practice? Was cloth typically offered as a grave good? Further research is required in order to answer these questions.
Conclusion

In conclusion, the York cremation burials were mostly urned and possessed traces of charcoal (pyre debris); glass, nails, unidentified metal, and ceramic (pyre goods); ceramic, cloth, and glass (grave goods); as well as bird, pig, and unidentified animal bone. Each burial contained at least one individual, but did not include elements from all human skeletal regions. Nevertheless, all of the individuals were adults whose sexes could not be determined, and three of them were afflicted with degenerative joint disease at the time of death. Furthermore, all of the burials were incompletely oxidized, had an average degree of fragmentation of 61%, and the average length of the largest bone fragment found amongst them was 75.5 mm. Finally, the average weight of the adult cremated remains was 624.87 g, which was less than what is expected from a modern adult cremation.

The burials from Trentholme Drive were mostly of unknown burial context and possessed traces of charcoal and slag (pyre debris); a lead ball, a game piece, metal nails, mortar, sea shells, and ceramic (pyre goods); ceramic and glass (grave goods); as well as bird, pig, cow, unburned chicken, unburned shrew, and unidentified animal bone. Each burial contained at least one individual, but did not include elements from all human skeletal regions. Two of the individuals were subadults, while the rest were adults. The sexes of the individuals were difficult to ascertain, and the one that could be estimated was deemed to be a possible male. At the time of death, eight individuals were afflicted with degenerative joint disorder, one was afflicted with periostitis of an unidentified long bone, another was afflicted both periostitis of an unidentified long bone as well as degenerative joint disease, and one was afflicted with degenerative joint disease and
antemortem tooth loss. Furthermore, all of the burials were incompletely oxidized, had an average degree of fragmentation of 59%, and the average length of the largest bone fragment found amongst them was 53.6 mm. Finally, the average weight of the adult cremated remains was 310.9 g, which was less than what is expected from a modern adult cremation.

On the whole, this York and Trenholme Drive assemblage displays characteristics that are typical of Romano-British cremation burials and provide important information regarding the lifeways and funerary customs of the Romano-British individuals inhabiting Yorkshire.
Appendix

Cremation Recording Forms

<table>
<thead>
<tr>
<th>Burial #: ABP, 3, 3</th>
<th>Date: 3/6/06</th>
<th>Observer: Carrie Sulosky</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Sex: ----</td>
<td>Estimated Age: Adult 20+ years</td>
<td>Estimated MNI: 1</td>
</tr>
</tbody>
</table>

Context: Urned cremation burial from greyware vessel

Total weight of cremated materials: 770.96 g  Total weight of non-human bone: 0 g

Total weight of cremated human bone: 715.13 g  Dimensions of largest fragment: 92.7 x 26.6 mm

Weight fractions: >10mm: 555.68 g  10-5mm: 139.78 g  5-2mm: 10.55 g  2-1mm: 9.12 g

Colour ranges: Mostly white; some patches of light grey on the cortical bone; dark grey on most of the trabecular bone

Shrinkage: Overall, very little shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on some long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—52 cranial fragments
10-5 mm—56 cranial fragments, 3 tooth roots
Axial Skeleton: > 10 mm—13 rib fragments, 9 vertebrae fragments
           10-5 mm—rib fragments

Upper Limb: > 10 mm—1 humerus fragment, 2 radius fragments

Lower Limb: > 10 mm—3 femur fragments, 6 tibia fragments

Duplicated elements: None

Age Indicators: Vertebral arches fused to body and trans. arch ≤ 20 years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: > 10 mm—ceramic

Pyre Debris: None

Identifiable non-human bone: None
Inventory of Finds Bags

> 10 mm:  Cranial
  Axial: vertebrae, rib
  Upper limb: humerus, radius
  Lower limb: femur, tibia
  Unidentified human bone
  Unidentified human long bone
  Ceramic
  Soil with traces of human bone

10-5 mm:  Axial skeleton: rib
  Unidentified human bone
  Unidentified human long bone
  Cranial and tooth roots

2 mm:  Unidentified human bone
  Soil with traces of human bone

< 2 mm:  Residue and traces of human bone
Burial #: H1058—near Holgate, Railway Bridge

Date: 14/6/06

Observer: Carrie Sulosky

Estimated Sex: ----

Estimated Age: Old adult 50+ years

Estimated MNI: 1

Context: Urned cremation burial from lead vessel

Total weight of cremated materials: 1495.56 g

Total weight of non-human bone: 22.6 g

Total weight of cremated human bone: 1001.04 g

Dimensions of largest fragment: 84.8 x 59 mm

Weight fractions: >10mm: 768.48 g, 10-5mm: 93.66 g, 5-2mm: 66.79 g, 2-1mm: 72.11 g

Colour ranges: Mostly white; some patches of light grey on the cortical bone of the skull and the throughout the trabecular bone; iron residue found on most of the bones

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on some long bones and the skull

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—98 cranial fragments (count includes mandible fragments and tooth roots)

10-5 mm—67 cranial fragments, 10 tooth roots

Axial Skeleton: > 10 mm—58 rib fragments, 32 vertebrae fragments, 1 sacrum fragment

10-5 mm—80 rib fragments, 7 vertebrae fragments
**Upper Limb:**  
> 10 mm—4 humerus fragments, 2 scapula fragments, 1 metacarpal head, 3 hand phalanges (fragments)  
10-5 mm—7 hand phalanges (fragments), 4 metacarpal heads

**Lower Limb:**  
> 10 mm—2 femur fragments, 5 tibia fragments, 1 metatarsal head, 2 talus fragments, 16 pelvis fragments  
10-5 mm—2 metatarsal heads, 2 foot phalanges (fragments)

**Duplicated elements:** None

**Age Indicators:** Fully formed M3 (wisdom tooth) roots—adult  
(Trisch, 1995)

**Sex Indicators:** None

**Pathological Data:**  
> 10 mm—compressed vertebra with horizontal osteophytes—degenerative joint disease

**Pyre goods:**  
> 10 mm—grey ceramic, iron nails (2 small, 1 large) melted to unidentified bone and skull vault  
2 mm—red glass, some light blue staining (indicative of copper?)

**Grave Goods:**  
> 10 mm—soil (dried mud) with positive fabric imprint—the fabric (a fine Romano-British weave) was probably used to shroud the bones and has since disintegrated  
2 mm—positive fabric imprint, peach-coloured ceramic

**Pyre Debris:**  
> 10 mm—charcoal  
2 mm—charcoal
Identifiable non-human bone:  > 10 mm—cremated pig with unfused epiphyses and other mammal bone (possibly pig)
10-5 mm—cremated bird bone
Inventory of Finds Bags

> 10 mm: Cranial (tooth root with maxilla)
      Axial: vertebrae, rib, sacrum
      Upper limb: humerus, scapula, metacarpal, hand phalanges
      Lower limb: femur, tibia, talus, metatarsal, pelvis
      Unidentified human bone
      Unidentified human long bone
      Grey ceramic
      Iron nails
      Soil with traces of human bone (fabric imprint)

10-5 mm: Axial skeleton: rib, vertebrae
         Unidentified human bone
         Unidentified human long bone
         Cranial, tooth roots
         Bird bone
         Charcoal
         Lower Limb: metatarsal, foot phalanges
         Upper Limb: metacarpal, hand phalanges
         Soil and bone fragments

2 mm: Unidentified human bone
      Soil with traces of human bone
      Charcoal
      Red glass
      Fabric imprint
      Peach ceramic

< 2 mm: Residue and traces of human bone
Burial #: H105—Railway Excavations, 1846  
Date: 4/6/06  
Observer: Carrie Sulosky

Estimated Sex: ----  
Estimated Age: Adult 25+ years, probably mid to late adult  
Estimated MNI: 1

Context: Urned cremation burial from lead vessel

Total weight of cremated materials: 505.31 g  
Total weight of non-human bone: 0 g

Total weight of cremated human bone: 410.83 g  
Dimensions of largest fragment: 87 x 16.4 mm

Weight fractions: >10mm: 229.84 g  
10-5 mm: 79.41 g  
5-2 mm: 76.23 g  
2-1 mm: 25.35 g

Colour ranges: Mostly white; some patches of light grey on the cortical bone of the long bone shafts and throughout the trabecular bone (some trabecular bone solid light grey, some tinged light grey)

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on some long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—33 cranial fragments  
10-5 mm—51 cranial fragments, 1 tooth with heavy attrition

Axial Skeleton: > 10 mm—6 rib fragments, 10 vertebrae fragments  
10-5 mm—26 rib fragments, 9 vertebrae fragments
Upper Limb: > 10 mm—1 humerus fragment, 1 radius fragment, 1 metacarpal fragment

Lower Limb: > 10 mm—2 femur fragments, 2 pelvis fragments

Duplicates: None

Age Indicators: Completely fused humeral head with no fusion lines—25+ years (Schwartz, 1995)
Heavy dental attrition indicates that individual is probably a mid to late adult

Sex Indicators: None

Pathological Data: None

Pyre goods: > 10 mm—melted metal fused to bone, drops of melted metal on other bones
10-5 mm—melted metal and metallic residue on bones
2 mm—metallic residue on some bones

