

“We operate as a **social business** that exclusively focuses on covering **delivery costs.**”



By utilizing recycled plastic, which requires five times less energy to produce and is not incinerated through waste-to-energy (WTE) methods, we effectively reduce associated emissions by 30%.

ECO BURIAL CHAMBERS

WWW.ECOBURIALCHAMBERS.CO.UK

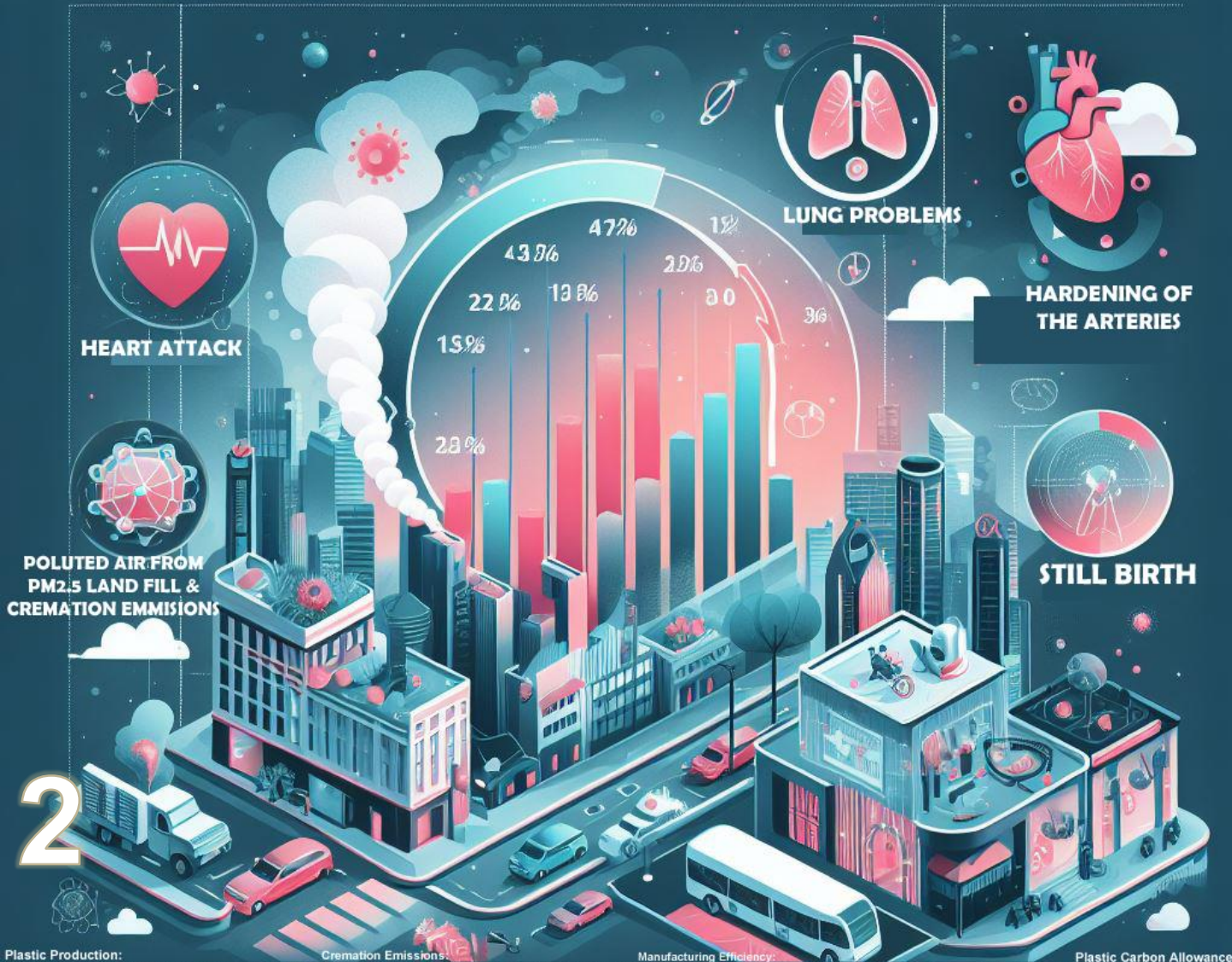


Space saving, environmentally friendly burials
Partner with local authorities and ready to develop & scale with your help

