HIGHGATE CEMETERY

INSPECTION AND REPORT ON THE CONDITION OF BUILDINGS AND STRUCTURES

VOLUME 2
PARTS 5 to 12: THE FUNERARY BUILDINGS

JANUARY- MARCH 2022
REVISION A: DECEMBER 2022

WEST SCOTT ARCHITECTS
The Studio 3A Bath Road Bedford Park London W4 1LL

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CONTENTS OF REPORT

REVISIONS

Revision A, December 2022: Additional material to Section 11: Morgan Mausoleum

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PART A - PARTICULARS OF SITE AND INSPECTION

BUILDING	Highgate Cemetery
LOCATION	Swains Lane, Highgate, London
INSPECTING ARCHITECT	John Scott RIBA AABC, West Scott Architects The Studio, 3A Bath Road, Bedford Park, London W4 1LL Tel. 0208 995 4275, email: studio@westscottarchitects.co.uk
DATE OF INSPECTIONS	January, February, March 2022
WEATHER CONDITIONS	Generally wintry, periodically wet and fairly cold
PREVIOUS INSPECTION	No reports available
LOCAL AUTHORITY	Borough of Camden
CONSERVATION AREA	The cemetery is in Highgate Village conservation area
LISTED	Various. See CMP etc and section headings below

A2: GENERAL NOTES

A2.1 This report is based on findings of an inspection made from the ground and readily accessible parts of roofs and parapets. It is emphasised that the inspection has been purely visual and that no enclosed spaces or inaccessible parts such as boarded floors, roof spaces or hidden timbers have been opened up for inspection. We are therefore unable to report that any such part is free from defect.

A2.2 This report is NOT a specification for the execution of the works and may not be used as such. When ready to proceed with any part of the recommended repairs, the Trustees should obtain appropriate specification and other documents as necessary and arrange for the work to be carried out by a suitable contractor. It should be noted that all repairs and alterations to the buildings are subject to listed building consent and will require the appropriate approvals. As listed buildings this may involve consultations with Local Authority, English Heritage, The Victorian Society, and others for any works affecting the character of the building.

A2.3 No inspection for or of asbestos has been carried out for this report, and nothing concerning the condition or presence of asbestos or other hazardous materials should be inferred from any references in it. The reader should refer to the site Asbestos Survey Report.

A3: NOTES FROM INSPECTION BRIEFING:

A3.1 Asbestos: The whole site was surveyed in 2014 and a register is in place. No asbestos has been identified in the structures concerned.

A3.2 Previous report: Any previous report is not available.

A3.3 Recent works: None since major conservation 1990-2000

A3.4 Scope of inspection: Detailed survey of exterior and accessible parts of interior to identify any defects requiring repair.

A3.5 Ecology: A full ecological survey will be essential to define the constraints on any construction work. Bats and rare spiders are known to use the various structures on the site.

PART B: GENERAL DESCRIPTION OF THE BUILDINGS

Highgate Cemetery was developed from 1837 by the London Cemetery Company, and the early development of the site was overseen sequentially by architects Stephen Geary and James Bunning.
The site of what is now the West Cemetery was extended by the opening of the East Cemetery in 1856.

In the mid 20th Century Highgate Cemetery entered a long period of decline, which by the 1960's saw it all but derelict. The cemetery closed in 1975, and was rescued by the establishment of the Friends of Highgate Cemetery who have managed the conservation and operation of the cemetery since then.

For a full description of the site and buildings please refer to the Conservation management Plan, the Statements of Significance and HCT publications by others.

A major programme of repairs, supported by grant funding from English Heritage and others, took place between 1986 and 2000. From 1990 this programme adopted a policy of conserving the funerary buildings and structures in a stabilised version of their semi-ruined state, and the conservation of the landscape has followed a similar policy balancing the spirit of place with the survival of important monuments and structures.

This report has been informed by information provided by Ian Dungavell of Highgate Cemetery Trust regarding current historical information, and has drawn on anecdotal accounts of the conservation works from 1990 to 2000 by the then architect for the site Robert George, operating successively as an employee of Caroe and Partners, then Clague Architects and finally independently as Robert George Architect. The assistance of both is gratefully acknowledged.

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PART C: SCOPE AND LIMITATIONS OF THE REPORT

C1: BRIEF
The brief for this survey and report is limited to the major buildings on the site, defined as
See volume 1:
D1: Chapel building, the reinstatement of pinnacles and cupola
D2: Chapel building
D3: North and South Lodges
D4: Colonnade

D5: Cuttings Catacombs
D6: Egyptian Avenue
D7: Circle of Lebanon
D8: Terrace Catacombs
D9: Mausolea; a) Cory-Wright, b) Beer and c) Cheylesmore
D10: Hartley mausoleum
D11: Morgan mausoleum
D12: Jankovic mausoleum

See volume 3:
D13: Guerrier mausoleum
D14: Kelman mausoleum
D15: Rosa mausoleum
D16: Otway mausoleum
D17: Da Silva mausoleum
D18: Dalziel mausoleum
D19: Strathcona mausoleum
D20: Pocklington mausoleum

C2: USE OF THE REPORT:
The report is intended for and directed to use to inform the scope and content of a major programme of repairs and capital works to be completed in 2025 or 2026. The narrative of the report is therefore concentrated on substantial conservation or long-cycle repairs, rather than the day to day management of building maintenance. In the case of the Chapel buildings, where the latter will have a substantial impact on the former a separate version of the report directed to short terms and routine maintenance is being prepared for issue to Highgate Cemetery Trust only.

C3: ACCESS LIMITATIONS:
It has not been possible to inspect the interior of all of the buildings covered in this report. Some are sealed permanently shut, and some are inaccessible due to door or other defects. Only one of the 13 Cuttings Catacombs was entered, although several others (identified in the text) could be partially viewed through gates. Access was possible only to 17 out of 55 vaults in Egyptian Avenue and Circle of Lebanon. In other cases either locks are inoperable or doors are seized shut through disuse. A programme of immediate opening up works is strongly recommended, and a supplementary survey of the further spaces in due course.

Briefing on H&S for the survey from HCT was clear in that safe access was possible to the various vault and catacombs spaces, but that none of the coffins, coffin debris or contents should be touched. In practical terms this has meant that each vault space where access has been possible has been opened, and the interior viewed

from the doorway or immediately inside. Where a full view of wall or floor surfaces, or an assessment of the structure of shelves supporting coffins, would rely on a more intimate or tactile survey, or on moving coffins for a better view this has not been done. In some cases this has unavoidably limited the survey.

C4: EXCLUSIONS
Excluded areas not accessible for inspection are shown on the annotated drawings.

Cuttings Catacombs: Interiors unless otherwise noted
Egyptian Avenue: 8/16 vaults as noted
Inner Circle: 19/20 vaults as noted
Outer Circle: 10/16 vaults as noted
Terrace Catacombs: 5/8 vaults as noted
Hartley Mausoleum: Interior
Morgan Mausoleum: Interior

C5: DRAWINGS
The survey drawings produced by Digital Inc in March 2022 should be referred to for orientation, referencing and vault numbering, and the general navigation of the report, but the report has been written to be clear and comprehensible without reference to drawings for the identification of defects.

Notwithstanding, we are issuing with the report a number of the survey drawings marked up to aid the location and understanding of defects in some areas:
Terrace Catacombs
Cuttings Catacombs
Colonnade
Chapel
Cory Wright Mausoleum
Beer Mausoleum
Egyptian Avenue
Circle of Lebanon

Further illustrative drawings can be added on request.

PART D: REPORT ON THE CONDITION OF THE FABRIC

D5	**CUTTING CATACOMBS**	
5.1	GENERAL	
	A terrace of simple vault structures built c1840-42 against a retaining wall with a high bank above it, stepping down the hill from left to right. For reference they are numbered from the left hand (uphill end) 1-15 with gaps at 8 and 10. They were originally designed as alternating structures with pitched roofs and infills between with flat roofs. This survives at the lower end, Nos. 11-15, but at the upper end Nos 2, 4 & 6 have been replaced with newer pedimented facades replacing the flat roofed vaults. The vault structures back onto a brick retaining wall approx. 2.5m high which is cambered inwards at each bay. This is understood to be a structure integral with the cross-walls. The Cutting Catacombs were fully refurbished in 2010 including the addition of galvanised steel supports to the pitched roofs, and the introduction of a land drain behind the top of the retaining wall after adding ground anchor support to the bank above. The Cuttings Catacombs are listed Grade II.	
	 	
5.2	**EXTERIORS**	
5.2.1	ROOFS	
	Vegetation from the bank behind, with probably 12 years unimpeded build-up of leaf mould, has completely choked any drainage from the roofs to the land drainage behind, which leaves little opportunity for inspection. This needs to be cleared, and the drainage (a French drain) reviewed. All of the roofs need to be cleaned off more regularly in order that the drainage that is there has a chance of working. When clear of plants and debris, the roofs can be reinspected and repairs scheduled. Major defects are not anticipated.	

	Small brick ‘chimney’ vents to some chambers are sound. Pitched roofs to pedimented vault buildings are in thick stone slabs, neatly jointed together. The abutment to and over the scalloped retaining wall at the back is unresolved and crude, with mortar fillets to weather brick offsets, but not defective. There is potential for water penetration through stonework joints if the pointing fails. To one vault (13) the stonework has been rendered over, and the render (unsurprisingly) has numerous defects. It is not clear how the water that collects between the vault roofs is carried away, and it can be considered certain that any channel is choked so this needs to be cleared and reviewed. Flat roofs to Nos 12 and 14 are also constructed with stone slabs. Of these one falls to the back, with drainage holes through the brick parapet and one to the front where is simply discharges over the edge.	
	    	