Grave Goods: None

Pyre Debris: 2 mm—charcoal

Identifiable non-human bone: None
### Inventory of Finds Bags

<table>
<thead>
<tr>
<th>Size Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 10 mm</td>
<td>Soil and rocks</td>
</tr>
<tr>
<td></td>
<td>Cranial</td>
</tr>
<tr>
<td></td>
<td>Axial: vertebrae, rib</td>
</tr>
<tr>
<td></td>
<td>Upper limb: humerus, radius, metacarpal</td>
</tr>
<tr>
<td></td>
<td>Lower limb: femur, pelvis</td>
</tr>
<tr>
<td></td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td>Unidentified human long bone</td>
</tr>
<tr>
<td></td>
<td>Bone with metallic residue, melted metal on bone</td>
</tr>
<tr>
<td>10-5 mm</td>
<td>Axial skeleton: rib, vertebrae</td>
</tr>
<tr>
<td></td>
<td>Unidentified human bone</td>
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<td></td>
<td>Unidentified human long bone</td>
</tr>
<tr>
<td></td>
<td>Cranial, tooth</td>
</tr>
<tr>
<td></td>
<td>Bone with melted metal, metallic residue</td>
</tr>
<tr>
<td></td>
<td>Soil and rocks</td>
</tr>
<tr>
<td>2 mm</td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td>Soil with traces of human bone, rocks</td>
</tr>
<tr>
<td></td>
<td>Charcoal</td>
</tr>
<tr>
<td></td>
<td>Bone with metallic residue</td>
</tr>
<tr>
<td>&lt; 2 mm</td>
<td>Residue and traces of human bone</td>
</tr>
</tbody>
</table>
**Burial #**: H2280.1  
**Date**: 4/6/06  
**Observer**: Carrie Sulosky

**Estimated Sex**: ----  
**Estimated Age**: Adult  
**Estimated MNI**: 1

**Context**: Urned cremation burial from greyware vessel with two lug handles

**Total weight of cremated materials**: 1305.29 g  
**Total weight of non-human bone**: 0.38 g

**Total weight of cremated human bone**: 665.59 g  
**Dimensions of largest fragment**: 53.1 x 29.9 mm

**Weight fractions**:  
- >10mm: 282.93 g  
- 10-5mm: 180.08 g  
- 5-2mm: 64.31 g  
- 2-1mm: 210.27 g

**Colour ranges**: Mostly white; grey trabecular bone; black patches on trabecular bone and some of the cortical bone of the long bones and skull

**Shrinkage**: No instances of abnormal shrinkage

**Fissuring**: No instances of abnormal fissuring

**Warping**: Warping visible on some long bones

**Identifiable Fragments Present in Each Sieve Fraction**:  

**Skull**:  
- > 10 mm—20 cranial fragments  
- 10-5 mm—51 cranial fragments

**Axial Skeleton**:  
- > 10 mm—7 rib fragments, 18 vertebrae fragments  
- 10-5 mm—25 rib fragments, 7 vertebrae fragments
**Upper Limb:**
- > 10 mm—1 radius fragment
- 10-5 mm—1 hand phalanx

**Lower Limb:**
- None

**Duplicated elements:**
- None

**Age Indicators:**
- Degenerative changes on spine suggest that the individual was an adult

**Sex Indicators:**
- None

**Pathological Data:**
- > 10 mm—slight lipping (horizontal osteophytes) on vertebral bodies

**Pyre goods:**
- > 10 mm—orange ceramic, charred

**Grave Goods:**
- None

**Pyre Debris:**
- 10-5 mm—charcoal
- 2 mm—charcoal

**Identifiable non-human bone:**
- 10-5 mm—cremated bird bone
## Inventory of Finds Bags

<table>
<thead>
<tr>
<th>Size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 10 mm</td>
<td>Cranial</td>
</tr>
<tr>
<td></td>
<td>Axial: vertebrae, rib</td>
</tr>
<tr>
<td></td>
<td>Upper limb: radius</td>
</tr>
<tr>
<td></td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td>Unidentified human long bone</td>
</tr>
<tr>
<td></td>
<td>Charred ceramic</td>
</tr>
<tr>
<td></td>
<td>Soil and rock</td>
</tr>
<tr>
<td>10-5 mm</td>
<td>Axial skeleton: rib, vertebrae</td>
</tr>
<tr>
<td></td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td>Unidentified human long bone</td>
</tr>
<tr>
<td></td>
<td>Cranial</td>
</tr>
<tr>
<td></td>
<td>Bird bone</td>
</tr>
<tr>
<td></td>
<td>Charcoal</td>
</tr>
<tr>
<td></td>
<td>Upper limb: hand phalanx</td>
</tr>
<tr>
<td></td>
<td>Soil and rock</td>
</tr>
<tr>
<td>2 mm</td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
</tr>
<tr>
<td></td>
<td>Charcoal</td>
</tr>
<tr>
<td>&lt; 2 mm</td>
<td>Residue and traces of human bone</td>
</tr>
</tbody>
</table>
**Burial #:** HG214 Near Holgate, Railway Bridge  
**Date:** 3/6/06  
**Observer:** Carrie Sulosky

<table>
<thead>
<tr>
<th>Estimated Sex: -----</th>
<th>Estimated Age: Adult &gt; 15-19 years</th>
<th>Estimated MNI: 1</th>
</tr>
</thead>
</table>

**Context:** Urned cremation burial from glass vessel

**Total weight of cremated materials:** 486.8 g  
**Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 314.18 g  
**Dimensions of largest fragment:** 37 x 14.7 mm

**Weight fractions:**  
- >10mm: 60.6 g  
- 10-5mm: 164.16 g  
- 5-2mm: 66.32 g  
- 2-1mm: 23.10 g

**Colour ranges:** Mostly white; dark grey patches on some trabecular bone, some bones dark grey throughout (skull, long bones)

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** Warping visible on 1 long bone fragment

**Identifiable Fragments Present in Each Sieve Fraction:**

**Skull:**  
- > 10 mm—22 cranial fragments  
- 10-5 mm—108 cranial fragments

**Axial Skeleton:**  
- > 10 mm—1 vertebra fragment
Upper Limb: 10-5 mm—1 radial head

Lower Limb: None

Duplicated elements: None

Age Indicators: Midlambdoid suture closure—> 15-19 years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: None

Pyre goods: > 10 mm—Ceramic
           10-5 mm—Ceramic

Grave Goods: 2 mm—glass—from urn??

Pyre Debris: None

Identifiable non-human bone: None
Inventory of Finds Bags

> 10 mm:  Cranial (with midlambdoid)
          Axial: vertebrae
          Unidentified human bone
          Unidentified human long bone
          Ceramic
          Soil

10-5 mm:  Unidentified human bone
          Unidentified human long bone
          Cranial
          Ceramic
          Rock
          Upper Limb: radial head
          Soil and bone fragments

2 mm:     Unidentified human bone
          Soil with traces of human bone
          Glass—from urn??

< 2 mm:   Residue and traces of human bone
Burial #: 1974.95—Appletree Farm, Heworth
Date: 4/6/06
Observer: Carrie Sulosky

Estimated Sex: ----
Estimated Age: Adult
Estimated MNI: 1

Context: Unburned cremation burial—large amount of charcoal may suggest pyre site (*bustum*)

Total weight of cremated materials: 484 g   Total weight of non-human bone: 0 g

Total weight of cremated human bone: 253.59 g   Dimensions of largest fragment: 94.6 x 34.2 mm

Weight fractions: >10mm: 224.31 g   10-5mm: 26.65 g   5-2mm: 3.69 g   2-1mm: 2.24 g

Colour ranges: Mostly white; some patches of light grey on the cortical bone of the long bones

Shrinkage: Femur and pelvis did not show the same amount of shrinkage as the rest of the bones

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on some long bones

Identifiable Fragments Present in Each Sieve Fraction:

*Skull:*  > 10 mm—8 cranial fragments
          10-5 mm—14 cranial fragments

*Axial Skeleton:*  > 10 mm—3 rib fragments, 1 vertebra fragment
                  10-5 mm—1 rib fragments, 1 vertebra fragment
**Upper Limb:** None

**Lower Limb:** > 10 mm—2 femur fragments, 2 pelvis fragments

**Duplicated elements:** None

**Age Indicators:** Large, fully formed femur without fusion lines—adult

**Sex Indicators:** None

**Pathological Data:** None

**Pyre goods:** None

**Grave Goods:** None

**Pyre Debris:** > 10 mm—charcoal
10-5 mm—charcoal
2 mm—charcoal

**Identifiable non-human bone:** None
### Inventory of Finds Bags

<table>
<thead>
<tr>
<th>Size</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 10 mm</td>
<td>Cranial</td>
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<tr>
<td></td>
<td>Axial: vertebrae, rib</td>
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<tr>
<td></td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td>Unidentified human long bone</td>
</tr>
<tr>
<td></td>
<td>Charcoal</td>
</tr>
<tr>
<td></td>
<td>Lower limb: pelvis, femur</td>
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<tr>
<td></td>
<td>Charcoal, soil, traces of human bone</td>
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<tr>
<td></td>
<td>Tile/rock</td>
</tr>
<tr>
<td>10-5 mm</td>
<td>Axial skeleton: rib, vertebrae</td>
</tr>
<tr>
<td></td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td>Unidentified human long bone</td>
</tr>
<tr>
<td></td>
<td>Cranial</td>
</tr>
<tr>
<td></td>
<td>Charcoal</td>
</tr>
<tr>
<td></td>
<td>Charcoal, soil, traces of human bone</td>
</tr>
<tr>
<td>2 mm</td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td>Charcoal, soil, traces of human bone</td>
</tr>
<tr>
<td></td>
<td>Charcoal</td>
</tr>
<tr>
<td>&lt; 2 mm</td>
<td>Residue and traces of human bone</td>
</tr>
</tbody>
</table>
Burial #: 1980.54 Catterick Bypass, 1959  
Date: 15/6/06  
Observer: Carrie Sulosky

<table>
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<th>Estimated Age:</th>
<th>Estimated MNI:</th>
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</thead>
<tbody>
<tr>
<td>----</td>
<td>Adult</td>
<td>1</td>
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</table>