Presentation by ALEX MORGAN



IMPACTS OF TOXIC EMISSIONS & PM2.5



Plastic Production: 1 ounce of polyethylene (PET) produced emits approximately 1 ounce of carbon dioxide (CO2) (EPA). Other sources suggest a production ratio of carbon emissions to plastic production closer to 5:1.

Recycling Impact: Recycling all plastic waste would reduce CO2 equivalent emissions to 4.9 gigatons in 2050, a 25% reduction from business-as-usual emissions. Recycling and remanufacturing plastic saves at least 30% of the carbon emissions compared to original processing and manufacturing.

Crementation Emissions: Globally, approximately 32.7 billion metric tons of CO2 were emitted from cremation in 2022. Projections indicate that the rate of cremations will reach almost 80% by 2040.

Air Pollution and Health: Air pollution increases the risk of lung cancer, cardiovascular disease, cognitive decline, and dementia. Fine particulate matter (PM2.5) air pollution, particularly in the UK, contributes to global morbidity and mortality, especially cardiovascular disorders. In the UK, 36 local authorities have care homes located in areas with PM2.5 levels above WHO-recommended limits.

Manufacturing Efficiency: The Climate Change Committee estimates that resource and energy efficiency in manufacturing can abate up to 314 million metric tons of CO2 by 2050. Circular supply chain efficiencies can contribute to 12 million metric tons of CO2 abatement.

Eco Concrete: Eco concrete made with 30% Biffa Certified Locally Recycled Polypropylene Aggregate significantly reduces CO2 emissions. Traditional concrete emits 3,907.75 kg of CO2, while eco concrete emits 167.475 kg of CO2 per 5.5 m3. The use of recycled ISO certified polypropylene further reduces emissions.

Plastic Carbon Allowance: The carbon emission abatement from circular recycled plastic as aggregate in concrete production. 290 kg/m3 with Recycled Polypropylene Aggregate <-600g per m3 In Cement 600x5.5 = 3.33 EBC Plastic Carbon Allowance carbon emissions in plastic production closer to 5:1 (3.3x5) = 16 EBC Plastic Carbon Allowance 1 Unit / 84 Niche Eco Burial Chambers 16 EBC Plastic Carbon Allowance @ £95 per EBCPCA = £ LA Offset

PROBLEM

A) THERE IS NO MORE ROOM FOR BURIALS

B) POLLUTION TO UNACCEPTABLE LEVELS

ECO BURIAL CHAMBERS

A

LACK OF BURIAL SPACE



ECO BURIAL CHAMBERS

Forecast:

In UK 36 local authorities, every single care home is located in areas with PM2.5 levels above the limits recommended by the WHO.

A quarter of 358 local authorities responding to the BBC said they would have no more room for burials by 2030.

[Alex Morgan](#)
CEO founder,
[Clean-wave.org](#)



BBC Sign in

NEWS

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Tottenham Park Cemetery threatened with closure

© 11 January



Visitors would still be allowed access to the graves

The government has applied to close Tottenham Park Cemetery after it said the owners "repeatedly failed to ensure the safety of burials".