5.2.2	WALLS	
	Without access to any of the sealed chambers, it is hard to be certain, but there is no reason to think that the walls are defective. In the 'gaps', however, the back wall is very wet, and at No. 10, water runs from piped outlets continuously.	
	  	
5.2.3	FACADES	
	All are essentially sound, but would benefit from control of roof run-off that should be going to the drain behind. The 'conserve as found' principles of 2010 are holding up well, and only some minor pointing is need to Nos. 1-7. Brickwork to back wall in gaps 8 & 10, and to infill at Nos. 12 & 14 is in need of localised repointing. Render defects to soffits of opening to Nos. 11 & 13.	
	   	

5.2.4	DOORS AND GATES	
	Iron doors and gates were repaired in 2010 and now need light repairs and painting, following an overall programme of opening up and reactivating them. The steel frames to Nos. 11,12 & 13 need earlier attention as they are corroding quickly.	
	 	
5.3	**INTERIORS**	
5.3.1	CUTTING CATACOMBS: No.1 JOHNSON VAULT	
	Not inspected, bricked-up.	
		
5.3.2	CUTTING CATACOMBS: No.2 STATES VAULT	
	No inspected, doors not working. To be inspected following access works.	
		

5.3.3	CUTTING CATACOMBS: No.3 ALLEN VAULT	
	Visible through gate. Roof evidently leaks at slab joints. Ivy trailing through the vent. Some light cleaning and repairs needed.	
	 	
5.3.4	CUTTING CATACOMBS: No.4 HANGES VAULT	
5.3.4.1	General:	
	Recently extensively reconstructed. New front stonework (approx. 10 years old) and interior still being fitted out. All in very good order.	
5.3.4.2	Ceiling and walls:	
	Interior all rendered, smooth and painted.	
	  	
5.3.4.3	Floor:	
	Recently installed stone tiled floor and stone sarcophagus.	
5.3.4.4	Door:	
	Overhauled and painted.	
	Note: Victor Herman (Sexton at Highgate Cemetery) reports that internal works to Hanges Vault (CC4) included major waterproofing and drainage, with a void and a perimeter trench drain running to an external drain. Other Cuttings Catacombs will have similar issues.	

5.3.5	CUTTING CATACOMBS: No.5 GREATOREX VAULT	
	Sealed halfway back, seen through a gate. Front part lined in marble which is dirty but not defective. Tiled floor, very damp.	
		
5.3.6	CUTTING CATACOMBS: No. 6 VAULT	
	Similar to Vault No.5, so part only of the interior is visble. Badly cracked marble facing to the sealed vaults has been neatly repaired. Rendered walls and ceiling, all sound. Floor tiles dirty and a bit damp.	
		
5.3.7	CUTTING CATACOMBS: No. 7 HAWES VAULT	
	Half wall near the front. Roof supported on steel frame appears sound, and that and the upper part of the walls are quite dry. Marble half wall quite sound, old cracks have been repaired.	
		

5.3.8	CUTTING CATACOMBS: No. 8 GAP	
	Gap. Plant growth in back wall should be controlled. Offsets in buttresses would benefit from some weathering.	
	 	
5.3.9	CUTTING CATACOMBS: No. 9 VAULT	
	Roof supported with steel structure visible over ¾ tall wall. Looks sound and fairly dry as do the tops of the walls. Marble wall similar to Vault No.7.	
		
5.3.10	CUTTING CATACOMBS: No. 10 GAP	
	Gap. Very wet but no plant growth. The water from this section should be better managed.	
		
5.3.11	CUTTING CATACOMBS: Nos. 11-15 VAULTS	
	All sealed with immovable iron doors.	

5.4	**SUMMARY AND COMMENTARY**	
	The clearing of the vegetation from the roofs, and maintenance/enhancement of the drainage both from them and to the bank behind is critical. Thereafter, a programme of light repairs, periodically repeated, should maintain the status quo. Doors and gates need to be eased, overhauled and painted within 10 years. Drainage needs to be better maintained and enhanced.	

D6	**<u>THE EGYPTIAN AVENUE</u>**	
6.1	GENERAL	
	The Egyptian Avenue, leading to the Circle of Lebanon, dates from the early development of the Cemetery in 1838-9, and is now attributed to architect Stephen Geary (although the list description attributes it to Bunning). It is listed Grade 1. The Avenue is entered through the lower portal, flanked by obelisks and a subterranean terrace of 8 vaults on each side runs uphill to the Circle of Lebanon. The Egyptian Avenue appears to have been originally vaulted for its full length, but this vault was removed in the past leaving only a 4m section over the upper portal. The architecture is an unscholarly interpretation of Ancient Egyptian.	
	 	
	In the 1960s Highgate Cemetery had fallen into extreme disrepair, and a programme of conservation repairs commenced in 1988 extended to the Egyptian Avenue in 1990 under the direction of Caroe and Partners, Architects. Following trials of a number of conservation options a policy of 'conserve as found' was adopted from 1990, starting with the Egyptian Avenue.	
6.2	**EXTERIOR**	
6.2.1	LOWER PORTAL Arch, retaining walls and obelisks: This façade pioneered the 'conserve as found' policy for major repairs in 1990. These comprised substantial clearance of vegetation, the consolidation but not reinstatement of render, and the reinstallation of doors with new steel frames. After trials, the original Roman Cement used for rendering was best matched by a cementacious mix, and the grouting of voids for reattachment of defective render was effected using Pozament 'St Pauls Mix' grout. Generally the repairs, now more than 30 years old, have stood up well, and there appear to be no substantial structural defects.	

	The structure is however very wet, and there are now once again plants taking root in crevices and cracks.	
	 	
	Continuing the established conservation policy here will demand a renewed engagement with vegetation management and topical repair. At present the render and pointing defects are not extensive, but new plant growth new cracks and other defects are escalation. A random tap-test revealed areas of render that ring hollow and there are some places where it is delaminating from the surface, both of which have the potential for rapid deterioration. Exposed areas of brickwork have pointing new quite eroded, and a full inspection will inform the extent to which this needs to be repointed to maintain structural stability, particularly of the obelisks.	
	 	
	The trailing ivy is picturesque, but full review of the wall heads and the back face of structures will only be possible after full (if temporary) clearance. The most critical area is probably that at the base of the Cory-Wright mausoleum, now infested with brambles. Wall heads may also require further work to minimise direct water ingress, as the state of the fibreglass trays installed in 1990 cannot be determined at the moment.	
	 	

	The iron gates, like the rest of the ironwork in this part of the Cemetery, was treated in the last cycle of repairs with 'Fertan' corrosion inhibitor. The present renewed corrosion is superficial, but decorations are very degraded. There is cracking of brickwork and render associated with corroding embedded iron fittings such as hinges.	
6.2.2	THE VAULT FACADES As noted above the Avenue was originally roofed over, and the spring of the vault remains as a cornice both sides. The wall heads in rendered brick are level with the upper ground level, with soil encroaching over it and very substantial (dare one say overgrown) yew bushes within 1m. It is not clear whether there is any land drainage at this level, and if not the possibility should definitely be investigated as a mitigation policy for water ingress. The wall heads and cornices have heavy deposits of leaf mould and soil deterring close inspection and harbouring damp. Following removal of debris and vegetation the treatment of these vulnerable surfaces should be reviewed.	
		
	The facades to the Avenue vaults were built using the same materials, and conserved using the same policies and specification as the portal described above. For some reason the left hand façade is wetter than that to the right, and the following describes the worst cases. There is hairline cracking in the underside of the cornice render, and wet spots. Previous repairs appear to be stable and only a few locations have open cracks in need of repair.	
		

	Other conserved render to the facades is continuing to gently decay, but very slowly and only a few areas were found to ring hollow to a random tap-test. One area badly affected by salt mobilisation between EA13 and EA15 is ecxtensively 'hollow'. An area of exposed brick to EA9 is very wet at the bottom, and earlier repairs are rather crude, but it is not actually defective or unstable. At EA6- EA8 there are areas of render near the ground that are actually detaching and these and similar patches will require conservation if they are not to be lost.	
	  	
	In other places the consolidation in its displaced state of earleir render has remained stable and visually effective.	
		
	The worst degradation is to the vault entrance reveals and soffits where moisture above drains out through the structure and where the steel door frames abut. Several door soffits are affected, the worst at EA15 where render is detaching in lumps now.	
		
	Future repairs should concentrate on water management, with a review of details, drainage and the weatherings to wall heads and cornices. Render repairs will be concentrated on the entrances, to be undertaken in tandem with treatment of the steel door frames.	

	The cast iron doors are all in need of overhaul, and - more particularly - so are the steel frames installed in 1990. This will involve the opening of non-operating locks, forced entry to stuck doors, renewal of corroded bolts and fittings rust treatment and redecorations. Individual cases are noted below.	
6.2.3	UPPER PORTAL The upper portal, at the entrance to the Circle of Lebanon, retains the tunnel vault for about 4m, and this carries the Circle perimeter path over it. This, with the arch and retaining walls each side, pillars and decoration are all formed in brick with render finishes, conserved in their decayed state.	
		
	The Avenue side of the vault has a hairline crack following the concealed arch-ring, and very small lateral cracks at the spring of the arch both sides, visible more by the water staining that they allow through than the cracks themselves. Subject to engineer's corroboration this is not of concern but should be monitored from year to year in case the defects are or become progressive.	
	 	
	The outer face is much less degraded than the rest of the Egyptian Avenue, and has most of the render intact, other than immediately over the arch. Previous repairs are stable and new plant invasion very limited. A random tap test to the render revealed some areas that ring hollow indicating detachment from the wall structure, but there are few signs of this on the outside and the short term implications are not extensive.	