**Context:** Urned cremation burial from square bottle

**Total weight of cremated materials:** 1337.31 g  **Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 1013.76 g  **Dimensions of largest fragment:** 79.1 x 26.4 mm

**Weight fractions:**  
> 10 mm: 701.05 g  
10-5 mm: 172.13 g  
5-2 mm: 43.65 g  
2-1 mm: 96.93 g

**Colour ranges:** Mostly white; some patches of light grey on the cortical bone of the skull/long bones and tinges on some trabecular bone; some femur fragments have white cortical bone and black trabecular bone

**Shrinkage:** Sternal end of clavicle larger than acromial, 1 femur shaft and head bigger than the other (each from different sides of the body)—may be normal variation accentuated by heat-related changes

**Fissuring:** Acromial end of clavicle more fissured than sternal end

**Warping:** Warping visible on some long bones and the skull

**Identifiable Fragments Present in Each Sieve Fraction:**

**Skull:**  
> 10 mm—55 cranial fragments  
10-5 mm—29 cranial fragments

**Axial Skeleton:**  
> 10 mm—7 rib fragments, 35 vertebrae fragments, 1 sternum fragment (from inferior
corpus), 2 clavicle fragments (1 sternal, 1 acromial)
10-5 mm—10 rib fragments, 11 vertebrae fragments

*Upper Limb:*  > 10 mm—1 head of a hand phalanx, 1 scapula fragment, 1 radius fragment, 1 ulna fragment, 5 humerus fragments (3 head pieces, 1 distal, 1 shaft)
10-5 mm—1 hand phalanx (distal)

*Lower Limb:*  > 10 mm—5 femur fragments, 14 pelvis fragments

**Duplicated elements:** None

**Age Indicators:** Vertebrae completely fused—adult 20+ years (Schwartz, 1995)

**Sex Indicators:** None—however the Catterick report lists the sex of the cremation as female—I personally don’t feel comfortable with that estimation as I have found no morphological features that were sex diagnostic

**Pathological Data:** > 10 mm—slight lipping (horizontal osteophytes) on cervical and one thoracic (T1?) vertebral bodies

**Pyre goods:** 2 mm—glass

**Grave Goods:** None

**Pyre Debris:** None

**Identifiable non-human bone:** None
Inventory of Finds Bags

> 10 mm: Cranial
  Axial: vertebrae, rib, sternum, clavicle
  Upper limb: humerus, ulna, radius, scapula
  Lower limb: femur, pelvis
  Unidentified human bone
  Unidentified human long bone
  Soil

10-5 mm: Axial skeleton: rib, vertebrae
  Unidentified human bone
  Unidentified human long bone
  Cranial
  Soil
  Upper Limb: hand phalanx

2 mm: Unidentified human bone
  Soil
  Glass

< 2 mm: Residue and traces of human bone
Burial #: Trentholme Drive
1974.303 Year 2/52
Date: 6/6/06
Observer: Carrie Sulosky
Estimated Sex: ----
Estimated Age: -----
Estimated MNI: 1

Context: Unknown

Total weight of cremated materials: 183.7 g  Total weight of non-human bone: 0.5 g

Total weight of cremated human bone: 176.91 g  Dimensions of largest fragment: 53.8 x 41.5 mm

Weight fractions: >10mm: 121.06 g  10-5mm: 46.23 g  5-2mm: 5.07 g  2-1mm: 4.55 g

Colour ranges: Some white; some white cortical bone with dark grey trabecular bone; many pieces of bone are dark grey throughout (pelvis, rib)

Shrinkage: One rib completely dark grey—seems to exhibit no (or very little) shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on some long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—4 cranial fragments
       10-5 mm—5 cranial fragments

Axial Skeleton: > 10 mm—2 rib fragments, 3 vertebrae fragments
               10-5 mm—5 rib fragments, 2 vertebrae fragments
Upper Limb:  None

Lower Limb:  > 10 mm—6 pelvis fragments

Duplicated elements:  None

Age Indicators:  None

Sex Indicators:  None

Pathological Data:  None

Pyre goods:  None

Grave Goods:  10-5 mm—grey ceramic

Pyre Debris:  None

Identifiable non-human bone:  10-5 mm—cremated bird bone
Inventory of Finds Bags

> 10 mm:  Cranial
        Axial: vertebrae, rib
        Lower limb: pelvis
        Unidentified human bone
        Unidentified human long bone

10-5 mm:  Axial skeleton: rib, vertebrae
        Unidentified human bone
        Unidentified human long bone
        Cranial
        Bird bone
        Charcoal
        Grey ceramic

2 mm:  Unidentified human bone
        Soil and rock

< 2 mm:  Residue and traces of human bone
Burial #: Trentholme Drive 1971.303 4
Date: 6/6/06
Observer: Carrie Sulosky

Estimated Sex: ----  Estimated Age: ------  Estimated MNI: 1

Context: Urned cremation burial from greyware vessel

Total weight of cremated materials: 325.56 g  Total weight of non-human bone: 0 g

Total weight of cremated human bone: 304.64 g  Dimensions of largest fragment: 65 x 37.1 mm

Weight fractions: >10mm: 230.24 g  10-5mm: 67.2 g  5-2mm: 3.54 g  2-1mm: 3.66 g

Colour ranges: Some are all white; some long bones have white cortical bone with dark grey trabecular bone; many, especially the skull, are light grey the whole way through

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on some long bones

Identifiable Fragments Present in Each Sieve Fraction:

*Skull:* > 10 mm—22 cranial fragments
  10-5 mm—19 cranial fragments

*Axial Skeleton:* > 10 mm—4 rib fragments
  10-5 mm—14 rib fragments
Upper Limb: > 10 mm—3 humerus fragments, 1 radius fragment

Lower Limb: > 10 mm—1 patella

Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: > 10 mm—grey ceramic (from urn?)
           10-5 mm—grey ceramic (from urn?)

Pyre Debris: None

Identifiable non-human bone: None
Inventory of Finds Bags

> 10 mm: Cranial
   Axial: rib
   Upper limb: humerus, radius
   Lower limb: patella
   Unidentified human bone
   Unidentified human long bone
   Ceramic

10-5 mm: Axial skeleton: rib
          Unidentified human bone
          Unidentified human long bone
          Cranial
          Ceramic
          Soil and traces of human bone

2 mm: Unidentified human bone
      Soil and bone

< 2 mm: Residue and traces of human bone
<table>
<thead>
<tr>
<th>Burial #: Trentholme Drive 1971.303 19a</th>
<th>Date: 8/6/06</th>
<th>Observer: Carrie Sulosky</th>
</tr>
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<tbody>
<tr>
<td>Estimated Sex: ----</td>
<td>Estimated Age: ----</td>
<td>Estimated MNI: 1</td>
</tr>
</tbody>
</table>

**Context:** Urned cremation burial

**Total weight of cremated materials:** 551.03 g  **Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 107 g  **Dimensions of largest fragment:** 28.6 x 22.6 mm

**Weight fractions:**
- $>10$ mm: 107 g
- 10-5 mm: 78.45 g
- 5-2 mm: 51.34 g
- 2-1 mm: 82.66 g

**Colour ranges:** Mostly white; some patches of dark and light grey trabecular bone

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** Warping visible on some long bones

**Identifiable Fragments Present in Each Sieve Fraction:**

- **Skull:** $>10$ mm—2 tooth roots
  - 10-5 mm—10 cranial fragments

- **Axial Skeleton:** $>10$ mm—1 vertebra fragment
  - 10-5 mm—3 vertebrae fragments

- **Upper Limb:** None
Lower Limb: None

Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: > 10 mm—periostitis on long bone (not tibia!)
  10-5 mm—periostitis on long bone (not tibia!)

Pyre goods: None

Grave Goods: > 10 mm—grey and orange ceramic
  2 mm—grey ceramic

Pyre Debris: 2 mm—charcoal

Identifiable non-human bone: None
### Inventory of Finds Bags

**> 10 mm:**
- Cranial
- Unknown long bone with periostitis
- Axial: vertebrae
- Soil and rock
- Unidentified human bone
- Unidentified human long bone

**10-5 mm:**
- Grey ceramic
- Rocks and soil
- Tooth roots
- Long bones with periostitis
- Axial: vertebrae
- Unidentified human bone
- Unidentified human long bone

**2 mm:**
- Unidentified human bone
- Ceramic
- Charcoal
- Soil and rock

**< 2 mm:**
- Residue and traces of human bone
Trenholme Drive---1971.303 69

NOT CREMATED

4 teeth:
- 1 M₂, unerupted
- 1 premolar unerupted
- 1 M¹, slight wear, full roots
- 1 M₁, slight wear, full roots

INDIVIDUAL AGED 7-9 YEARS

Trenholme Drive---1971.303 77—urned cremation

*contents of lower urn
  - charcoal
  - cremated human bone—0.27 g
  - soil and rock

*contents of upper urn
  - charcoal
  - cremated human bone—0.62 g
  - soil and rock

Trenholme Drive---1971.303 85b—urned cremation

*top of urn
  - soil and rock
  - unidentified cremated human bone—1.75 g
  - charcoal
  - painted wall plaster? probably intrusive
  - fossil
<table>
<thead>
<tr>
<th>Burial #: Trenholme Drive 1971.303 87</th>
<th>Date: 5/6/06</th>
<th>Observer: Carrie Sulosky</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Sex: ----</td>
<td>Estimated Age: Adult 20+ years</td>
<td>Estimated MNI: 1</td>
</tr>
</tbody>
</table>

**Context:** Unknown

**Total weight of cremated materials:** 509.25 g  
**Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 346.4 g  
**Dimensions of largest fragment:** 57.4 x 30.7 mm

