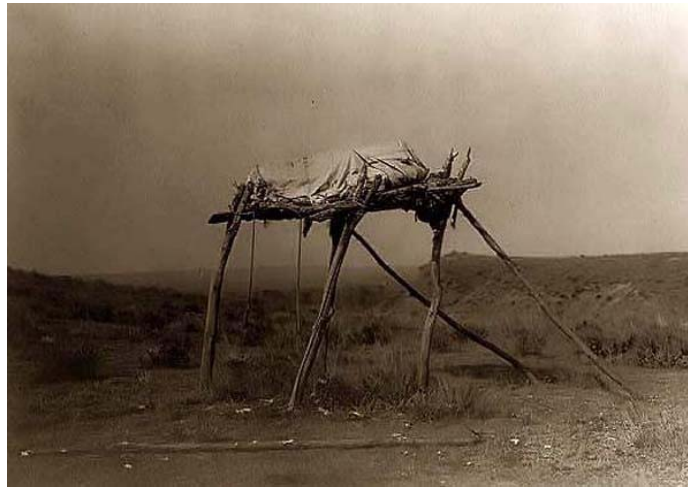


Burial and Cremation Considering the Options



The History of burials



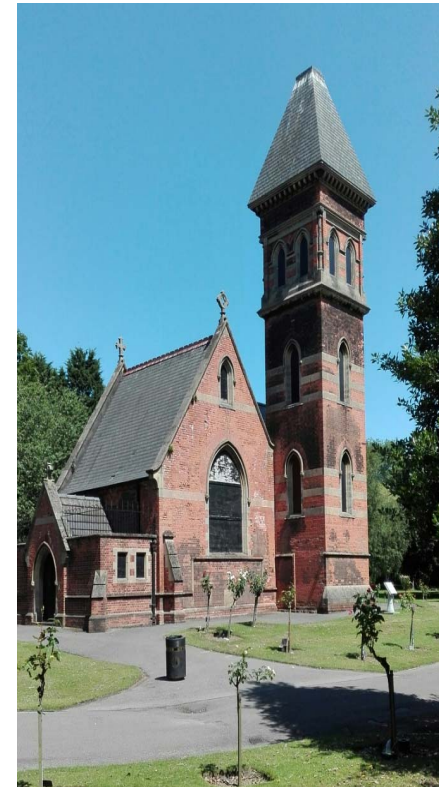
Cremation



Burials and cremations UK Origins



- Churchyards reaching capacity
- 1800's saw development of privately run cemeteries
- Developed in large urban areas with fast growing populations :London Manchester, Leeds
- catered for the wealthy.
- 1830's cholera epidemic saw thousands die and need for burial space became a problem.
- Growing public health concerns about overcrowded cemeteries led to 1852 Metropolitan Burial Act and eventual development of publically funded cemeteries across Britain.
- Responsibility passed for municipal cemeteries to local authorities in 1894 via The Local Government Act.
- 1874 Cremation Society of England founded – against much public opposition.
- First legal cremation 1885 Woking Crematorium (privately built in 1879)
- Cremation Act 1900/1902 formally allowed burial authorities to build and operate crematoriums
- 1963 Catholic church allows cremation for those who wish.
- 75% of UK funerals now use cremation



A time for alternatives?

- Need to consider a number of factors:
- Physical space – difficulties in identifying suitable burial space.
- Impact on environment – emissions, potential pollution of ground waters, energy demand etc.
- Green lifestyles – concerns about impact on environment, ‘cradle to grave’.
- New proposals being developed ranging from ‘ready to go ‘ to proof of concept development.
- Are they lawful?
- Most important - will the public accept them?



New technologies – how realistic are they?

- PROMESSION freezing and crystallising a body with removal of non-biodegradable elements.
- Powder is created as a result of high-intensity vibrating and is placed in bio-degradable casket and interred in top layer of soil where aerobic bacteria convert powder to humus over 6-12 months
- Been under development for over 10 years.
- Tested successfully on animal carcasses – ‘proof of concept’.
- Still receiving interest from scientists and public alike.
- NASA and Mars flights.