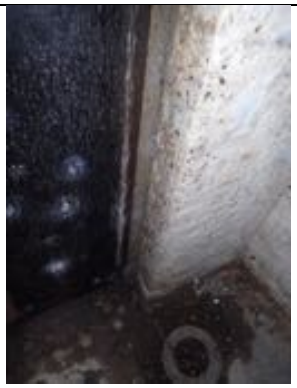
	 	
	On the outer side of the portal the wall head forms a substantial parapet to the footpath above. There are some cracks in coping joints but only minor repairs are essential. This parapet, at approx. 900mm high, does not meet current regulations for the context but it is substantial and safe in the context of the Cemetery. The protection of the dangerous drop to the other side (into the Avenue cutting) is only a low iron railing and a split lath fence, and this needs to be reviewed.	
	 	
6.3	**VAULT INTERIORS**	
	The condition of the doors and locks means that only some of the vaults can be made accessible for inspection. These are described below in detail, and in the case of the Egyptian Avenue they amount to 50% of the spaces. From these it is possible to draw cautious provisional conclusions about the overall condition of the structures as a whole, with which to inform the policy of repair under the Capital Project, but it must be noted that this will be subject to review when the rest of the vaults are accessible.	
6.3.1	EA1 HARRIS VAULT	
	 	

	GENERAL	
	Damp but not running with water. Plinth and 3 shelves all around. 4 coffins, all broken.	
	CEILING	
	Brick vault. No defects.	
	  	
	WALLS	
	Brick. No structural defects. Pointing repairs needed around the door.	
	  	
	FLOOR	
	Stone slabs. Dirty but sound.	
	DOOR	
	In fair condition. No serious corrosion to frame but very vulnerable.	

6.3.2	EA3 DALZIEL VAULT 1	
	  	
	GENERAL	
	Generally as EA1. Plinth and 3 shelves all around. 2 coffins on middle shelf.	
	CEILING	
	No defects. Hairline crack in the longitudinal joint, 3 courses to the right of the crown of the arch, approx. 900mm long.	

	  	
	WALLS	
	No structural defects. Some open joints and missing collar joint around the door frame.	
	  	
	FLOOR	
	Stone slabs. Dirty but sound.	
	DOOR	
	In fair condition. No serious corrosion to frame but very vulnerable to it.	

6.3.3	EA7 CHILLINGWORTH VAULT	
	  	
	GENERAL	
	Generally as EA1. Top shelf around 3 sides. 1 shelf below at the back only. Both back shelves sealed with marble inscription slabs.	
	CEILING	
	No defects.	

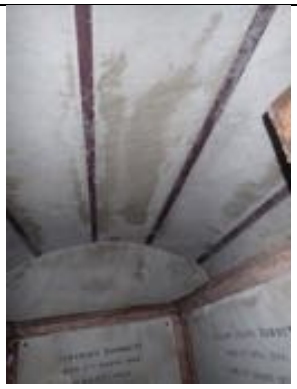
	  	
	WALLS	
	No defects. Few small tree roots. Big hole over left hand side of the door arch inside.	
	  	
	FLOOR	
	150mm black and white tiles. Dirty but sound.	
	DOOR	
	Some corrosion but not fundamentally unsound. 1 lettering ring from the door detached and loose inside.	

6.3.4	EA8 STONEHAM VAULT	
	 	
	GENERAL	
	Generally as EA1. 3 shelves all around. 7 adult coffins and 1 child coffin, all very decayed.	
	CEILING	
	No defects. A very few fibrous roots.	

	  	
	WALLS	
	Not fully visible but no defects seen. Door lining outside has displaced up to 75mm away from the door frame at the top. Inside face of the wall not displaced. Collar joint issues at door frame.	
	 	
	FLOOR	
	Damps stone slabs. Wet at the door.	
	DOOR	
	Bolt detaching and some corrosion. Medium overhaul needed.	

6.3.5	EA10 DALZIEL VAULT 2	
	  	
	GENERAL	
	Generally as EA1. Plinth and 3 shelves all around. 4 adult coffins.	
	CEILING	
	No defects. Very few fibrous roots.	

	  	
	WALLS	
	No structural defects. Collar joint issues at door frame.	
	  	
	FLOOR	
	Stone slabs. Sound enough.	
	DOOR	
	Some light corrosion. Light overhaul needed.	

6.3.6	EA12 DUMMETT VAULT	
	  	
	GENERAL	
	Generally as EA1 but with elaborate finishes in red and white marble. 3 shelves all around with 4 coffins sealed with marble inscription slabs.	
	CEILING	
	Faceted lining of 6 white marble slabs separated by iron T-bars. Marble is sound, although lightly stained by moisture ingress from above. Bars have light corrosion, and the potential for these to cause structural issues with the marble lining should be carefully considered in conserving them.	

	  	
	WALLS	
	Similarly lined in large marble slabs. Shelves in stone with red marble mouldings on front edges. Mouldings are detaching in places, and shelves have delamination to the underside. Red marble lining to door opening is cracked and broken. Repairs required.	
	  	
	FLOOR	
	150mm black and white tiles. Dirty but sound.	
	DOOR	
	Bolt to free leaf missing. Some corrosion. Medium overhaul needed.	

6.3.7	EA15 BEADNELL VAULT	
	  	
	GENERAL	
	Generally as EA1. Plinth and 3 shelves all around. 5 adult and 3 child coffins.	
	CEILING	
	No defects. A lot of fibrous roots.	

	  	
	WALLS	
	No visible defects, view limited by the coffins. Many roots. Missing collar joint on both sides of the door arch.	
	  	
	FLOOR	
	Stone slabs, some uneven. Open joints. Very wet at the door.	
	DOOR	
	Very stiff. Bolt to free leaf is detaching and frame corroding. Medium overhaul required.	

6.3.8	EA16 VIGERS VAULT	
	  	
	GENERAL	
	Generally as EA1. Plinth and 3 shelves all around. 6 coffins.	
	CEILING	
	No defects, sound.	

	  	
	WALLS	
	No defects, some fibrous roots.	
	  	
	FLOOR	
	Stone slabs. Open joints but not uneven. Wet at the door and back half of the vault.	
	DOOR	
	Light corrosion. Light overhaul required.	
6.4	**SUMMARY AND COMMENTARY**	
	The structures should be reviewed when vegetation has been comprehensively cleared prior to a programme of works, and following a general programme here and elsewhere of reopening non-functional doors allowing full access to all of the spaces. From the present limited inspections and access possible it is reasonable to assess that the general structural condition of the Egyptian Avenue and the vaults opening from it is reasonably good and will require only localised and minor repair. The philosophy and implementation of repairs in 1990 has stood the test of time well, and the ongoing care of the building should involve continued similarly specified cyclical repairs to the render and decorations of the exterior, paying particular attention (in the context of the Capital Project) to drainage, the weathering and protection of wall heads and ledges and the conservation and protection of doors and frames with other external ironwork. In common with the Circle of Lebanon there will be a need for a unified approach to the vault doors and gates, irrespective of their varying	

	condition. To some the works will be significant, to others relatively superficial. The finish/colour will have to be carefully considered. Individual vaults (eg EA12 Dummett) have internal finishes and decoration in need of careful conservation if the status quo is to be maintained. Initial works should be considered as urgent, with more substantial works being needed for sure within 5 years. It will be a feature of any significant works that there will have to be exceptionally careful planning around ecology matters (bats, birds and spiders) and around health and safety. Any substantial building works within the vault chambers will involve working in close proximity to degraded coffins and remains, and the implications for working, protection and probably some removal will be considerable.	

D7	**<u>THE CIRCLE OF LEBANON:</u>**	
	Like the Egyptian Avenue, the Circle of Lebanon is cut into the hillside and the ambient ground level is represented by the upper level, or roof, of the structures. Like the Egyptian Avenue, the inner part of the Circle of Lebanon dates from the early development of the Cemetery in 1838-9, and is now attributed to architect Stephen Geary. The outer ring was developed in c1876 by architect Thomas Porter. It is listed Grade 1 in a single listing entry with the Egyptian Avenue. Consistent with the Egyptian Avenue, both phases of the Circle are in an unscholarly Ancient Egyptian idiom, albeit with classical references as well.	
	 	
7.1	**<u>INNER CIRCLE</u>**	
	The inner circle forms a drum-shaped structure within the circular cutting. The grass roof surface covers the vaults around the perimeter and the centre of the circle is of solid ground, either retained or backfilled at the time of construction. This effectively forms a 'planter' for the feature Cedar tree at the exact centre. The original cedar tree was felled in 2019 and a replacement planted in 2020. For the purposes of this report the vaults are numbered clockwise from the axis of the Egyptian Avenue.	
7.1.1	**EXTERIOR**	
	A continuous façade of 20 neo-Egyptian vault entrances in a battered wall forms the outer face to the circle cutting. This is in rendered brickwork, the entrance door cases originally also in render with modelled decorations, but some have subsequently been replaced in granite or marble. Works in 1990 comprised conservation 'as found' of the facades, after a trial restoration that remains at IC9. At roof level the parapet was at least partly reconstructed, and behind it a new drainage channel formed with concealed plastic pipes within the wall down to drainage at the lower ground level. As recounted by the architect of the time (Robert George) the top of the parapet was cement rendered over a Bituthene waterproof membrane. He confirmed that there is no record of any waterproofing to the roofs of the vaults themselves, or of any other structures below the centre of the circle, but these were not exposed during the 1990s works.	

	The cornice below the parapet, and the tops of the door cases, were fitted with neat lead cappings. All the doors were removed, and shot-blasted, then returned and rehung in new steel frames. There is evidence to indicate that the doors from different phases of original construction were not differentiated in the reassembly.	
7.1.1.1	ROOF AND PARAPETS This was inspected only from the roof level of the outer circle, so detailed inspection was limited. The lead-lined drainage channel appears to be clear and spound, and this should be verified by close inspection next time it is swept clean. The brick wall forming the inner kerb of the channel appears to be sound from this slightly remote inspection. The render to the parapet has failed in many places, and the cement render is detaching. As this forms an essential part of the waterproofing of the structure this should be fully repaired to a carefully considered specification, not conserved 'as found'.	
	 	