**Weight fractions:**  
&gt;10mm: 246.02 g  
10-5mm: 59.54 g  
5-2mm: 19.44 g  
2-1mm: 21.4 g

**Colour ranges:** The cortical bone on the skull ranges from black to light grey to white; the cortical bone of the femur and other long bones is both white and dark grey; the trabecular bone is dark grey

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** No abnormal warping visible

**Identifiable Fragments Present in Each Sieve Fraction:**

**Skull:**  
&gt; 10 mm—20 cranial fragments  
10-5 mm—13 cranial fragments

**Axial Skeleton:**  
&gt; 10 mm—1 rib fragment, 4 vertebrae fragments  
10-5 mm—7 rib fragments
**Upper Limb:**  > 10 mm—2 humerus fragments

**Lower Limb:**  > 10 mm—5 femur fragments, 2 pelvis fragments, 1 talus fragment, 2 tibia fragments

**Duplicated elements:**  None

**Age Indicators:**  Vertebrae completely fused—adult 20+ years  (Schwartz, 1995)

**Sex Indicators:**  None

**Pathological Data:**  None

**Pyre goods:**  > 10 mm—Roman gaming piece made out of animal bone (cortical)
    10-5 mm—Roman gaming piece made out of animal bone (cortical), charred ceramic
    2 mm—charred ceramic, small lead ball

**Grave Goods:**  None

**Pyre Debris:**  2 mm—charcoal

**Identifiable non-human bone:**  None
### Inventory of Finds Bags

<table>
<thead>
<tr>
<th>Size</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 10 mm</td>
<td>Cranial&lt;br&gt;Axial: vertebrae, rib&lt;br&gt;Upper limb: humerus&lt;br&gt;Lower limb: femur, pelvis, tibia, talus&lt;br&gt;Unidentified human bone&lt;br&gt;Unidentified human long bone&lt;br&gt;Animal bone gaming pieces</td>
</tr>
<tr>
<td>10-5 mm</td>
<td>Axial skeleton: rib&lt;br&gt;Unidentified human bone&lt;br&gt;Unidentified human long bone&lt;br&gt;Cranial&lt;br&gt;Soil and traces of human bone&lt;br&gt;Roman game pieces&lt;br&gt;Ceramic</td>
</tr>
<tr>
<td>2 mm</td>
<td>Unidentified human bone&lt;br&gt;Soil, rock&lt;br&gt;Charcoal&lt;br&gt;Lead ball&lt;br&gt;Charred ceramic</td>
</tr>
<tr>
<td>&lt; 2 mm</td>
<td>Residue and traces of human bone</td>
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</tbody>
</table>
**Burial #:** Trenholme Drive 1971.303 88  
**Date:** 7/6/06  
**Observer:** Carrie Sulosky

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</thead>
<tbody>
<tr>
<td>----</td>
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</tbody>
</table>

**Context:** Urned cremation burial from greyware vessel

**Total weight of cremated materials:** 192.2 g  
**Total weight of non-human bone:** 18.74 g

**Total weight of cremated human bone:** 8.40 g  
**Dimensions of largest fragment:** 22.4 x 15.7 mm

**Weight fractions:**  
\(>10\text{mm}: 0.92\text{ g}\)  
\(10-5\text{mm}: 1.25\text{ g}\)  
\(5-2\text{mm}: 0.4\text{ g}\)  
\(2-1\text{mm}: 5.8\text{ g}\)

**Colour ranges:** Mostly white; some patches of light grey on the cortical bone

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** No instances of abnormal warping

**Identifiable Fragments Present in Each Sieve Fraction:**

**Skull:**  
\(>10\text{mm}—1\) cranial fragment

**Axial Skeleton:** None

**Upper Limb:** None
Lower Limb: None

Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: > 10 mm—grey ceramic (from urn?)

Pyre Debris: > 10 mm—charcoal
            10-5 mm—charcoal
            2 mm—charcoal
            < 2 mm—charcoal

Identifiable non-human bone: > 10 mm—unburnt chicken bones (wings and legs but not the 'meatiest' parts)
                              10-5 mm—unburnt chicken bones (wings and legs but not the 'meatiest' parts)
                              2 mm—unburnt chicken bones (wings and legs but not the 'meatiest' parts)
                              < 2 mm—unburnt chicken bones (wings and legs but not the 'meatiest' parts)
Inventory of Finds Bags

> 10 mm:
  - Cranial
  - Grey ceramic
  - Charcoal
  - Rock and soil
  - Chicken bones

10-5 mm:
  - Chicken bones
  - Unidentified human bone
  - Soil and rock
  - Charcoal

2 mm:
  - Unidentified human bone
  - Charcoal
  - Chicken bones
  - Rock and soil

< 2 mm:
  - Residue and traces of human bone, chicken bone, and charcoal
Burial #: Trentholme Drive 1971.303 89b

Date: 6/6/06
Observer: Carrie Sulosky

Estimated Sex: ----
Estimated Age: ----
Estimated MNI: 1

Context: Unknown

Total weight of cremated materials: 84.68 g  
Total weight of non-human bone: 0 g

Total weight of cremated human bone: 20.75 g  
Dimensions of largest fragment: 28.4 x 16.8 mm

Weight fractions:  
>10 mm: 3.51 g  
10-5 mm: 4.83 g  
5-2 mm: 4.29 g  
2-1 mm: 8.12 g

Colour ranges: Most of the cortical bone is white, and most of the trabecular bone is light grey

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: No abnormal warping visible

Identifiable Fragments Present in Each Sieve Fraction:

Skull: 10-5 mm—tooth roots  
2 mm—tooth roots

Axial Skeleton: None

Upper Limb: None
Lower Limb: None

Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: None

Pyre Debris: 2 mm—charcoal/slag

Identifiable non-human bone: None
Inventory of Finds Bags

> 10 mm: Soil, rock and traces of human bone
   Unidentified human bone

10-5 mm: Tooth root
   Unidentified human bone
   Soil with traces of human bone

2 mm: Unidentified human bone
   Soil with traces of human bone
   Charcoal, slag
   Tooth roots

< 2 mm: Residue and traces of human bone
Burial #: Trentholme Drive 1971.303 98
Date: 7/6/06
Observer: Carrie Sulosky
Estimated Sex: ----
Estimated Age: -----  Estimated MNI: 1

Context: Unknown

Total weight of cremated materials: 20.2 g  Total weight of non-human bone: 0.33 g

Total weight of cremated human bone: 19.82 g  Dimensions of largest fragment: 38.1 x 15 mm

Weight fractions:  >10mm: 13.68 g  10-5mm: 5.14 g  5-2mm: 0.54 g  2-1mm: 0.46 g

Colour ranges: The cortical bone is mostly white, with some light grey patches (especially on the long bones), whereas the trabecular bone is mostly dark grey

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Some warping visible on the long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—2 cranial fragments
       10-5 mm—3 cranial fragments

Axial Skeleton: None

Upper Limb: None
Lower Limb: None

Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: 10-5 mm—unburnt grey ceramic

Pyre Debris: None

Identifiable non-human bone: 10-5 mm—cremated bird bone
Inventory of Finds Bags

> 10 mm: Cranial
  Unidentified human bone
  Unidentified human long bone

10-5 mm: Bird bone
  Unidentified human bone
  Unidentified human long bone
  Cranial
  Ceramic

2 mm: Unidentified human bone

< 2 mm: Residue and traces of human bone
Burial #: Trentholme Drive 1971.303 119
Date: 9/6/06
Observer: Carrie Sulosky

Estimated Sex: ----
Estimated Age: Adult
Estimated MNI: 1

**Context:** Urned cremation burial

**Total weight of cremated materials:** 512.04 g  **Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 495.75 g  **Dimensions of largest fragment:** 53.6 x 10.6 mm

**Weight fractions:**  >10mm: 298.84 g  10-5mm: 152.28 g  5-2mm: 31.43 g  2-1mm: 13.20 g

**Colour ranges:** Mostly white cortical bone with black trabecular bone; some bones were grey throughout; some bones were white throughout

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** Warping visible on the long bones and skull

**Identifiable Fragments Present in Each Sieve Fraction:**

*Skull:*  > 10 mm—38 cranial fragments
          10-5mm—75 cranial fragments

*Axial Skeleton:*  > 10 mm—3 rib fragments, 12 vertebrae fragments
                   10-5 mm—19 rib fragments, 10 vertebrae fragments
Upper Limb: None

Lower Limb: > 10 mm—8 pelvis fragments

Duplicated elements: None

Age Indicators: Fully fused vertebrae—adult 20+ years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: > 10 mm—slight lipping (horizontal osteophytes) of the vertebral bodies

Pyre goods: None

Grave Goods: None

Pyre Debris: 2 mm—slag

Identifiable non-human bone: None
Inventory of Finds Bags

> 10 mm: Cranial
   Axial: rib, vertebrae
   Unidentified human bone
   Unidentified human long bone
   Lower limb: pelvis

10-5 mm: Unidentified human bone
   Unidentified human bone
   Cranial
   Rock
   Axial: vertebrae, rib

2 mm: Slag
   Fossil
   Unidentified human bone
   Rock and soil

< 2 mm: Residue and traces of human bone
**Burial #:** Trentholme Drive 1971.303 124b  
**Date:** 10/6/06  
**Observer:** Carrie Sulosky  
**Estimated Sex:** ----  
**Estimated Age:** Adult 20+ years  
**Estimated MNI:** 1

**Context:** Unknown

**Total weight of cremated materials:** 687.1 g  
**Total weight of non-human bone:** 1.13 g

**Total weight of cremated human bone:** 513.03 g  
**Dimensions of largest fragment:** 73.2 x 44.4 mm

**Weight fractions:** >10mm: 334.54 g  
10-5mm: 104.95 g  
5-2mm: 17.44 g  
2-1mm: 56.10 g

**Colour ranges:** Some bone completely white (skull, long bones); most all grey with white patches; some with white cortical and dark grey/black trabecular