SHAWN MILLER

The vast majority of the items the researchers saw the hermit crabs using in the photographs were made of plastic



Table 2.1: Projected total burials and required burial space for inner London boroughs for the period 2010/1-2030/1

Borough	Total estimated deaths	Estimated cremations	Total estimated burials	Estimated re-opens	New burial spaces required
Camden	24,139	12,634	11,505	2,261	9,244
City of London	970	566	404	95	309
Hackney	24,057	12,065	11,992	2,203	9,789
Hammersmith and Fulham	17,737	10,588	7,149	1,656	5,493
Haringey	24,011	12,773	11,238	2,277	8,961
Islington	23,257	13,193	10,064	2,308	7,756
Kensington and Chelsea	16,363	9,583	6,780	1,509	5,271
Lambeth	33,971	20,059	13,912	3,409	10,503
Lewisham	30,704	18,553	12,151	3,035	9,116
Newham	29,621	15,472	14,149	2,176	11,973
Southwark	29,300	17,358	11,942	2,864	9,078
Tower Hamlets	27,367	12,193	15,174	2,074	13,100
Wandsworth	27,669	16,814	10,855	2,630	8,225
Westminster	21,781	12,052	9,729	1,934	7,795
Inner London	330,948	183,904	147,044	30,430	116,614
Barnet	43,261	22,250	21,011	3,458	17,553
Bexley	35,167	22,961	12,206	3,293	8,913
Brent	36,591	22,268	14,323	2,785	11,538
Bromley	48,247	31,260	16,987	4,564	12,441
Croydon	50,498	31,801	18,697	4,525	14,172
Ealing	42,474	26,043	16,431	3,488	12,943
Enfield	41,856	24,759	17,097	3,557	13,540
Greenwich	38,927	23,994	14,933	3,771	11,162
Harrow	29,002	17,797	11,205	2,182	9,023
Havering	39,958	26,328	13,630	3,696	9,934
Hillingdon	35,629	22,972	12,657	3,116	9,541
Hounslow	29,340	18,342	10,997	2,410	8,587
Kingston upon Thames	20,833	13,075	7,758	1,942	5,816
Merton	25,203	15,655	9,548	2,288	7,260
Redbridge	36,815	21,251	15,564	2,759	12,805
Richmond upon Thames	22,274	14,005	8,269	2,153	6,116
Sutton	29,372	18,915	10,458	2,737	7,721
Waltham Forest	31,469	17,631	13,838	2,745	11,093
Outer London	664,874	408,852	256,022	58,016	198,006

LUNG PROBLEMS

Plastic Land fill

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1 Unit / 84 Niche Eco Burial Chambers 16 EBC Plastic Carbon Allowance @ £35 per EBCPCA = £ LA Offset

HEART ATTACK

Micro Plastics

Manufacturing Efficiency:
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Circular supply chain efficiencies can contribute to 12 million metric tons of CO2 abatement.

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Eco concrete made with 30% Biffa Certified Locally Recycled Polypropylene Aggregate significantly reduces CO2 emissions. Traditional concrete emits 3,907.75 kg of CO2, while eco concrete emits 167.475 kg of CO2 per 5.5 m³.
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Cremation Emissions:
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Projections indicate that the rate of cremations will reach almost 80% by 2040.

Air Pollution and Health:
Air pollution increases the risk of lung cancer, cardiovascular disease, cognitive decline, and dementia.
Fine particulate matter (PM2.5) air pollution, particularly in the UK, contributes to global morbidity and mortality, especially cardiovascular disorders.
In the UK, 38 local authorities have care homes located in areas with PM2.5 levels above WHO recommended limits.