	The cornice below the parapet, with rendered finish and ribbed decoration, is generally sound, although conserved as found and in places the brick substrate is visible. The lead capping is intact and needs some careful re-dressing where the edge has been disrupted. There is extensive vegetation growing in the joint at the abutment of the lead, and this needs to be killed, removed and the cracking made good. Picturesque it may be, but this vegetation is unwelcome in the context of the building fabric. There is one cast iron vent pipe protruding from the grass roof (serving IC14?). The top is broken and unsightly, but could easily be cut neatly above grass level without other disruption.	
		

7.1.1.2	VAULT FACADES The continuous vault façade was extensively repaired in 1989-90 in the same manner as that to the Egyptian Avenue, and the repairs have stood up well over the following 30 years. Render reattached by pinning and cosolidated using 'St Pauls Mix' grout has largely remained adhered, and although the lower part of the wall is unsurprisingly wet where brickwork is exposed the structure remains sound. Localised vegetation should be brought under control and emerging and new defects attended to with a similar repair philosophy. If vegetation is removed now and kept under strict control a cycle of repair is deemed necessary within 5 years, but this is not expected to be either extensive or invasive. Such render defects as there are are concentrated at the base of the walls, and there are some sections where render is now detaching. These will need repair if the surface is not to be lost.	
	   	
	The doorcases are generally in good order other than the abutment of the steel door frames (see below) and they have neat and sound lead capping which will discharge the rainwater effectively if they are cleared of vegetation debris.	
		

	As in the Egyptian Avenue the iron doors in their newer steel frames present the most concerns, and here it is compounded by their having a steel cill embedded in the stone paving. The steelwork is heavily corroded in places, particularly the top and bottom corners. It is likely that they will have to be removed for further conservaiton, and the condition of the steel itself will only be revealed when the corrosion has been removed. Some replacement should be planned for.	
	 	
7.1.2	**INTERIORS**	
	The only vault interior accessed for the survey was that to IC7. It was not possible to open the doors to any of the other 19 vaults. The interior to IC7 does not itself present any great concerns, but this sample is inadequate for the drawing of any more general conclusions. A programme of reopening of the vault doors and further inspection will be needed before repairs can be scheduled and, whilst no structural defects are in evidence, until that time any assessment of the structural condition is premature.	
7.1.2.1	IC7 HUGHES VAULT	
	  	
	GENERAL	
	Tapered chamber with elliptical brick vault. 4 shelves on 3 sides. 8 adult and 3 child coffins.	
	CEILING	
	Sound, other than a longitudinal crack in 2 bed joints, i.e. 5th and 6th joint to the right hand side of the centreline. Small but significant. Structural Engineer's advice needed, together with monitoring before decisions are taken regarding remedial works.	

	  	
	WALLS	
	No clear defects. Some small cracking around left end of stone lintol (looking in). Pointing repairs needed around the door.	
	FLOOR	
	Stone slabs. Very dirty and very wet but not obviously defective.	
	DOOR	
	Light corrosion. The steel frame is vulnerable and will need to be checked and treated.	

7.2	**CIRCLE OF LEBANON: OUTER CIRCLE**	
	The Outer Circle structures fall into four sectors, each roughly a quadrant, clockwise from the Egyptian Avenue: a) Retaining wall with ground-level grave monuments at the foot of it Steps (1) to the upper level b) Outer circle vaults OC1-8 Entrance to Beer mausoleum undercroft c) Outer circle vaults OC9-16 Steps (2) d) Retaining wall with Kelham and Rosa mausolea in front of it The Kelham and Rosa mausolea are at the moment excluded from the scope of this report.	
7.2.1	**EXTERIORS**	
7.2.1.1	RETAINING WALL (1) A heavily rusticated retaining wall approx. 4m high has an elaborate cornice with vestigial triglyphs at the top. The rustication stops at a secondary cornice rather more than halfway up. The wall is constructed in brick, with finishes including all of the decorations formed in render.	
		
	With the exception of a few rustication panels where the render has broken away (exposing the brick) the lower part of the wall is in remarkably good condition, free from structural cracks and defects. This includes the secondary cornice. The upper part of the wall in smooth render has hairline cracks, largely horizontal, which have been repaired in the past and have not moved since. Some of this part of the wall is concealed by trailing ivy, but all the visible parts are consistently sound except for the extreme corners, where diagonal cracks have similarly been repaired and remain fairly stable. The top cornice is sound where it can be seen, and there is a neat lead capping (added in 1990 we suppose). There are a few blemishes where the brickwork is visible and some fine cracks notably at the end returns.	

	 	
	The wall head forms a low parapet to the upper level, unprotected other than by the row of graves between it and the path. The wall head is completely obscured by ivy but a random check revealed cracking and defects to the render which should be addressed by thorough cyclical repairs to ensure that water ingress is minimised.	
		
	Subject to review when the ivy has been cleared the other repairs needed at the moment to this wall are localised and very minor.	
7.2.1.2	STEPS 1 Stone steps with rendered brick kerb each side. There are some open joints in the steps, but only the top step has any significant displacement, and that could be easily rectified. Some previous indent repairs are sound and two steps have broken edges that might warrant repair in the future. The kerbs have long-standing cracks in the render, some repaired, but none that indicate any fundamental underlying defect. There are no handrails, and this might be considered in a review of access considerations.	
	 	

	 	
7.2.1.3	VAULT FACADES OC1-OC7 The vault facades added in 1870 continue the rusticated treatment and details of the retaining wall, with neo-Egyptian doorway matching those to the Inner Circle, mainly in render but with some renewed in granite. The end return wall to the steps (1) has lost much of its render finish coat, but the backing coats are sound and the degraded effect in keeping with the overall aesthetic. Crazing to the smooth render at the top of the steps is progressive and more problematic, and this will need repair within 5 years.	
	 	
	The vault facades are less damaged than those to the Inner Circle, and as there the previous conservation works have served well. Vegetation taking a secure hold should be removed and holes stopped up. Minor render defects can be addressed by ongoing cyclical repairs.	
	 	
	The iron doors with steel frames have the same issues as noted for the Inner Circle, but without water ingress from above they are much less corroded and need only light repairs.	

	The vaults are ventilated by cast iron vents at high level. The originals are decorative and are sound enough. Where broken they could be replicated. Later additions are less attractive and less sound, and these are worthy of better resolution in. the course of repair.	
		
7.2.1.4	VAULT EXTERIORS OC8-9, WITH BEER MAUSOLEUM ENTRANCE Generally these are as OC1-OC7 above. Extensive cracking to the upper part of the façade render has not failed since previous repairs The brick retaining walls to the Beer mausoleum forecourt are free of structural defects, but the pointing has eroded… not to a degree that threatens stability but it will eventually get to that. Some minor vegetation for removal. The cast iron rain water pipes show every sign of discharging down the wall as a result of being blocked, regularly if not at this moment. They need overhaul and painting.	
	  	

7.2.1.5	VAULT FACADES OC10-OC16 Generally as OC1-7, but there. are more stone door cases, and the rendering is generally more degraded. However, as elsewhere the previous conservation works remain generally sound and the progressive defects are minor	
	 	
	Diagonal crackingin the upper corner to steps (2) clearly allows water through it as there are heavy calcium deposits, but it does not appear to be progressive. Repairs will be needed, but should be relatively minor.	
		
7.1.2.6	STEPS (2) Stone steps with rendered brick kerbs each side. There is no displacement or distortion, but there are extensive holes between the stone units, both in the treads and risers. Some (at the back of the treads) are open to a considerable void so simple repointing will not be viable. Nothing makes these steps structurally defective or compromises their use. There are no handrails, and this might be considered in a review of access considerations.	
	 	

7.1.2.7	RETAINING WALL (2) The rendered brick retaining wall between Steps 2 and the Egyptian Avenue is detailed exactly as retaining wall (1) above, see 7.2.1.1.	
	 	
	Structurally it has not fared as well as Retaining Wall (1), historically there has been some major displacement of the wall head, up to 50mm, including the cornice. The render has also degraded more than for Retaining Wall (1). Notwithstanding, the repairs that addressed these defects in c 1990 appear to be performing well and the render remains for the most part in need of nothing more than cyclical repairs to maintain the status quo.	
	 	
	The cornice has the same neat and sound lead weathering detail as the rest. The parapet render is in need of more urgent and invasive repair, in common with the rest of the Outer Circle	
7.1.3	ROOFS	
	The Outer Circle vaults OPC1 to OC16 have a flat roof at the upper ground level, with a low parapet to the rear where there is no significant drop, and a slightly higher parapet at the front and ends. Roof covering is in asphalt, reneweed in the 1990s works, with lead cover flashings in places. Parapet upstands are all finished in render, which is reported as having been applied over a Bituthene waterproof membrane. The roof continues across the entrance to the lower level of the Beer Mausoleum.	

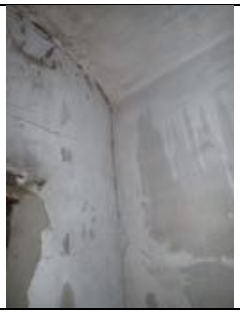
	Whilst the roofs are easily accessible from the upper level by climbing across a single row of graves, they are not intended as being accessible to the public, and the lack of edge protections makes them dangerous in that respect. This is a matter for review in terms of site management, but we are not advocating the installation of guarding.	
		