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** Warping visible on long bones

**Identifiable Fragments Present in Each Sieve Fraction:**

**Skull:**  
> 10 mm—8 cranial fragments  
10-5 mm—24 cranial fragments  
2 mm—tooth root

**Axial Skeleton:**  
> 10 mm—7 rib fragments, 8 vertebrae fragments  
10-5 mm—8 rib fragments, 2 vertebrae fragments
Upper Limb: None

Lower Limb: > 10 mm—3 tibia fragments, 6 pelvis fragments

Duplicated elements: None

Age Indicators: Vertebrae completely fused—adults 20+ years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: None

Pyre Debris: None

Identifiable non-human bone: 10-5 mm—cremated bird bones (light grey in colour)
Inventory of Finds Bags

> 10 mm:  Cranial
         Unidentified human bones
         Unidentified human long bones
         Lower limb: pelvis, tibia
         Soil and traces of human bone
         Axial: rib, vertebrae

10-5 mm:  Bird bones
         Unidentified human bone
         Soil and traces of human bone
         Axial: rib, vertebrae
         Cranial
         Unidentified human long bone

2 mm:  Unidentified human bone
       Tooth root
       Rock and soil with traces of human bone

< 2 mm:  Residue and traces of human bone
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<th>Burial #:</th>
<th>Trentholme Drive 1971.303 202</th>
<th>Date:</th>
<th>6/6/06</th>
<th>Observer: Carrie Sulosky</th>
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</thead>
<tbody>
<tr>
<td>Estimated Sex:</td>
<td>----</td>
<td>Estimated Age:</td>
<td>Subadult &lt; 8 years</td>
<td>Estimated MNI: 1</td>
</tr>
</tbody>
</table>

**Context:** Unknown

**Total weight of cremated materials:** 39.11 g  
**Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 27.91 g  
**Dimensions of largest fragment:** 38.4 x 26.6 mm

**Weight fractions:**  
\( >10 \text{mm} \): 19 g  
\( 10-5 \text{mm} \): 8.01 g  
\( 5-2 \text{mm} \): 0.84 g  
\( 2-1 \text{mm} \): 0.58 g

**Colour ranges:** Mostly white cortical bone, some patches of light grey (on skull); most trabecular bone black/dark grey

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** No visible warping

**Identifiable Fragments Present in Each Sieve Fraction:**

**Skull:**  
\( >10 \text{mm} \)—6 cranial fragments  
\( 10-5 \text{mm} \)—unerupted \( M^1 \) with Carabelli cusp, 4 cranial fragments

**Axial Skeleton:** 10-5 mm—1 vertebra fragment
Upper Limb: None

Lower Limb: None

Duplicated elements: None

Age Indicators: Unerupted M₁—subadult < 8 years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: None

Pyre Debris: None

Identifiable non-human bone: None
**Inventory of Finds Bags**

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<thead>
<tr>
<th>Size Range</th>
<th>Category</th>
<th>Description</th>
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</thead>
<tbody>
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<td>&gt; 10 mm</td>
<td>Cranial</td>
<td>Rock</td>
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<tr>
<td></td>
<td></td>
<td>Unidentified human long bones</td>
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<tr>
<td>10-5 mm</td>
<td>Rock</td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unerupted M1 with Carabelli cusp</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Axial: vertebrae</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cranial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unidentified human long bone</td>
</tr>
<tr>
<td>2 mm</td>
<td></td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td>&lt; 2 mm</td>
<td></td>
<td>Residue and traces of human bone</td>
</tr>
</tbody>
</table>
Burial #: Trentholme Drive
1971.303 203
Date: 5/6/06
Observer: Carrie Sulosky

Estimated Sex: ----
Estimated Age: Adult 20+ years
Estimated MNI: 1

Context: Urned cremation burial in greyware vessel

Total weight of cremated materials: 663.02 g
Total weight of non-human bone: 0 g

Total weight of cremated human bone: 529.73 g
Dimensions of largest fragment: 61.9 x 31.5 mm

Weight fractions: >10mm: 334.93 g 10-5mm: 93.63 g 5-2mm: 33.92 g 2-1mm: 67.25 g

Colour ranges: Most of cortical bone white with patches of light grey; light grey trabecular bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones and some skull fragments

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—17 cranial fragments
       10-5 mm—19 cranial fragments

Axial Skeleton: > 10 mm—2 rib fragments, 19 vertebrae fragments
               10-5 mm—4 rib fragments, 14 vertebrae fragments
Upper Limb: > 10 mm—2 humerus fragments

Lower Limb: > 10 mm—1 talus fragment, 8 pelvis fragments
10-5 mm—1 pelvis fragment

Duplicated elements: None

Age Indicators: Vertebrae completely fused—adults 20+ years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: None

Pyre goods: None

Grave Goods: > 10 mm—grey ceramic
10-5 mm—grey ceramic

Pyre Debris: 2 mm—charcoal

Identifiable non-human bone: None
Inventory of Finds Bags

> 10 mm: Cranial
  Unidentified human bones
  Unidentified human long bones
  Ceramic
  Axial: rib, vertebrae
  Upper limb: humerus
  Lower limb: talus, pelvis

10-5 mm: Ceramic
  Lower limb: pelvis
  Unidentified human bone
  Soil and traces of human bone
  Axial: rib, vertebrae
  Cranial
  Unidentified human long bone

2 mm: Unidentified human bone
  Charcoal
  Soil with traces of human bone

< 2 mm: Residue and traces of human bone
Burial #: Trenholme Drive
1971.303 205

Date: 7/6/06
Observer: Carrie Sulosky

Estimated Sex: ----
Estimated Age: Older adult
Estimated MNI: 1

Context: Unknown

Total weight of cremated materials: 307.61 g
Total weight of non-human bone: 10.96 g

Total weight of cremated human bone: 274.82 g
Dimensions of largest fragment: 56.3 x 30.5 mm

Weight fractions: >10mm: 184.75 g
10-5mm: 77.07 g
5-2mm: 1.48 g
2-1mm: 11.52 g

Colour ranges: Most of the cortical bone is light grey, while some is black and some is white; trabecular bone is dark grey

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—33 cranial fragments
10-5 mm—43 cranial fragments

Axial Skeleton: > 10 mm—1 vertebra fragment
10-5 mm—9 rib fragments, 4 vertebrae fragments
**Upper Limb:**
> 10 mm—1 humerus fragment, 1 metacarpal head, 1 hand phalanx

**Lower Limb:**
> 10 mm—1 tibia fragment, 4 pelvis fragments, 3 femur fragments

**Duplicated elements:** None

**Age Indicators:** Auricular surface—older adult (Lovejoy et al., 1985)

**Sex Indicators:** None

**Pathological Data:** None

**Pyre goods:** None

**Grave Goods:** 10-5 mm—ceramic, 2 sides, grey with reddish inside

**Pyre Debris:** 2 mm—charcoal

**Identifiable non-human bone:** > 10 mm—proximal cremated cow phalanx
Inventory of Finds Bags

> 10 mm: Cranial
  Unidentified human bones
  Unidentified human long bones
  Auricular surface—older adult
  Lower limb: pelvis, tibia, femur
  Upper limb: metacarpal, phalanx, humerus
  Proximal cow phalanx
  Axial: vertebrae

10-5 mm: Ceramic
  Unidentified human bone
  Axial: rib, vertebrae
  Cranial
  Unidentified human long bone

2 mm: Unidentified human bone
  Charcoal
  Rock and soil

< 2 mm: Residue and traces of human bone
Burial #: Trenholme Drive 1971.303 260  
Date: 13/6/06  
Observer: Carrie Sulosky  
Estimated Sex: ----  
Estimated Age: Mid? Adult  
Estimated MNI: 1

Context: Unknown

Total weight of cremated materials: 1343.62 g  
Total weight of non-human bone: 1.14 g

Total weight of cremated human bone: 1289.45 g  
Dimensions of largest fragment: 92.4 x 53 mm

Weight fractions:  
>10mm: 920.22 g  
10-5mm: 254.31 g  
5-2mm: 46.16 g  
2-1mm: 68.76 g

Colour ranges: The cortical bone of the tibia, radius and skull is white with black patches, the cortical bone of the pelvis and vertebrae is white with light grey tinged trabecular bone, and the long bones have white cortical bone and black trabecular bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones and skull

Identifiable Fragments Present in Each Sieve Fraction:

Skull:  
> 10 mm—64 cranial fragments  
10-5 mm—60 cranial fragments  
2 mm—1 tooth root
**Axial Skeleton:**  > 10 mm—2 sternal clavicle ends, 1 superior portion of manubrium, 13 rib fragments, 2 sacrum fragments, 40 vertebrae fragments (including dens)

10-5 mm—39 rib fragments, 26 vertebrae fragments

**Upper Limb:**  > 10 mm—2 scapula fragments, 4 humerus fragments, 2 radius fragments, 1 hand phalanx, 1 ulna fragment

**Lower Limb:**  > 10 mm—1 patellae (right and left), 9 femur fragments

**Duplicated elements:** None

**Age Indicators:** Everything fused—adult, pathology indicates individual may be mid adult (Schwartz, 1995)

**Sex Indicators:** None

**Pathological Data:** > 10 mm—slight lipping (horizontal osteophytes) of vertebral bodies

**Pyre goods:** > 10 mm—bones with iron residue: 1 unidentified, 1 fibula, 1 metatarsal head, 9 tibia, 16 pelvis

10-5 mm—molten metal—iron?, bright orange charred and unglazed ceramic

2 mm—bright orange, unglazed and charred ceramic

**Grave Goods:** None

**Pyre Debris:**  10-5 mm—charcoal

2 mm—charcoal

**Identifiable non-human bone:** > 10 mm—cremated mammal and bird bones
Inventory of Finds Bags

> 10 mm: Cranial
Unidentified human bones
Unidentified human long bones
Upper limb: humerus, scapula, radius, hand phalanx, ulna
Lower limb: pelvis, tibia, metatarsal, patella, femur, fibula
Mammal bone
Bird bone
Unidentified bone with iron residue
Axial: rib, vertebrae, sacrum, manubrium, clavicle