PMI 25

POLUTED AIR FROM PM2.5 LAND FILL & CREMATION EMISSIONS

4

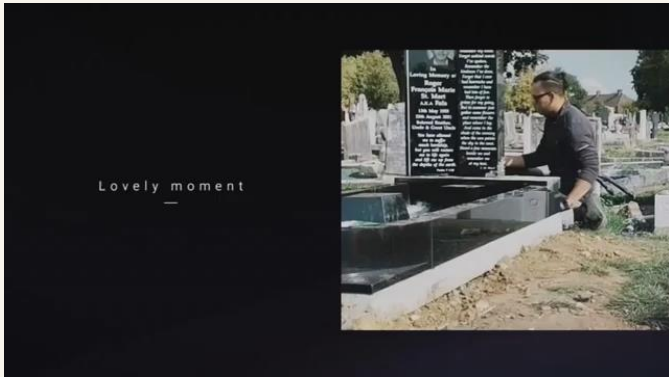
ECO BURIAL CHAMBERS

B POLLUTION CAUSED BY BURIALS

1. **Circular Supply Chains** - emissions in plastic production closer to 5:1
recycling plastic saves 30% carbon emissions
2. **Virgin Burial Space** – 84 Niche at £1000/20yr =
Deferred revenue £84,000.00
1 sold per month = 8yrs
3. **Air-** Fine dust: PM10 / PM2.5; risk of stillbirth,
Heart attack, Lung problems & dementia
4. **Soil-** Formaldehyde disappeared in 10 years;
embalmed body contains 180g, nine litres of embalming fluid.
5. **Water - leached chemicals**, ammonia,
formaldehyde, chloride and metals
6. **Chemicals** – Reducing chemicals to ensure
carcinogenic formaldehyde doesn't get into the water.

Reduce Pollution

RECAP - WHAT I DO ?



UK Deaths 2020-2023 = 2,174,730
x10% 217,473

TARGET

[50% 1000 =5%] / [50% 12,000 =5%] Potential Customers x Average Market Price = [Segment]
Cremation [5%] Burial 108,736 x £1000 = £108,736,000.00

Good afternoon Mr Morgan, 11/01/2024
Thank you for contacting Hounslow Cemeteries and I apologies for the delay in response.

We are currently looking into providing an option for cremated remains, and in doing so we have visited neighboring cemeteries and crematoria. Our research has demonstrated that many options for cremated remains are already provided by local crematoria, with the exception of cremated remains graves. As a burial authority, we do receive enquiries about these graves, therefore our primary objective regarding cremated remains is developing a cremated remains grave section.

Yours sincerely
Clare Ward | Senior Citizenship and Cemeteries Coordinator, Deputy Superintendent Registrar Environment, Culture and Customer Relations | Hounslow District Register Office, Feltham Lodge, 38-40 Harlington Road West, Feltham, TW14 0JJ



To be read and signed by the Memorial Mason carrying out the work: I have read and understood and agree to abide by the current regulations in respect of memorials and fittings. I will not install the memorial until I have received the approved memorial permit. I will include with this application a full description, including materials, dimensions, and fixing methods. All the work I complete will be in accordance with the current N.A.M.M.'s or B.R.A.M.M.'s Code of Working Practice, and each memorial will be made, assembled, and fixed in accordance with BS6415. I am liable to any further works that may be required in respect of adjustment to its position, removal of inscribed lettering not included in this application or the addition of the grave number if omitted. I will not work while a funeral is taking place, and I will leave the cemetery tidy. I will not include trade telephone numbers, website address or email address on any part of the memorial. Stone Masons trade name only may appear discreetly on memorial with grave owner's consent. In letters no bigger than 1 inch in height.

Company name: THE LOVING MEMORY GAVESTONE CO
Address: 12 STAG LANE BUCKHURST HILL ESSEX IG9 5TD UK
Email: lovingmemoryco@gmail.com
Tel: 07308139770 N.A.M.M./B.R.A.M.M registration number:
Signature: A.Morgan Print name: A.Morgan

The materials of which monuments are made must receive the approval of the Borough council. Bath Stone, Caen Stone and other soft stone will not be approved. IMPORTANT: Please refer to our website for full terms and conditions and current fees. Attachments of sketches or CAD drawings accepted.

Please include the intended inscription here, including where on the memorial it will appear:

Row	Design	Material	Size (inch)	Qty
1		Grey G64	74 17.5 5 2	
2		Grey G64	75 25.5 4 2	
3		Grey G64	155 4 79.5 4	
4		Grey G64	66 2 28.75 4	
5		Grey G64	66 13.5 1.5 10	
6		Grey G64	12 15 32 72	
7		Grey G64	93 12 87.5 60	
8		Grey G64	9 12 87.5 38	

Please include a sketch of the memorial design here:

Flating details:
Type of dowel: stainless steel, grade 304 Yes Length of dowel: 381 mm
Type of adhesive: SikaH Hybrid Adhesive Sealant Thickness of dowel: 26 mm

OTHER USE ONLY
Approved by: Permit issued: Fee: Date:

Please send all correspondence to the Cemeteries Office, Feltham Lodge, 38-40 Harlington Road West, TW14 0JJ Tel: 020 8583 2000. Email: cemeteries@hounslow.gov.uk. Cheques are payable to London Borough of Hounslow.