	The roof of solid masonry has a mastic asphalt surface integral with abutment upstands all round. The roof drains to the rear, where there are outlets to the adjacent ground in several places, and to rain water pipes in the Beer Mausoleum entrance at the centre. The rear edge has a low kerb without a flashing and stone copings, the front edge a higher rendered parapet with a lead flashing. The render to the front parapet is in poor condition, with extensive cracking and defects that require attention. There is a lot of light vegetation in the external face, above the cornice. As noted elsewhere these parapets are not considered candidates for conservation ‘as found’ and care must be taken to specifiy the repairs and exclude water ingress. The rear parapet has minor defects with open joints between coping stones. The asphalt upstands have localised failure of adhesion to the vertical substrate, and have consequentially slumped, with cracks as a result.	
	 	

	 The roofing defects should be addressed by repair rather than complete renewal, but there will be a need for some review of details and specification.	
7.2.2	**INTERIORS**	
7.2.2.1	OC1 COLUMBARIUM	
	  	
	GENERAL	
	Plastered vault and walls with ‘pigeon holes’ on 3 sides. Open iron gates.	
	CEILING	
	Render damp but sound to visual inspection. Hairline crack at wall junction on left hand side of the back wall.	
	  	

	WALLS	
	Visible parts all rendered and affected by damp, but render has blown only to the back wall at low level. Stone shelves generally sound. Some infilled with inscription slabs.	
	  	
	FLOOR	
	Cement screed, a bit rough but not unsound. Wet at the back on right hand side.	
	GATES	
	Light corrosion and failing decorations. Medium overhaul needed.	

7.2.2.2	OC4: BATTEN/RADCLYFFE HALL VAULT	
	  	
	GENERAL	
	All rendered inside. 2 shelves at high level on 2 sides. 1 coffin and 1 ashes box on shelves. Radclyffe Hall coffin on the floor.	
	CEILING	
	Plastered vault. No defects.	
	  	

	WALLS	
	Plastered. No cracks. Damp in places, especially around shelf junctions and over the door. Whitewashed stone shelves (some could be concrete) have minor defects and some have lost edge faces. To be defrassed and made good. Marble shelf with white brackets in good order.	
	  	
	FLOOR	
	Black and white marble tiles, in good order.	
	GATES	
	Open iron lattice with steel plate infill. Light corrosion to framing, worse to infill plates. Medium overhaul needed. Cast iron frame of the gates is corroded at head but appears to be only superficial.	

7.2.2.3	OC6: ROBERTS VAULT	
	  	
	GENERAL	
	Walls and ceiling all rendered. 1 shelf at low level on 3 sides. 2 coffins.	
	CEILING	
	Plastered segmental vault. No cracks except at abutment to front wall (1-2m long). Needs Structural Engineer's advice.	
	  	

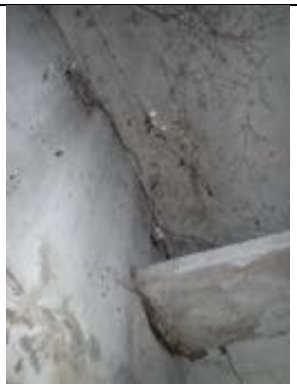
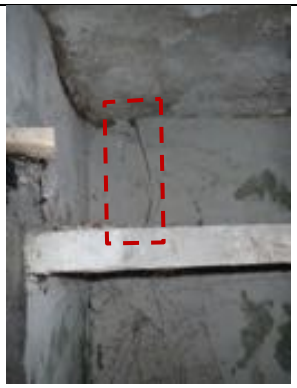
	WALLS	
	Rendered. Generally in good condition but very uneven/repaired above the shelf on left hand side. Crack to upper part of both front corners and diagonal crack down from the front right hand corner at the top. Small horizontal crack halfway up left hand wall. Extensive making good around the door frame required.	
	  	
	FLOOR	
	Black and white marble tiles, in good order. Damp at back corners.	
	DOOR	
	All in good order but open collar joint outside.	

7.2.2.4	OC8: LE BAS VAULT	
	  	
	GENERAL	
	Irregular Plan. Segmental vault. All rendered. 4 shelves to 3 sides. 4 adult coffins.	
	CEILING	
	Rendered vault. Spot water ingress affecting appearance but no render detachment.	
	 	

	WALLS	
	All rendered. Some micro cracking to right hand wall. Old making good around the door.	
	 	
	FLOOR	
	Black and white marble tiles with elaborate pattern. Dirty but sound.	
	DOOR	
	All sound except the frame (securely fixed) is not in alignment with external lining to the opening.	

7.2.2.5	OC9: HUGHES VAULT	
	  	
	GENERAL	
	Irregular Plan. Segmental vault. All rendered. 3 shelves to 3 sides. 2 coffins, 1 of them bigger and overhanging the shelf it rests on.	
	CEILING	
	Rendered vault. No structural defects. Isolated damp spotting.	
	  	
	WALLS	
	All rendered. Some old repairs and irregularities but broadly sound. Old making good around the door. Some delamination on stone shelves but nothing major.	

	 	
	FLOOR	
	Large format (250mm) diagonal black and white marble tiles. Dirty but sound.	
	DOOR	
	In good condition.	

7.2.2.6	OC10: PAZZI VAULT	
	  	
	GENERAL	
	Rendered segmental vault. Rendered walls. 4 shelves to 3 sides. 3 adult coffins and 1 sealed shelf. Pillar with bust sculpture.	
	CEILING	
	No cracking to the vault itself but there is a big crack (5mm wide) at abutment to the front wall, larger at left hand corner. Structural Engineer's advice needed.	
	  	
	WALLS	
	Only parts visible. Render is quite sound but there are a lot of fibrous roots. Substantial vertical crack in left hand wall from the top front corner	

	down (5mm wide, decreasing towards bottom). Structural Engineer's advice needed. Stone shelves, nothing to comments.	
	  	
	FLOOR	
	150mm black and white tiles. Pillar and bust stained but in good condition.	
	GATES	
	Cast iron gates with open lattice, plated behind. In good condition, requiring light overhaul.	
7.3	**SUMMARY AND COMMENTARY**	
	The external fabric of the Circle of Lebanon is in need of cyclical repairs to maintain the status quo, with concentration on the parts that are critical to the management of rain water… roofs, parapets, cornices etc. The removal of picturesque vegetation will be less extensive here than in the Egyptian Avenue, but it will nonetheless be essential to full review when the documents are prepared for the repair works. In common with the Egyptian Avenue there will be a need for a unified approach to the vault doors and gates, irrespective of their varying condition. To some the works will be significant, to others relatively superficial. The finish/colour will have to be carefully considered. The internal fabric to the Inner Circle will need further assessment, including by structural engineer, following a programme of works to enable entry to more, if not all, of the vaults. The one vault inspected presents some structural concerns which can only be properly assessed in a wider context. The larger sample of 6/16 vaults in the Outer Circle allows *some* general conclusions to be drawn, but full access and a review will be needed before works are specified. Structural defects noted in the Outer Circle vaults appear to be minor, and of a varied nature with no generic defects emerging as a pattern. They will need to be addressed by localised repairs individually specified with structural engineer's advice. If accessibility matters are to be addressed by the Capital Project there will be decisions to be made regarding steps, handrails and edge protection.	

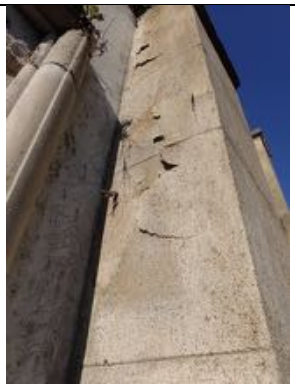
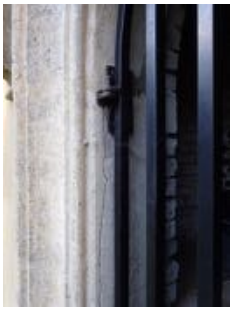
	It will be a feature of any significant works that there will have to be exceptionally careful planning around ecology matters (bats, birds and spiders) and around health and safety. Any substantial building works within the vault chambers will involve working in close proximity to degraded coffins and remains, and the implications for working, protection and probably some removal will be considerable.	

D8	**<u>TERRACE CATACOMBS</u>** The terrace catacombs were constructed at the top of the West Cemetery site in 1838, designed by the Cemetery architect Stephen Geary. The rear of the structure, close to but not against the boundary with St Michael's church and adjacent houses, forms a retaining wall to the hillside, and the rest of the structure is built up to it. The roof to the catacombs forms a large level terrace with views over the Cemetery and beyond, accessed by a wide fight of steps at each end. The terrace catacombs were altered in the mid 19th century by the insertion of doorways either side of the central entrance, creating four private vaults from the front part of the internal spaces. Other than these, and two private vaults under the steps at each end, the burials in the Terrace Catacombs are into individual burial chambers constructed in brick and stone either side of a long central hall. Some such chambers are sealed with a stone inscription slab but many are open and the coffins visible. The interiors of the Terrace Catacombs are open to guided tours of visitor groups. The roof terrace is not at the moment accessible to unauthorised personnel, and is used for beekeeping. The Terrace Catacombs are listed Grade II*	
	 	
	We are advised by Robert George that the conservation work commenced in the late 1980s included: • Renewal of the roof terrace surface • External render renewal • Reinstatement of parapet piers, columns and ironwork • Reconstruction of the upper part of the steps, at least on the east side and probably both The works to this building predated the decision to conserve structures in their defgraded and ruined state, to the exterior of the building is here judged against a state of conventional good repair. The original asphalt roof, when in good order, provided a waterproof membrane. It was replaced with a tarmac surface which is to some degree permeable, and this resulted in increased water ingress to the vault below. Drainage is from gullies with grating at low points, and it is	

	reported that these drain to a sump behind the rear wall in the centre, and thence to drainage at the lower level. At a later date remedial drainage works were carried out and the line of the drains replaced can be traced on the terrace by patching in the tarmac. We are told that the first programme of render repairs to the exterior were carried out using lime render, but these failed quickly due probably to the moisture levels in the substrate. The render that survives now is from a further programme using a cement mix, which was found to better replicate the behaviour of the 'Roman Cement' used in 1838. We understand that no works were carried out to the interior in 1988-94.	
8.1	**EXTERNAL**	
8.1.1	ROOF	
	 	
	The tarmac terrace surface has cracks, cracks at joints and low points all of which encourage and harbour plants and moss. This is a self-perpetuating and escalating problem which needs to be addressed. Each low point relates to a drain, but the organic growth makes it apparent that these hold water, at least temporarily. There are 8 plate-glass oculus rooflights fitted into concrete frames flush with the tarmac surface. Two of these are badly cracked and it is clear from below that the joints around them are not fully waterproof. There is a skirting upstand of what appears to be asphalt along the front parapet wall, but how or whether that links to the asphalt is not clear. As noted below it is clear that the roof continues to allow water penetration, and it will be necessary to resurface the roof with a properly waterproof membrane, protected by a wearing surface against damage from pedestrian and other traffic. At the same time the broken rooflights should be replaced and the sound ones reviewed to minimise water ingress. Drainage should be reviewed (again) to ensure that it is fully functional.	