10-5 mm: Rock and soil
Unidentified human bone
Cranial
Unidentified human long bone
Charcoal
Ceramic
Axial: vertebrae and rib
Molten metal (iron?)
Bone with metal residue (iron)

2 mm: Unidentified human bone
Tooth root
Rock and soil
Charcoal
Bright orange ceramic

< 2 mm: Residue and traces of human bone
Burial #:  Trentholme Drive 1971.303 262
Date:  10/6/06
Observer:  Carrie Sulosky

Estimated Sex:  ----
Estimated Age:  Mid? Adult
Estimated MNI:  1

Context:  Urned cremation burial

Total weight of cremated materials:  796.81 g  Total weight of non-human bone:  0 g

Total weight of cremated human bone:  721.72 g  Dimensions of largest fragment:  37.3 x 35.6 mm

Weight fractions:  >10 mm: 400.08 g  10-5 mm: 263.12 g  5-2 mm: 40.51 g  2-1 mm: 18.01 g

Colour ranges:  All mostly white; some skull, rib and vertebrae are light grey the whole way through with white patches

Shrinkage:  No instances of abnormal shrinkage

Fissuring:  No instances of abnormal fissuring

Warping:  Warping visible on long bones and skull

Identifiable Fragments Present in Each Sieve Fraction:

*Skull:*  > 10 mm—40 cranial fragments, 6 mandible fragments, 1 midlambdoid suture
         10-5 mm—68 cranial fragments, 1 tooth root

*Axial Skeleton:*  > 10 mm—6 rib fragments, 9 vertebrae fragments
                   10-5 mm—21 rib fragments, 15 vertebrae fragments
Upper Limb:  
> 10 mm—6 humerus fragments, 1 radius fragment  
10-5 mm—3 hand phalanges

Lower Limb:  
> 10 mm—1 tibia fragment, 4 pelvis fragments, 2 femur fragments, 1 metatarsal (distal epiphysis)  
10-5 mm—1 distal head of a metatarsal

Duplicated elements: None

Age Indicators:  
Midlambdoid suture fused—15-19 years (Schwartz, 1995)  
Tarsal distal epiphysis fused—18-22 years (Schwartz, 1995)  
Pathology indicates that individual may be a mid-adult

Sex Indicators: None

Pathological Data:  
> 10 mm—slight lipping (horizontal osteophytes) on vertebral bodies, antemortem  
  tooth loss—on mandible, completely resorbed

Pyre goods:  
> 10 mm—2 small nails (cremated) (Find 264)

Grave Goods: None

Pyre Debris:  
2 mm—charcoal

Identifiable non-human bone: None
Inventory of Finds Bags

> 10 mm:  Mandible (with antemortem tooth loss), cranium, midlambdoid suture
          Axial: vertebrae, rib
          Lower limb: pelvis, femur, tibia, metatarsal
          Upper limb: humerus, radius
          Unidentified human bone
          Unidentified long bone
          Rock

10-5 mm:  Unidentified human bone
          Unidentified human long bone
          Lower limb: Distal metatarsal
          Tooth root
          Rocks and soil
          Cranial
          Upper limb: Hand phalanx
          Axial: ribs, vertebrae

2 mm:  Unidentified human bone
        Charcoal
        Rock and soil

< 2 mm:  Residue and traces of human bone
Burial #: Trenholme Drive 1971.303 273b
Date: 5/6/06
Observer: Carrie Sulosky

Estimated Sex: ----
Estimated Age: Adult
Estimated MNI: 1

Context: Unknown

Total weight of cremated materials: 108.56 g
Total weight of non-human bone: 0 g

Total weight of cremated human bone: 107.73 g
Dimensions of largest fragment: 59.1 x 16.3 mm

Weight fractions: >10mm: 100.31 g
10-5mm: 6.84 g
5-2mm: 0.14 g
2-1mm: 0.44 g

Colour ranges: Mostly white, some patches of dark grey trabecular bone, cortical bone of the skull charred black in one place

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—4 cranial fragments

Axial Skeleton: > 10 mm—1 vertebra fragment
**Upper Limb:** None

**Lower Limb:** > 10 mm—2 tibia fragments, 1 pelvis fragment

**Duplicated elements:** None

**Age Indicators:** Pathology suggests that this is an adult

**Sex Indicators:** None

**Pathological Data:** > 10 mm—slight lipping (horizontal osteophytes) of vertebral bodies—superior and inferior bodies

**Pyre goods:** None

**Grave Goods:** None

**Pyre Debris:** None

**Identifiable non-human bone:** None
Inventory of Finds Bags

> 10 mm: Cranial
  Unidentified human long bones
  Lower limb: pelvis, tibia
  Axial: vertebrae

10-5 mm: Unidentified human bone

2 mm: Unidentified human bone

< 2 mm: Residue and traces of human bone
**Burial #:** Trentholme Drive 1971.303 280  
**Date:** 8/6/06  
**Observer:** Carrie Sulosky

<table>
<thead>
<tr>
<th>Estimated Sex: ----</th>
<th>Estimated Age: Adult 20+ years</th>
<th>Estimated MNI: 1</th>
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</table>

**Context:** Unknown

**Total weight of cremated materials:** 398.48 g  
**Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 378.68 g  
**Dimensions of largest fragment:** 64.4 x 21.1 mm

**Weight fractions:**  
> 10 mm: 252.85 g  
10-5 mm: 108.66 g  
5-2 mm: 13.81 g  
2-1 mm: 3.36 g

**Colour ranges:** The bones are mostly white, some patches of light grey on the cortical bone, and some instances in which the entire bone is light grey throughout (skull); some cortical bone white with dark/light grey trabecular bone (pelvis, some long bones)

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** Warping visible on long bones

**Identifiable Fragments Present in Each Sieve Fraction:**

**Skull:**  
> 10 mm—35 cranial fragments  
10-5 mm—43 cranial fragments, 3 tooth roots  
2 mm—tooth root
**Axial Skeleton:**
> 10 mm—7 rib fragments, 9 vertebrae fragments
10-5 mm—20 rib fragments, 8 vertebrae fragments, 1 sacrum

**Upper Limb:**
> 10 mm—2 humerus fragments

**Lower Limb:**
> 10 mm—1 femur head, 1 proximal epiphysis of a tibia, 1 pelvis fragment, 1 fibula fragment

**Duplicated elements:** None

**Age Indicators:** Vertebrae completely fused—adults 20+ years (Schwartz, 1995)

**Sex Indicators:** None

**Pathological Data:** None

**Pyre goods:**
> 10 mm—burnt striated ceramic (grey outside, orange inside)
10-5 mm—4 striated ceramic
2 mm—striated ceramic

**Grave Goods:** None

**Pyre Debris:**
10-5 mm—charcoal

**Identifiable non-human bone:** None
## Inventory of Finds Bags

### > 10 mm:

- Cranial
- Unidentified human bones
- Unidentified human long bones
- Lower limb: pelvis, proximal epiphysis of tibia, head of femur, fibula
- Upper limb: humerus
- Striated ceramic
- Axial: rib, vertebrae

### 10-5 mm:

- Charcoal
- Unidentified human bone
- Striated ceramic
- Axial: rib, vertebrae
- Sacrum
- Tooth roots
- Cranial
- Unidentified human long bone

### 2 mm:

- Unidentified human bone
- Tooth root
- Rock and soil
- Striated ceramic

### < 2 mm:

- Residue and traces of human bone
Burial #: Trentholme Drive 1971.303 293  Date: 12/6/06  Observer: Carrie Sulosky

Estimated Sex: ----  Estimated Age: Subadult <16-17 years  Estimated MNI: 1

Context: Unknown

Total weight of cremated materials: 910.77 g  Total weight of non-human bone: 0.26 g

Total weight of cremated human bone: 793.65 g  Dimensions of largest fragment: 49.2 x 26.0 mm

Weight fractions:  >10mm: 397.1 g  10-5mm: 300.87 g  5-2mm: 70.92 g  2-1mm: 24.76 g

Colour ranges: Some bones were white throughout, most were light grey throughout; some black patches on the cortical bone of the skull and long bones; some long bones had white cortical bone and black trabecular bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull:  > 10 mm—63 cranial fragments
        10-5 mm—130 cranial fragments, 3 tooth roots
        2 mm—tooth root
Axial Skeleton:  > 10 mm—5 rib fragments, 4 vertebrae fragments  
              10-5 mm—46 rib fragments, 10 vertebrae fragments

Upper Limb:  > 10 mm—1 humerus fragment

Lower Limb:  > 10 mm—2 femur fragments, 1 talus fragment, 6 pelvis fragments (with unfused epiphyses)  
              10-5 mm—1 femur fragment

Duplicated elements: None

Age Indicators:  Unfused iliac crest—< 16-17 years (Schwartz, 1995)  
                 Unfused pubic symphyses—< 16-17 years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: None

Pyre goods:  > 10 mm—1 ceramic, grey outside, orange inside (charred)

Grave Goods: None

Pyre Debris:  > 10 mm—charcoal  
              10-5 mm—charcoal  
              2 mm—slag, charcoal

Identifiable non-human bone:  2 mm—unburnt shrew bones (intrusive)
Inventory of Finds Bags