BUSINESS MODEL



RESEARCH

We based our research on market trends and commercial sales

Demand for Cremations



DESIGN

We believe people need sustainable and space efficient buildings

Lack Of Funeral Space To Intern Remains



ABSTRACT

Minimalist design and easy to build

Equal to 430 Trees CO2 Abatement in 1 Year



Work index was calculated from the grind ability by the empirical equation:

$$W_i = \frac{36 \sqrt{\gamma}}{G + 82} \sqrt{100 \gamma}$$

Where
W_i = The work index
G = Ball mill grind-ability
γ = Micron size of the mesh of grind.

The work index is defined as the kWh required to grind one tonne of material to 80 per cent passing 100 μ.

Approximate power required to grind the material to fineness of 400 m²/kg (Blaine's) was calculated from the equation:

$$W = \frac{10 W_i}{\sqrt{F}} - \frac{10 W_i}{F}$$

Where
W = The work in kWh/tonne.
W_i = The work index.

8 Month's Feed Back



ECO BURIAL CHAMBERS



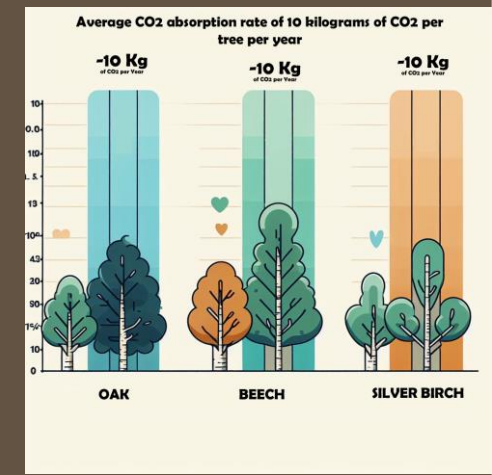
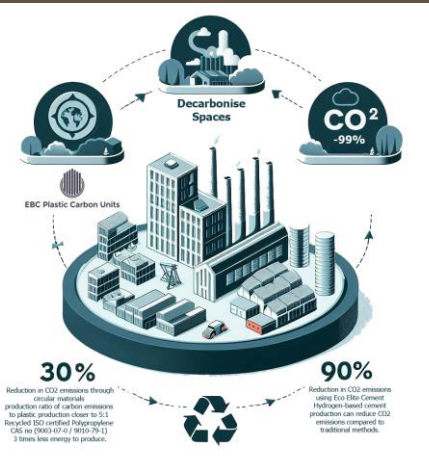


SOLUTION

Supply and Fit Eco Elite Concrete Foundations with 84 Grey Granite Niche Columbarium, a structure for the reverential storage of funerary urns holding cremated remains of the deceased.

150 `` x 40 `` [Saves 42 Spaces over 1 burial]

5 Meters squared Eco Elite Foundations are equal to 430 trees worth of CO2 abatement in 1 Year



Dear Alex, 10/01/2024
 My name is Rebekah and I am the Cemetery Manager working for Idverde managing the cemeteries on behalf of London Borough of Hammersmith & Fulham. I would like to **thank you** for sharing your detailed proposal to install columbarium's within our borough cemeteries.

I have begun initial discussions with the council regarding your proposal and feel that **this could certainly be a project that the council may want to consider** as it gives our clients an additional option for the resting place of cremated remains.

I look forward to hearing from you.