	   	
	The parapet has a low continuous wall with a stone coping. This has sockets for existing and previous balustrade panels which hold water and harbour organic growth. There are open joints. Both need addressing.	
	 	
	Piers are rendered and have stone caps, gabled and flat. There is some render erosion but nothing requiring major or particularly urgent intervention. Such defects as there are are either superficial or very localised to the points are which there are embedded iron fixings for the balustrade. The stone caps are sound, with small and localised breakages that do not really affect either appearance or performance.	
	 	

		
	The iron balustrade panels are in good order. Light corrosion at the ends has affected adjacent render but not the integrity of the ironwork. It should be better protected against corrosion before repairs to the render.	
		
	At each end of the roof there is an opening over a D-shaped light/vent well. Brick parapets have been renewed and are sound, along with galvanised steel bars which are in need of decorations but not more.	
		
8.1.2	EXTERNAL WALLS	
	The front elevation is all in rendered brick, with projecting buttresses. The original gothic arched entrances are also formed with render. Iron gates close the arched openings, and there are iron decorative plates fitted to high level vents. Square headed stone doorcases were added to the vaults either side of the central entrance, and these have iron doors of varying design.	

	  	
8.1.2.1	CENTRAL BAYS (W3-E3 inclusive) The render is clearly affected by the wall fabric behind it being damp, with localised blistering along hairline cracks. However light defrassing reveals sound surface below, without serious visual impact, so repairs may be minimal. The render is clearly of two different mixes, and the yellower one is more affected than the greyer one. Random tap-testing did not reveal any debonding and there are no cracks indicating structural movement.	
	 	
	Defects to the surrounds of openings are largely due to corroding ironwork, and they DO need attention. Render door surrounds are cracked, and the stone doorcases have broken stones, notably to WV1 and WV2 where corroding iron door frames have triggered the worst cases. Repairs including rust treatment and isolation are needed. Similarly the steps to vaults WV1, WV2, EV1, EV2 all have open joints which need to be repaired to prevent escalating defects.    	

	There is light plant growth around WV2, and the marble facing to the wall around the entrances to WV1 (Broxholm) and WV2 (Beetles) has some cracking and displacement without being actually loose.	
	 	
8.1.2.2	WEST WING (W4-W14)	
	Render is generally sound, with some small cracks and delamination to the arched opening at W8. Even where there are hairline cracks there appears to be no debonding of the render, and there are no cracks indicating structural movement. A big woody bush growoing in one of the vents should be killed and removed. Bird proofing mesh has been crudely fitted and is coming away, so that it now just traps debris. The decorative state of the ironwork is poor, but there is little actual corrosion.	
	  	
8.1.2.3	WEST WING RETURN	
	The façade to vaults WV3 and WV4 has no particular defects other than a vertical crack at the abutment to the octagonal pier beside WV4. This however shows no sign of render detachment when tap-tested so a simple repair should suffice if done before it gets worse. A repair will be the easiest way to monitor for any progressive movement, and this crack could be on the list for referral to the engineer.	
	 	

	The pier and the retaining wall to the slope beyond are heavily infested with ivy which needs to be cleared for proper inspection and repairs. There are render defects visible through the leaves, but managed decay may be appropriate here if no major defects are revealed. The two iron vault doors are corroded and in need of overhaul, rust treatment and decoration.	
8.1.2.4	EAST WING (E4-E14) Most of the comments on the west wing apply equally here, but the render condition is more variable, with more cracks and surface loss. Even so the backing coats remain secure, and a policy of managed care could be appropriate rather than renewal. There are a few defects relating to corroding iron fixings to the vent plates, and these do need repair.	
	  	
8.1.2.5	EAST WING RETURN Render to the façade of vaults EV3 and EV4 (Simpson) is sound, and the doors to the two vaults are in good order.	
	 	
	The extended retaining wall to the slope beyond is badly affected by damp where it is below the upper ground level. Here the render has delaminated and detached. This is doing no structural harm in itself but doesn't look very good, and as above may be a candidate for actively managed decay.	

	There is a big crack half wall along the retaining section that should be referred to the engineer and monitored.	
	   	
8.1.3	DOORS, GATES AND RAILINGS	
	Some reference is made to these above, summarised as follows:	
8.1.3.1	Railings: Cast iron balustrade panels to the upper terrace were all either conserved or replicated in the early 1990s and all fixing details date from then. They are in good order and fixings are secure. Some very superficial corrosion has affected the ends of railing panels embedded in render, but this has affected the render rather than the ironwork.	
8.1.3.2	Gates: The wrought iron gates into the Terrace Catacombs are in fair condition, with superficial corrosion that will need to be treated before they are redecorated. Ferrous fixings into walls are corroding and causing disruption of the masonry and render finishes, and these will need to be the focus of attention in any refurbishment. Repairs will inevitably be associated with repainting.	
8.1.3.3	Doors: Cast iron doors into vaults are so heavily constructed that surface corrosion makes no difference to their structural condition, and the doors to the Terrace Catacombs vaults vary in this respect from good condition to poor. Frames of cast iron, some replaced in steel, are more problematic and these are causing disruption to other materials due to corrosion expansion. Repairs will focus on the treatment in situ or by removal of the door frames and the overhaul of the doors so that all are, and can remain, functional. Repairs will inevitably be associated with repainting.	

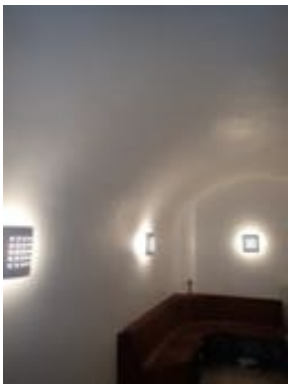
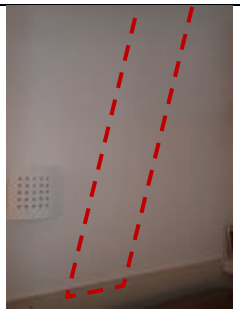
8.1.3.4	Vents: The Terrace Catacombs are ventilated from high level ventilation holes dressed with iron facings and grilled in the shape of a shield. These are handsome and functional, and the cast iron is itself in good order with only light surface corrosion. Some units with fixing lugs covered by render are disrupting the render by corrosion expansion, and there the ironwork will need to be exposed and treated. Others have been crudely adapted by the addition of external mesh against birds ingress, and they will need to be properly repaired with internally fitted mesh. All need painting.	
8.1.4	WEST STEPS Upper flight of York Stone steps has stone kerb on outer side and a high rendered brick parapet wall on inside. Parapet is all as noted for the terrace above, and there is a small holly bush rooting in one crevice. The kerb is partly displaced and has big open joints The steps themselves are dirty but sound, with some smaller open joints.	
		
	Below the steps is a slope, once surfaced in concrete, but now so degraded as to be effectively unsurfaced - and both bumpy and muddy. Any use for access would require that this is resurfaced.	
8.1.5	EAST STEPS The upper flight of the east steps was also rebuilt in York Stone, but subsequently coated over with asphalt to waterproof them. This has pulled away at the abutment each side, and to the lower steps it has failed in the middle of the steps as well. If the steps need to be waterproofed the membrane should be introduced lower, below the stonework, and it should be integrated with the parapet/kerb details. The lower part is of wide steps in concrete, much degraded.	
	  	

8.2	**INTERNAL** All of the catacombs structure is in brick, with massive transverse walls between the bays either side of the central longitudinal hall. All of the brickwork appears to have been limewashed except the central entrance bay and those at E8 and W8, which were plastered. Each bay other than the entrances is subdivided with brick walls and stone slabs into 15 (3 wide, 5 high) coffin-sized compartments, some open and some closed with inscription slabs. The floor is in stone slabs to the entrance bays, and packed muddy gravel to the rest.	
		
8.2.1	CENTRAL SECTION BAYS W3 TO E3 No cracks or structural defects in the vaults or walls. The render finish to the central bay is much degraded but the approx. 50% remaining appears to be well adhered. One damaged vault-spring in E2 needs to be referred to the engineer for a repair specification. The back half of the structure is understandably much wetter than the front part, but this does not appear to have affected structural integrity. Not much can be seen of the external and retaining walls behind the burial compartments, but nothing visible indicates a problem	
	 	

	 	
	The majority of burial spaces here have closing slabs and these are largely secure, or if displaced show no sign of collapsing or falling. An iron frame at the top of the back section of bay W1 has corroded and has allowed the inscription slab to displace. The floor slabs are old and worn but not defective in the context of the place, other than a few slabs near the door which have subsided and should be relevelled.	
		