Cryomation

- Use of liquid nitrogen freeze drying and fragmentation with optional 'accelerated composting'.
- removal of non-biodegradable elements still posing problem.
- Church of England describe process as 'grotesque' and 'undignified'
- Still some technological issues re. making it a one process approach
- Process longer than traditional cremation but looking to develop a 24 hour operation.
- Currently being considered by UK local authority.

Alkaline Hydrolysis – Resomation (water cremation)

WHAT IS INVOLVED?

- Same ceremony for families as with flame
- Woollen coffin
- Simple unattended operation
- Use of water (5% Alkaline) at temperature (no boiling) to reduce body to bones/ash
- 3 – 4 hours cycle time
- Bones cremulated as with flame
- All emissions from process are sterile, inert with no DNA trace

Alkaline Hydrolysis – Resomation (water cremation) cont'd

- No CO₂ or mercury emissions
- Use of water as opposed to flame seen as gentler
- Up to a third more pure white ash compared to that produced by flame cremation is returned to the family.
- No need to remove implants
- Reduced operating costs
- Reduced maintenance costs



Is Resomation a realistic option?

- Sandwell Council - Rowley Regis Crematorium
- Why?

‘Better for the environment than flame cremation or burial.

Natural process using water to reduce the body to its basic element of bone/ash.

Choice of an alternative cleaner and greener end of life option for bereaved families.

Gentler alternative to flame.

Simply another initiative that will reduce the nations carbon footprint.

Futureproof our service’

Water Cremation at Sandwell

Planning consent at Rowley Regis Crematorium received in March 2017.

Resomator ready to be installed.

Local funeral director support.

Elected members support.

Numerous requests from bereaved families asking for water cremation.

Long awaited decision from water company -

Severn Trent Water refused trade effluent permit – ‘not convinced about the process’ and ‘serious concerns about the public acceptability’



Is it Lawful?

- Water Cremation is NOT illegal in UK.
- Law Commission announced in December a commitment to establish “A Modern Framework for Disposing of the Dead”
- Provision through legislation for regulation in Scotland established by new Burial and Cremation (Scotland) Act 2016. provides a clear platform for the introduction of the technology
- For administrative purposes until regulated, Sandwell will adopt current cremation regulations and guidance to deliver Water Cremation.
- Water Cremation will be offered in Sandwell.

Its only a matter of time!



Is it acceptable?

- In 2008, the [Cremation Society of Great Britain](#) amended its Memorandum and Articles of Association to allow it to promote other methods of dealing with dead bodies, “in particular [Resomation](#) which the Society regards as a viable adjunct to cremation due to its number of environmental advantages”.
- Up to 1925, cremation was used for less than 0.50% of deaths in the UK, and it was 1968 before the number of cremations exceeded that of burials, assisted in part by the end of the Roman Catholic ban.

Plant- Based disposal

INFINITY BURIAL SUIT

- Biodegradable fabric embroidered with a thread based on mushroom mycelium which can digest dead tissue.
- Burial in suit without casket, suit disintegrates and mycelium grows nourished by body,
- Mycelium emit enzymes which neutralise bodily toxins and transfers nutrients to plants.



URBAN DEATH PROJECT – ‘RECOMPOSITION’.

- Shroud wrapped bodies placed at top of ‘core’ in wood chips.
- Over several weeks aerobic decomposition and microbial activity occurs.
- Body moves further down core and breaks down into an earthy soil.
- Continuous process.
- Based on livestock mortality composting.
- Safe and sustainable.
- ‘Neither energy or matter can be created or destroyed’
- Decomposition breaks down molecules which create new molecules.
- Bodies effectively transformed into new substances



Conclusions

- Clear that there are several serious options beyond the 'proof of concept' stage
- A number of local authorities are actively pursuing options.
- Public opinion rather than technological innovation may be the blockage
- Need to consider and compare economic and environmental benefits as compared to current options – may be very different when full-scale operation underway.
- Not replacements but complimentary.
- Still need further refinements before all risks removed and financial benefits fully understood.