Kind regards

Rebekah Parrott

Cemeteries Manager

Environment Department

Hammersmith and Fulham Council

020 88781934

Rebekah.parrott@lbhf.gov.uk

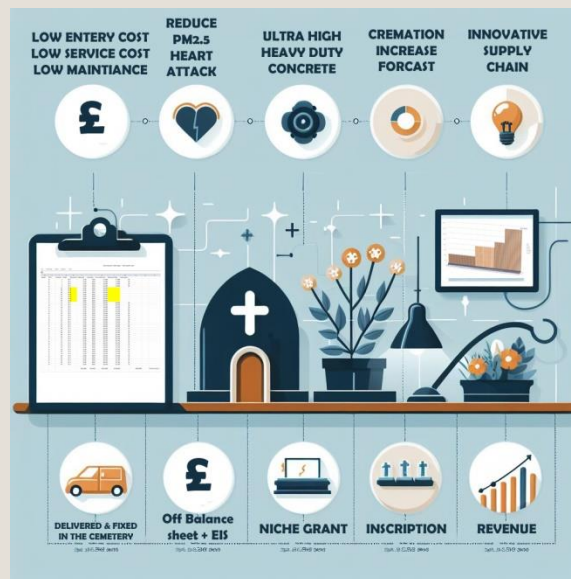
www.lbhf.gov.uk/cemeteries



Innovate UK



The legal duty imposed on local authorities in England and Wales is contained in **The Public Health (Control of Disease) Act 1984** [92x] Public health funerals at Hammersmith and Fulham Council 2019-22 = **Cost £154,475.00**



MEET THE PROSPECTS



Application for permission to erect a memorial

Section _____ Plot _____ No _____ at North Sheen, Mortlake, Fulham Palace Road, Margravine Cemetery subject to the council's rules and regulations and in accordance with the particulars stated below. (If application is in respect of additional work to an existing memorial, this should be stated on the form.)

Proposed inscription (if in respect of a burial in another grave should be indicated in the inscription)

Name of Mason: A MORGAN, THE LOVING MEMORY GAVESTONE CO

Signature: [Signature]

Address: 12 STAG LANE BUCKHURST HILL ESSEX IG9 5TD UK

Item	Design	Material	Size (width)	Qty		
1		Grey GB14	14	17.5	5	3
2		Grey GB14	70	10.5	4	2
3		Grey GB14	10.5	4	70.0	4
4		Grey GB14	66	2	10.75	4
5		Grey GB14	66	13.5	1.5	10
6		Grey GB14	12	1.5	12	72
7		Grey GB14	9.5	12	0.75	80
8		Grey GB14	9	12	0.75	24

Natural stone memorials only may be erected. Kerbs and landings will not be permitted unless they conform to the size of the grave space. All memorials must have the number of the grave cut thereon in 25 mm letters.

NR: It is recommended that memorial insurance is take out on all memorials. Contact your stonemason for details.

This application when completed must be sent to the Stonemason, who will forward it to:

Cemeteries Office
 North Sheen Cemetery
 Lower Richmond Road
 Richmond, Surrey TW9 4LL
 Tel: 020 8878 1934