8.2.2	EAST SECTION BAYS E4 TO E14 Generally the construction is as the central part. Only bay E8 is plastered and paved. Similarly condition is consistent with the central section. There is a damaged vault-spring at E6 and a lesser version of the same at E9. In E7 water migration has led to voiding of the brickwork joints in the vault. A crack along the lines of joints in the vault to E11 should be referred to the engineer. In summary the vault brickwork will need some repairs, but it will be localised and relatively minor.	
		

	The decorative cast iron grille to the east end vent shaft is broken in the middle, but in functional terms it is now protected by the bars above.	
		
	There are places where the floor has eroded in patterns that appear to reflect water dripping from the vault above. This illustrates vividly the need to address the roof and mitigate water penetration.	
	 	
8.2.3	WEST SECTION BAYS W4 TO W14 All as the east section, but the plaster in bay W8 is showing signs of detaching. This needs to be either consolidated or removed under controlled conditions.	
		
	The floor to the west section is much wetter in places than elsewhere. This probably correlates with the drainage form above… or lack of it.	
	 	

	The grille to the vent shaft at the western end is also broken, and here enmeshed in barbed wire, which could be removed. The shaft is full of very substantial debris, and this should be removed. It has no picturesque qualities. An iron grille in W8 has corroded in the most spectacular manner and should not on any account be disturbed.	
		
8.2.4	WEST EXTERNAL VAULTS WV1 TO WV4	
	No access.	
8.2.5	EAST EXTERNAL VAULTS EV1 TO EV4	
8.2.5.1	EV1: TYLER VAULT	
	The Tyler vault is the only one of the four private vaults flanking the central entrance to which there is even partial access. These vaults appear on early layout plan as part of the interior spaces, and it appears that they were walled off from the interior and fitted with external entrances at a later date. As a result the internal construction is exactly as that to the main spaces of the catacombs, with brick walls and an elliptical vault, previously limewashed. It is believed (personal communication by Victor Herman) that it had coffin shelves on the three walls, probably in 3 tiers, but these were walled up within the last 25 years. As a result the door opens onto a small space with concrete block walls approx. 2.5m high (ie not to the top) on three sides, floored in the original flagstones and with the vault visible above the block walls.	
	 	
	The structures visible appear to be in good condition from this limited view. The door is in good working order	

8.2.5.3	EV3: SIMPSON VAULT 1	
	GENERAL	
	The vault interior has been entirely refitted seemingly quite recently. Walls and ceiling, with no break between them, are all smooth, plastered and painted with silk finish.   	
	Stone plinth with two elaborate coffins. Electric lighting. Timber corner seat. Comparison to Simpson Vault 2 (see below) suggests that refurbishment of this vault included a thick lining to walls and raising of the floor by about 125 mm.	
	CEILING & WALLS	
	 	
	All seem to be generally sound and unusually dry. It's assumed that there is a waterproofing system in place with the plaster lining. However, some areas ring hollow and there is a small vertical crack on the right hand wall (near the front) and hairline cracking in the opening above the door. Structural Engineer's advice needed. Some rust staining on angle beads at the door betrays damp issues within. All other finishes are neat and sound. Lighting/wiring not tested but working.	

	 	
	FLOOR	
	Patterned stone tiling.	
	DOOR	
	The cast iron door has been recently painted and works smoothly.	

8.2.5.4	EV4: SIMPSON VAULT 2	
	  	
	GENERAL	
	In contrast to Simpson Vault 1, this vault is entirely 'unmodernised'. Brick tunnel vault and walls with a projecting course at the spring of the vault. Stone plinth and 1 shelf on 2 sides. The back wall is in modern concrete blocks (C20) and anecdotally the burials have been sealed behind it. There are no coffins in the vault.	
	CEILING	
	The brick vault is very damp and pointing very degraded. As a result, it is hard to identify any defects, but there are no obvious cracks or deformations. There are a lot of roots penetrating the brickwork, curtains of fine root structures all over the vault and some solid roots up to 12mm in diameter. There are a few locations where fixings into the vault have left holes/scars. At the abutment to the front wall (over the door), there is	

	a displacement crack approx. 20mm wide, where the wall has moved outwards. Bricks have fallen from this area and it needs repair.	
	 	
	WALLS	
	In a similar condition to ceiling, very damp but less roots. The blockwork back wall is in good order. Shelves are dirty and damp but sound.	
	 	
	FLOOR	
	Stone paved floor. Dirty and damp but not uneven.	
	DOOR	
	Rusty but operable. Medium overhaul required.	
8.3	**SUMMARY AND COMMENTARY**	
	Extensive works to the roof covering and roof drainage will be required to address the continued excessive water penetration from above and behind. If the steps to the terrace at both ends are to be continued in use they will require substantial repairs which will include a review and renewal of any waterproof membrane in them to protect the private and public vaults below. If a conserve as found policy is now to be extended to this structure there will be ongoing conservation repairs needed to the rest of the external fabric, but of a minor and cyclical nature. The most substantial other external works will relate to the treatment and isolation of embedded ironwork, and the continued control of vegetation. In common with the Egyptian Avenue and Circle of Lebanon there will be a need for a unified approach to the vault doors and gates, irrespective of their varying condition. To some the works will be significant, to others relatively superficial. The finish/colour will have to be carefully considered.	

	Internally we recommend engineer's advice on structural defects potentially compromising the brick vault, although these do not at present appear to be causing structural distress and they have been there a long time. Notwithstanding there will be some internal brickwork repairs needed after works to the roof covering, but we expect those to be localised and relatively minor. Other internal conservation will be in the form of interventions to control and manage the natural and slow decay of finishes and contents, in common with the overall conservation philosophy Any extensive internal works will be complicated by ecology matters (bats, birds and spiders) and concerns around health and safety. Any substantial building works within the vault chambers will involve working in close proximity to degraded coffins and remains, and the implications for working, protection and probably some removal will be considerable.	

D9a	**<u>CORY-WRIGHT MAUSOLEUM</u>** The Cory-Wright mausoleum stands high above the lower portal to the Egyptian Avenue, on a steeply sloping site approached from the upper perimeter path around the Circle of Lebanon. It was built in 1910 by architect George Nield (who had carried out work to Cory-Wright's house). It is listed Grade II. The mausoleum takes a simple gabled temple form, realised with Baroque details in white limestone with very high quality workmanship. It originally had gates between the projecting walls at the front, missing since the 1960's	
	 	
9a.1	EXTERNAL	
9a.1.1	ROOF	
	The roof is constructed in 3 tiers of stone slabs each side, and is generally in good order where seen on the RH side (facing the entrance). The left hand side could not be seen from any vantage point due to the falling ground. On the side seen there is what looks like a crack at the front end of the top tier of stone. This should be checked with access and repairs expected. The further side should be inspected from access equipment in due course.	
	 	
9a.1.2	WALLS	
	High quality ashlar masonry with very tight joints should be cleared of ivy, and access arranged to the uninspected LH side. All the visible parts are in excellent order. The only defect noted is a very long-standing displacement at the RH spring of the entrance arch, which appears to be stable.	

	A stone drainage channel at the base of the side walls needs to be cleaed out and the water discharge from it managed. The bronze gates are in very good order. The low walls flanking the entrance are in good structural order but some open joints and cracked stones need pointing.	
	 	
9a.2	INTERNAL The stone pitched roof is supported by a transverse arch at the mid-point. Walls are the internal face of the solid ashlar stonework. There are four gothic carved stone sarcophagi, two each side, and the floor is in marble mosaic. The doors are in bronze, and there is a quatrofoil window in the rear wall glazed in intense orange glass	
		
9a.2.1	CEILING The stone roof appears to have leaked at joints in the past but not recently, so staining is residual. This should be checked after prolongued rain. The stone is damp in patches on the north side, probably corrleating to moss and moisture retaining deposits on the roof outside.	
	 	

	The crack noted from outside has been pointed and a telltale fitted. This has not moved since that was done.	
		
9a.2.2	WALLS Similarly in good order. The displacement over the entrance arch has also been pointed and fitted with a telltale, and this is also stable. Signs of surface water migration on the stones is probably historic, or due to condesation (or both). The window glazing is bowed, but appears to be completely sound and secure. A few cracked panes are of no consequence	
		
9a.2.3	FLOOR The mosaic floor is in excellent condition, if a little dirty.	
		
9a.2.4	CONTENTS The four sarcophagi are in excellent condition, as are the small marble shelves for ashes urns above them.	
9a.3	SUMMARY The works carried out in the late 20th century have ensured that theCory-Wright Mausoleum remains in good condition. It is presented as a building in good repair, rather than a state of conserved decay, and as	

	such it must be maintained to that standard. The Cory-Wright Mausoleum is in good order, with only minor repairs needed. The parts of walls and ceilings not visible for inspection should be checked when access is available. It is most important that any defects relating to water run-off and disposal are addressed and this includes the ground channels each side.	
D9b	**<u>BEER MAUSOLEUM</u>**	
9b.1	**BEER MAUSOLEUM EXTERIOR** The Beer mausoleum, attributed in much of the literature and in the listing description to John Oldrid Scott, is now known to have been designed by Belgian architect William Bouwens van der Boijen, with J. O. Scott acting as executive architect. It is a work of exquisite craftsmanship and very sophisticated design, well deserving of its Grade II* listing.	
	 	
9b.1.1	ROOF The stepped spire has circular glazed lucarne openings near the top, and at the base the four curved pediments abut it, so that water only runs off at the corners. From a n inspection from ground level and the adjacent terrace it can be seen that the stonework is generally in excellent condition, with few if any open joints or defects. There is however developing plant growth in the crevices at the base of the spire, and these will be rooting in open joints unseen, and affecting the run-off of water. They need to be removed and defects addressed, and at the same time the whole structure checked from close inspection.	
	 	