> 10 mm:  Cranial
Unidentified human bones
Unidentified human long bones
Lower limb: pelvis with unfused epiphyses, femur, talus
Charcoal
Upper limb: humerus
Rocks
Ceramic
Axial: rib, vertebrae

10-5 mm:  Rock and soil
Unidentified human bone
Lower limb: femur
Axial: rib, vertebrae
Cranial, tooth roots
Charcoal
Unidentified human long bone

2 mm:  Unidentified human bone
Tooth root
Rock and soil
Ground snail (intrusive)
Unburnt shrew bones (intrusive)
Slag, charcoal

< 2 mm:  Residue and traces of human bone
Burial #: Trentholme Drive 1971.303 332  
Date: 6/6/06  
Observer: Carrie Sulosky

Estimated Sex: ----  
Estimated Age: Adult 20+ years  
Estimated MNI: 1

Context: Unknown

Total weight of cremated materials: 141.73 g  
Total weight of non-human bone: 0 g

Total weight of cremated human bone: 133.28 g  
Dimensions of largest fragment: 38.6 x 20.1 mm

Weight fractions:  
>10mm: 87.72 g  
10-5mm: 40.02 g  
5-2mm: 3.32 g  
2-1mm: 2.22 g

Colour ranges: Some long bones have white cortical bone and dark grey trabecular bone; some bones were light grey throughout, some bones were white throughout

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—8 cranial fragments (including mandible with tooth root inside)  
10-5 mm—18 cranial fragments

Axial Skeleton: > 10 mm—6 rib fragments, 3 vertebrae fragments  
10-5 mm—8 rib fragments, 5 vertebrae fragments
Upper Limb: > 10 mm—1 humerus fragment

Lower Limb: > 10 mm—2 femur fragments, 4 pelvis fragments

Duplicated elements: None

Age Indicators: Vertebrae completely fused—adults 20+ years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: None

Pyre goods: > 10 mm—orange ceramic (charred)
10-5 mm—orange ceramic (charred)

Grave Goods: None

Pyre Debris: None

Identifiable non-human bone: None
Inventory of Finds Bags

> 10 mm: Cranial (including mandible with tooth root)
  Unidentified human bones
  Unidentified human long bones
  Lower limb: pelvis, femur
  Upper limb: humerus
  Ceramic
  Axial: rib, vertebrae

10-5 mm: Ceramic
  Unidentified human bone
  Axial: rib, vertebrae
  Cranial
  Unidentified human long bone

2 mm: Unidentified human bone
  Rock and soil

< 2 mm: Residue and traces of human bone
**Burial #:** Trentholme Drive 1971.303-bag says 396b, could be 398b  
**Date:** 8/6/06  
**Observer:** Carrie Sulosky  

<table>
<thead>
<tr>
<th>Estimated Sex:</th>
<th>Estimated Age:</th>
<th>Estimated MNI:</th>
</tr>
</thead>
<tbody>
<tr>
<td>****</td>
<td>Adult</td>
<td>1</td>
</tr>
</tbody>
</table>

**Context:** Unknown

**Total weight of cremated materials:** 397.96 g  
**Total weight of non-human bone:** 58.89 g

**Total weight of cremated human bone:** 285.27 g  
**Dimensions of largest fragment:** 40 x 35.9 mm

**Weight fractions:**  
>10mm: 180.99 g  
10-5mm: 50 g  
5-2mm: 12.34 g  
2-1mm: 41.94 g

**Colour ranges:** White cortical bone (patches of light grey on the tibia); trabecular bone is white with patches of light grey; some trabecular bone is dark grey

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** Warping visible on long bones and skull

**Identifiable Fragments Present in Each Sieve Fraction:**

**Skull:**  
> 10 mm—5 cranial fragments  
10-5 mm—6 cranial fragments

**Axial Skeleton:**  
> 10 mm—2 rib fragments, 2 vertebrae fragments
Upper Limb: None

Lower Limb: None

Duplicated elements: None

Age Indicators: Pathology suggests that the individual is an adult

Sex Indicators: None

Pathological Data: > 10 mm—slight lipping (horizontal osteophytes) on vertebral bodies

Pyre goods: None

Grave Goods: None

Pyre Debris: 2 mm—charcoal

Identifiable non-human bone: > 10 mm—cremated pig bone
Inventory of Finds Bags

> 10 mm: Cranial
  Unidentified human bones
  Unidentified human long bones
  Pig
  Axial: rib, vertebrae

10-5 mm: Unidentified human bone
  Soil
  Cranial
  Unidentified human long bone

2 mm: Unidentified human bone
  Charcoal
  Rock and soil

< 2 mm: Residue and traces of human bone
Trentholme Drive---1971.303 398c

*Melted iron/soil deposit
*Total weight: 65.27 g

Trentholme Drive---1971.303 398d

*Charcoal deposit
*Total weight: 134.11 g
Burial #: Trentholme Drive 1971.303 403
Date: 9/6/06
Observer: Carrie Sulosky

Estimated Sex: M?
Estimated Age: Adult
Estimated MNI: 1

Context: Urned cremation burial

Total weight of cremated materials: 811.32 g  Total weight of non-human bone: 0.21 g

Total weight of cremated human bone: 740.25 g  Dimensions of largest fragment: 101 x 29.3 mm

Weight fractions:  >10mm: 506.46 g  10-5mm: 162.42 g  5-2mm: 53.89 g  2-1mm: 17.48 g

Colour ranges: Mostly white the whole way through; cortical bone of tibia is white, black, and grey and trabecular bone is black; some long bones have white cortical bone and light grey trabecular bone; some long bones are light grey throughout

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull:  > 10 mm—31 cranial fragments
        10-5 mm—32 cranial fragments, 1 tooth root
Fell out of urn:  > 10 mm—11 cranial fragments
        10-5 mm—8 cranial fragments
**Axial Skeleton:**
- > 10 mm—1 rib fragment, 22 vertebrae fragments
- 10-5 mm—7 rib fragments, 6 vertebrae fragments

Fell out of urn:
- > 10 mm—1 vertebra fragment

**Upper Limb:**
- > 10 mm—1 humerus fragment

**Lower Limb:**
- > 10 mm—7 femur fragments, 5 tibia fragments, 1 calcaneus, 8 pelvis fragments

Fell out of urn:
- > 10 mm—2 pelvis fragments

**Duplicated elements:** None

**Age Indicators:** Femoral and humeral heads fused—adult

**Sex Indicators:** Well-developed linea aspera, suggests a possible male

**Pathological Data:**
- > 10 mm—slight lipping (horizontal osteophytes) on vertebral bodies
- 10-5 mm—periostitis on unidentified long bone

Fell out of urn:
- > 10 mm—periostitis on unidentified long bone

**Pyre goods:** None

**Grave Goods:** 10-5 mm—green glass

**Pyre Debris:** 2 mm—charcoal

**Identifiable non-human bone:**
- 10-5 mm—cremated galliform bone
- 2 mm—unburnt shrew long bone (intrusive)
## Inventory of Finds Bags

### > 10 mm:

- Cranial
- Unidentified human bones
- Unidentified human long bones
- Upper limb: humerus
- Lower limb: femur, calcaneus, tibia, pelvis

### 10-5 mm:

- Unidentified human bone
- Axial: rib, vertebrae
- Periostitis on unidentified long bone
- Green glass
- Galliform bone
- Cranial, tooth roots
- Unidentified human long bone

### 2 mm:

- Unidentified human bone
- Charcoal
- Rock and soil
- Unburnt shrew long bones

### < 2 mm:

- Residue and traces of human bone

<table>
<thead>
<tr>
<th>Fell out of urn:</th>
<th>&gt; 10 mm:</th>
<th>10-5 mm:</th>
<th>2 mm:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unidentified human long bone</td>
<td>Unidentified human bone</td>
<td>Rock and soil</td>
</tr>
<tr>
<td></td>
<td>Cranial</td>
<td>Periostitis on unidentified long bone</td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Axial: vertebrae</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower limb: pelvis</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unidentified human long bone</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cranial</td>
<td></td>
</tr>
</tbody>
</table>

| < 2 mm: | Residue and traces of human bone |
Burial #: Trentholme Drive
1971.303 432

Date: 12/6/06
Observer: Carrie Sulosky

Estimated Sex: ----
Estimated Age: Mid? Adult
Estimated MNI: 1

Context: Unknown

Total weight of cremated materials: 315.02 g
Total weight of non-human bone: 1.49 g

Total weight of cremated human bone: 282.45 g
Dimensions of largest fragment: 89.8 x 17.1 mm

Weight fractions: >10mm: 211.6 g
10-5mm: 52.23 g
5-2mm: 4.59 g
2-1mm: 14.03 g

Colour ranges: White cortical bone, trabecular bone tinged with grey; some patches of light grey cortical bone on one piece of unidentified human bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—8 cranial fragments
10-5 mm—12 cranial fragments

Axial Skeleton: > 10 mm—3 rib fragments, 5 vertebrae fragments
10-5 mm—6 rib fragments, 5 vertebrae fragments
**Upper Limb:**  > 10 mm—right scapula (glenoid fossa), 1 additional scapula fragment, right distal radius
  10-5 mm—1 scapula fragment

**Lower Limb:**  > 10 mm—left talus, right patella, 7 pelvis fragments, 1 left metatarsal 1 (1 shaft, 1 distal epiphysis), 2 fibula fragments