FOR OFFICE USE ONLY

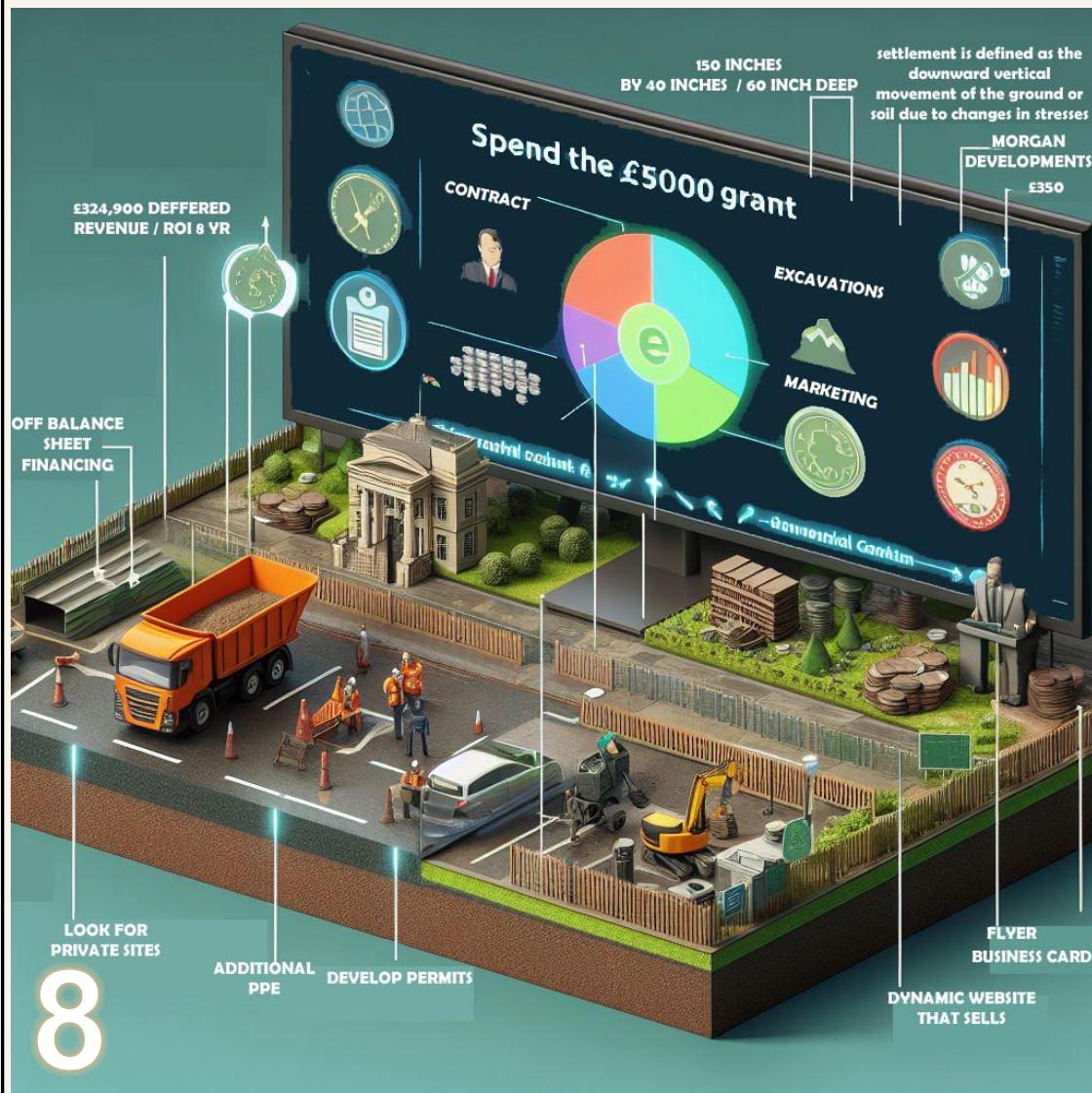
Purchase Reg No: _____
 Fee: £ _____
 Receipt No: _____
 Permit No: _____

8
 Month's
 Feed
 Back

8 years of space 1Niche sold per month / 8Yrs realising approx £324.000 deferred revenue
 20y-£1000 / 40y-£2000 / 50y-£2500 / 75y-£3750

The on-site inscriptions would be priced at £5 per letter, and if the granite plaque needs to be removed for inscriptions, it would be £3 per letter.

PLANS FOR PRODUCT LAUNCH



SPEND £1.2m

Supply and Fix 24 x 84 Niche On Eco Foundations **2,016 spaces** – RoI **£15M**

Excavations for Foundations & settlement study [*Eco Mortar for 3D Concrete Printer R&D*]

The most comprehensive water test, analysing a Cemetery water sample for the widest-possible list of chemicals and microbes <https://mytapscore.com/products/extended-plus-water-test>



THANK YOU