

Expert Team: Options for Tuam Site

Option / Description	Estimated timeline and costs (costs relate to site and technical works only)	Exhumation	Forensic analysis of human remains	Attempt to individualise (separate out) co-mingled remains	Further excavation of other areas of potential interest	Excavate total available area	Comment / Other issues
<p>1. Memorialisation <i>No further investigative work. Return the site to being managed as a memorial. Make site safe for public access</i></p>	<ul style="list-style-type: none"> • 6 months – 1 year <p>Cost: €100k - €500k</p>	No	No	No	No	No	Could also be combined with any of the other options below
<p>2. Exhume known human remains <i>Recover human remains interred in the chambered structure identified to date and reinter elsewhere. No further forensic analysis of remains.</i></p>	<ul style="list-style-type: none"> • 3 months for engineering works / ground preparation. • 8 weeks for on-site excavation <p>Cost: €300k - €800k</p>	Yes	No	No	No	No	Requires engineering work and health and safety. Also needs engagement with stakeholders and clear communications
<p>3. Forensic excavation and recovery of known human remains <i>Complete forensic archaeological excavation, recovery and analysis of human remains from the chambers identified to date</i></p>	<ul style="list-style-type: none"> • 3 month lead-in • 10 week excavation • 10 weeks lab processing (some concurrently) • 6-8 months overall <p>Cost: €500k - €1.2m</p>	Yes	Yes	Yes	No	No	Utilises approach of <i>Humanitarian Forensic Action</i> with forensic controls to preserve and record evidence meticulously

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<p>4. Forensic excavation and recovery, and further evaluation/ excavation of other areas of potential burial/ interest</p> <p><i>Complete forensic excavation and recovery of all human remains in memorial garden and any other targeted area, following geophysical survey, assessment of witness statements, historical records etc.</i></p>	<ul style="list-style-type: none"> 6-12 months <p>Cost: €2m - €2.5m</p> <p>Note: Costs variable depending on the results of work as it proceeds, including 'ground truthing' of existing geophysical surveys and test excavations as required</p>	Yes	Yes	Yes	Yes	No	Includes an extensive programme of non-intrusive investigative work, and decisions as to what further areas are of potential further interest. Needs to address any possible duplication of efforts with the Commission's own investigations
<p>5. Forensic excavation of total available area</p> <p><i>Full forensic and archaeological excavation of all available ground formerly occupied by the M&B Home. A total of 0.4 hectares, comprising memorial garden, playground, car park etc. Excludes private built areas (houses and gardens etc subsequently built on the former site)</i></p>	<ul style="list-style-type: none"> 12-24 Months <p>Cost: €3m - €5m</p> <p>Depending on findings as work proceeds</p>	Yes	Yes	Yes	Yes	Yes	The most intrusive, disruptive option aimed at exhausting all potential for further relevant and preserved human remains

The report also makes the following key points in relation to the potential use of DNA testing in Tuam:

1. The need to communicate realistic expectations as to what DNA testing may be able to produce in a complex site such as Tuam.
2. The impossibility of achieving positive DNA identification of infants and young juveniles without samples from living relatives. Even then, identification will be extremely difficult, and will depend on the quality of the remains recovered.
3. The quality of samples are less likely to be usable for DNA identification in the case of infants because the best source of DNA can be teeth, including the root, which are not sufficiently formed in humans until the age of 2 years.
4. The fact that the process of DNA testing can itself destroy the samples, leaving little left to re-inter after the process. While this may be acceptable when dealing with e.g. whole skeletons or significant intact portions, it is far less satisfactory when being used to identify individual fragments of commingled remains which are effectively destroyed as they are 'individualised'.
5. The need for a pilot/feasibility study before any decision is taken to move to a larger programme of DNA testing. Even then, the pilot/samples would give an indication of results only for the selected sample, rather than for the wider site.
6. None of the options as presented above include DNA technologies as this is currently an unquantifiable and unknown factor.
7. It is essential to note that costs listed here are indicative of technical or site work only.