**Duplicated elements:** None

**Age Indicators:**  > 10 mm—distal radius fused—adult 20-23 years  (Schwartz, 1995)

**Sex Indicators:** None

**Pathological Data:**  > 10 mm—slight lipping (horizontal osteophytes) on vertebral bodies

**Pyre goods:** None

**Grave Goods:** None

**Pyre Debris:** None

**Identifiable non-human bone:**  10-5 mm—cremated bird bone, unburnt galliform coracoid
**Inventory of Finds Bags**

> 10 mm:  
  Cranial  
  Unidentified human bones  
  Unidentified human long bones  
  Lower limb: left MT 1, left talus, fibula, right patella, pelvis  
  Upper limb: humerus, right radius, scapula  
  Axial: rib, vertebrae

10-5 mm:  
  Unidentified human bone  
  Unburnt galliform coracoid  
  Cremated bird bone  
  Soil  
  Cranial  
  Upper limb: scapula  
  Axial: rib, vertebrae  
  Unidentified human long bone

2 mm:  
  Unidentified human bone  
  Rock and soil

< 2 mm:  
  Residue and traces of human bone
**Burial #:** Trenholme Drive 1971.303 475  
**Date:** 6/6/06  
**Observer:** Carrie Sulosky

<table>
<thead>
<tr>
<th>Estimated Sex: ----</th>
<th>Estimated Age: ----</th>
<th>Estimated MNI: 1</th>
</tr>
</thead>
</table>

**Context:** Unknown

**Total weight of cremated materials:** 35.4 g  
**Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 16.15 g  
**Dimensions of largest fragment:** 28.1 x 12.7 mm

**Weight fractions:**  
>10mm: 1.23 g  
10-5mm: 2.5 g  
5-2mm: 2.76 g  
2-1mm: 9.66 g

**Colour ranges:** White cortical bone with light grey trabecular bone

**Shrinkage:** No instances of abnormal shrinkage

**Fissuring:** No instances of abnormal fissuring

**Warping:** No visible warping

**Identifiable Fragments Present in Each Sieve Fraction:**

**Skull:** None

**Axial Skeleton:** None

**Upper Limb:** None
Lower Limb: None

Duplicated elements: None

Age Indicators: None

Sex Indicators: None

Pathological Data: None

Pyre goods: > 10 mm—burnt sea shell

Grave Goods: None

Pyre Debris: None

Identifiable non-human bone: None
Inventory of Finds Bags

> 10 mm: Burnt shell
       Unidentified human bones

10-5 mm: Unidentified human bone
       Soil

2 mm: Unidentified human bone
     Soil

< 2 mm: Residue and traces of human bone
Burial #: Trentholme Drive 1971.303 493
Date: 9/6/06
Observer: Carrie Sulosky

Estimated Sex: ----
Estimated Age: Adult
Estimated MNI: 1

Context: Unknown

Total weight of cremated materials: 290.74 g  
Total weight of non-human bone: 0 g

Total weight of cremated human bone: 279.65 g  
Dimensions of largest fragment: 65.8 x 19.3 mm

Weight fractions:  
>10mm: 244.1 g  
10-5mm: 26.62 g  
5-2mm: 3.37 g  
2-1mm: 5.56 g

Colour ranges: Most of the bone is white; skull has patches of dark grey cortical and trabecular bone, some vertebrae dark grey throughout; tibiae have white cortical bone and black/dark grey trabecular bone; humeri have light grey cortical bone; some bones have white cortical bone and dark grey trabecular bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on long bones

Identifiable Fragments Present in Each Sieve Fraction:

Skull:  
> 10 mm—19 cranial fragments  
10-5 mm—8 cranial fragments
Axial Skeleton:  
> 10 mm—3 rib fragments, 5 vertebrae fragments  
10-5 mm—2 rib fragments, 2 vertebrae fragments

Upper Limb:  
> 10 mm—4 humerus fragments

Lower Limb:  
> 10 mm—3 tibia fragments, 5 pelvis fragments, 5 femur fragments  
10-5 mm—1 pelvis fragment

Duplicated elements:  None

Age Indicators:  All vertebrae fused—adult 20+ years (Schwartz, 1995)

Sex Indicators:  None

Pathological Data:  > 10 mm—slight lipping (horizontal osteophytes) on vertebral bodies

Pyre goods:  None

Grave Goods:  None

Pyre Debris:  10-5 mm—slag

Identifiable non-human bone:  None
**Inventory of Finds Bags**

<table>
<thead>
<tr>
<th>Size Range</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 10 mm</td>
<td>Cranial</td>
</tr>
<tr>
<td></td>
<td>Unidentified human bones</td>
</tr>
<tr>
<td></td>
<td>Unidentified human long bones</td>
</tr>
<tr>
<td></td>
<td>Upper limb: humerus</td>
</tr>
<tr>
<td></td>
<td>Lower limb: tibia, femur, pelvis</td>
</tr>
<tr>
<td></td>
<td>Axial: rib, vertebrae</td>
</tr>
<tr>
<td>10-5 mm</td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
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<tr>
<td></td>
<td>Cranial</td>
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<tr>
<td></td>
<td>Slag</td>
</tr>
<tr>
<td></td>
<td>Lower limb: pelvis</td>
</tr>
<tr>
<td></td>
<td>Axial: rib, vertebrae</td>
</tr>
<tr>
<td></td>
<td>Unidentified human long bone</td>
</tr>
<tr>
<td>2 mm</td>
<td>Unidentified human bone</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
</tr>
<tr>
<td>&lt; 2 mm</td>
<td>Residue and traces of human bone</td>
</tr>
</tbody>
</table>
Burial #: Trentholme Drive
1971.303 523

Date: 5/6/06

Observer: Carrie Sulosky

Estimated Sex: ----

Estimated Age: -----

Estimated MNI: 1

Context: Unurned cremation burial

Total weight of cremated materials: 86.28 g
Total weight of non-human bone: 0 g

Total weight of cremated human bone: 84.22 g
Dimensions of largest fragment: 24.2 x 22.8 mm

Weight fractions: >10mm: 37.34 g 10-5mm: 32.84 g 5-2mm: 4.3 g 2-1mm: 9.74 g

Colour ranges: White cortical bone with patches of light grey; dark grey trabecular bone

Shrinkage: No instances of abnormal shrinkage

Fissuring: No instances of abnormal fissuring

Warping: Warping visible on skull

Identifiable Fragments Present in Each Sieve Fraction:

Skull: > 10 mm—3 cranial fragments
       10-5 mm—9 cranial fragments

Axial Skeleton: > 10 mm—4 rib fragments, 2 vertebrae fragments
               10-5 mm—12 rib fragments, 3 vertebrae fragments

Upper Limb: None
Lower Limb:  > 10 mm—5 pelvis fragments

Duplicated elements:  None

Age Indicators:  None

Sex Indicators:  None

Pathological Data:  None

Pyre goods:  None

Grave Goods:  None

Pyre Debris:  None

Identifiable non-human bone:  None
Inventory of Finds Bags

> 10 mm:  
Cranial
Unidentified human bones
Unidentified human long bones
Lower limb: pelvis
Axial: rib, vertebrae

10-5 mm:  
Unidentified human bone
Soil
Cranial
Axial: rib, vertebrae
Unidentified human long bone

2 mm:  
Unidentified human bone
Soil

< 2 mm:  
Residue and traces of human bone
**Burial #:** Trentholme Drive 1971.303 552  
**Date:** 7/6/06  
**Observer:** Carrie Sulosky

**Estimated Sex:** ----  
**Estimated Age:** Adult  
**Estimated MNI:** 1

**Context:** Unknown

**Total weight of cremated materials:** 463.18 g  
**Total weight of non-human bone:** 0 g

**Total weight of cremated human bone:** 441.35 g  
**Dimensions of largest fragment:** 72.9 x 44.7 mm

**Weight fractions:**  
$>10\text{mm}$: 280.34 g  
$10-5\text{mm}$: 70.93 g  
$5-2\text{mm}$: 18.57 g  
$2-1\text{mm}$: 71.51 g

**Colour ranges:** Most of the bone has white cortical bone and dark grey trabecular bone; some bone completely white throughout (skull, vertebrae, fibula, humerus, ulna); some patches of dark grey cortical bone (fibula, pelvis, femur, tibia)

**Shrinkage:** 1 part of the humerus not as shrunken as the rest—from the opposite arm?

**Fissuring:** No instances of abnormal fissuring

**Warping:** Warping visible on long bones and skull

**Identifiable Fragments Present in Each Sieve Fraction:**

*Skull:*  
$>10\text{mm}$—10 cranial fragments  
$10-5\text{mm}$—9 cranial fragments

*Axial Skeleton:*  
$>10\text{mm}$—2 rib fragments, 15 vertebrae fragments  
$10-5\text{mm}$—4 rib fragments, 1 vertebra fragment
Upper Limb: > 10 mm—6 humerus fragments, 1 ulna fragment

Lower Limb: > 10 mm—3 tibia fragments, 1 fibula fragment, 3 femur fragments, 4 pelvis fragments

Duplicated elements: None

Age Indicators: Fully fused vertebrae—adult 20+ years (Schwartz, 1995)

Sex Indicators: None

Pathological Data: None

Pyre goods: 10-5 mm—burnt/black mortar

Grave Goods: 10-5 mm—ceramic, black outside, red inside

Pyre Debris: None

Identifiable non-human bone: None
Inventory of Finds Bags

> 10 mm: Cranial
   Unidentified human bones
   Unidentified human long bones
   Soil
   Upper limb: humerus, ulna
   Lower limb: pelvis, tibia, femur, fibula
   Axial: rib, vertebrae

10-5 mm: Unidentified human bone
   Soil
   Ceramic
   Black/burnt mortar
   Cranial
   Axial: rib, vertebrae
   Unidentified human long bone

2 mm: Unidentified human bone
   Rock and soil

< 2 mm: Residue and traces of human bone
Bibliography


Morrison, A. Personal communication regarding origins of cremation burials in the care of Yorkshire Museum and Gardens—5/06.