9b.1.2	WALLS The rusticated, corniced and decorated walls are also free from substantial defects. Some old repairs remain stable.	

	At the plinth there is a substantial hole in the entrance steps which needs repair, with infill of any deeper void. Other pointing defects are very minor.	
	 	
	The offsets at low level should be kept free of moss which retains moisture. This is particularly relevant at the corners, where the run-off from the roof is not controlled so it runs down the walls and splashes on the base. This relates to dampness inside and a review of details at roof level is recommended.	
		
9b.1.3	DOORS AND WINDOWS The cast iron doors are in excellent condition. Glazing is fitted from within. The lunette windows have pierced stone screens glazed in clear glass on three sides. On the foutrth side, over the door, it has glazing ain a cast iron frome. This was not inspected closely, but appears to be in good order. Any work including access to this should include review and redecoration.	
		
9b.2	**BEER MAUSOLEUM: INTERIOR** The interior is spectacular, with walls and dome inlaid with marble and mosaic, and 3 carved sarcophagi on marble steps, the central one with a carved monument over it depicting the deceased girl with an angel.	

	  The interior of the spire is visible through an oculus at the centre of the dome. The floor is of intricate inlaid marble tiles.	
9b.2.1	DOME AND SPIRE No structural defects could be seen from ground level, and the mosaic decorations appear in good order. The limestone around them however shows signs of localised wetting, some perhaps ongoing, and that would correspond with the plant growth at the base of the spire, and run off to the corners. There is a small puddle under one area (back left corner) which adds to the supposition that water ingress is happening and should be addressed. It can be seen through the central hole in the dome that there is a space between it and the spire above. We understand that any water penetration to the spire (which has happened in the past) collects around the perimeter of the dome in an undrained channel of sorts, and can only escape by soaking gently through to the cornice below. This correlates with what we see from inside.	
	 	
9b.2.2	WALLS The limestone here also shows staining from being wet in the past, but now for the most part it is dry. This should be verified by monitoring after prolongued rain. Any defects that need addressing are outside, or at the lunette windows if the glazing leaks.	

	One marble panel has eroded as a result of salts action from wetting, but that is now dry.	
		
	At the base there is concentrated staining and damp in the four corners, and there the stone faces are affected by salts and potentially frost. Mitigation may involve some revision of water run off at high level.	
	 	
	Even when dry staining will remain, and that can only be mitigated, even in part, by poultice cleaning.	
9b.2.3	FLOOR The floor has a few cracked tiles in the way of the entrance, but these are well fixed and stable.	
		
9b.2.4	DOORS The cast iron doors are in good order. Some os the glazing fixings need repair. The glazing is fitted with a gap arpound it, so it has not sealed the space, but ventialtion should be considered as there is a substantial risk in the mausoleum of damaging condensation.	

9b.2.5	MONUMENTS The three sarcophagi are in very good order. There is some moisture migrating in to them from damp walls, but not to make them defective. One (RHS) has a small area of cracking ot one carved support, which could be from an embedded ferrous fixing inside it.	
	 	
9b.3	**BEER MAUSOLEUM: LOWER SECTION, UNDERCROFT**	
	  	
9b.3.1	GENERAL	
	The basement vault under the Beer Mausoleum accommodated its burials. It appears to be structurally independent from the Circle of Lebanon but is entered from it through an arch and a small forecourt between Le Bas Vault (OC8) and Hughes Vault (OC9). It has a single square vaulted space with a deep arched alcove on 3 sides, each with a plinth and 2 shelves. The fourth arch has the gated arch entrance from the Circle of Lebanon. In the central vault there is a circular opening from the mausoleum above, blocked with 2 stone slabs. The vault and the walls are in limewashed brickwork. 2 of the coffin shelves are sealed with rendered panels.	
9b.3.2	VAULT	
	No cracks or apparent defects and relatively dry. The two iron bars supporting the stone slabs in the oculus are rusty and need treatment.	

	  	
9b.3.3	WALLS	
	Damp, particularly at the bottom where the limewash decorations are completely degraded. No structural defects. Some loss of pointing to faces. Stone arch to entrance is in good order inside. Shelves sound but damp at the walls and wet at the base. No contents other than potentially in sealed voids. Some loose material stored inside appears to come from this building and others.	
	  	
9b.3.4	FLOOR	
	Concrete screed. Damp but sound and level.	
9b.3.5	GATES	
	Open iron gates, rusty but operable. Medium overhaul required.	
9b.4	SUMMARY The works carried out in the late 20th century have ensured that the Beer Mausoleum remains in good condition. It is presented as a building in good repair, rather than a state of conserved decay, and as such it must be maintained to that standard. Concerns focus on the continued prevention control and and mitigation of water ingress at high level and as a result of run-off, as it is that that is having the only significant detrimental effects on the building interior. A round of minor cleaning and repair is overdue to the spire and roof, and consideration should be given to improving water discharge points to carry the water clear of the building. Following those works, and a period of environmental stabilisation, the cleaning and conservation of surfaces inside the building can be considered.	

	The only defects noted to the internal features is small breakage of one stone support to a sarcophagus, which should be tackled before the problem intensifies. To the lower parts of the building the conservation works needed are really bound up with those for the Circle of Lebanon, where the conservation philosophy is different. There and adoption of the principle of 'conserve as found' will inform a less interventionist approach, and the main issues will be repointing and structural stability of retaining walls and the management of water discharge from the roof of the Circle Vaults. The conservation of gates etc will follow the comments for the Circle of Lebanon, see 7.3 above.	

D9c	**<u>CHEYLESMORE MAUSOLEUM</u>** A square structure in white marble built in 1926 to a design by American architect Thomas Hastings of Carrere and Hastings. The marble has weathered outside to a light grey lightly textured finish with a slight sparkle. Ashlar masonry in a single skin is in huge blocks, with perfectly formed joints of 2-3mm. It is listed grade II.	
		
	The sides are plain below a large projecting cornice. The back elevation has two flat Ionic pilasters flanking two windows with cast iron grilles. The front elevation has two engaged but round Ionic pilasters set in antis either side of a pedimented door case. Above the cornice is a flat parapet, and the roof behind (apparently asphalt) cannot be seen. It is not clear where the rainwater discharge goes, but there is reportedly an internal rainwater pipe. The Cheylesmore Mausoleum was extensively restored in the 1990's, and this included renewal of the asphalt roof and the replacement of the coffered ceiling. It also included the glazing to doors and windows which changed the ventilation regime dramatically.	
9c.1	EXTERIOR	
9c.1.1	ROOF The roof should be inspected using access equipment when available. It should be assumed that there will be some work to be done. It is suspected that at least some of the moisture seen inside is from penetration at high level. Pattern staining to the wall below the cornice indicates that water is running through the joints to the cornice. A lead weathering to this should be seriously considered.	
	 	

9c.1.2	WALLS Extensive work in the early 1990's has left the masonry in good order, with no open joints. A tree impinging on the structure from the back should be cut back before it causes damage. Ivy growth should be strictly controlled	
	 	
	Where ground has fallen away at the base of the walls it can be seen that the stonework overhangs what appears to be a concrete base. Where this is cracked at the front RH corner it should be repaired, and perhaps rendered for a better appearance.	
		
	The steps are sound. Hairline cracking at the RH end and a small pointing defect in the middle.	
	 	

9c.1.3	DOORS The cast iron doors with open grillage have been glazed from within. They are in need of some overhaul and painting. There are paint blisters in both bottom corners with corrosion under them.	
	 	
9c.2	INTERIOR The interior has a coffered ceiling of unknown construction… it has mitred joints between the panels and is painted. Walls are the inside face of the single-skin ashlar, here in a honed smooth finish. Two sides have coffin-shelves also in marble. Only the bottom ones are occupied and they are sealed up with plastered brickwork. There is a large marble cross on a stepped base opposite the entrance door. Sone tiled floor in 2 colours.	
	 	
9c.2.1	CEILING The whole interior suffers from moisture, much of it probably condensation, but the ceiling shows particular signs of water ingress around the edge. The detailing and rain water disposal should be carefully reviewed, and the ceiling itself checked for defects from access equipment.	
		

9c.2.2	WALLS Algal growth and run-marks, but this could all be from condensation. To be reviewed after prolongued rain, before addressing ventilation issues and cleaning the surfaces. The coffin-shelves have staining indicating pooling of water, and to the sealed sections the plaster is degrading from moisture in places- but not a widespread failure.	
	  	
9c.2.3	FLOOR There is a crack across the floor, front to back just to the right of the door. This probably the result of failure of the concrete floor slab, and it should be monitored with engineers advice. It is not large and does not appear to be progressive. The most likely result is a need to manage adjacent trees.	
		
9c.3	SUMMARY Whilst the masonry is sound there is a real need to resolve the very damp internal environment, which should involve review of the roof condition (including the ceiling) and rain water disposal, cornice weathering and ventilation. The tree impinging on the structure should be cut back. Engineers advice should be sought regarding the crack in the floor. Otherwise the repairs needed are minor and of a cyclical nature. Minor stonework repairs to the front at low level should be undertaken before finishes and loose elements are lost. The interior will benefit hugely from cleaning, but only when the environmental conditions have been improved	

D10	**<u>HARTLEY MAUSOLEUM</u>** The Hartley Mausoleum takes the form of an Egyptian pylon, with battered sides rising to a big coved cornice, a stepped roof supporting a huge urn. It is all in hard red sandstone ashlar with very large stone units and tight joints. It is recorded as being designed c 1847 by Patrick MacDowell and is listed grade II.	
		
10.1	ROOF The stepped stone slabs should be checked from access equipment, and the stability of the urn verified.	
10.2	WALLS There is no significant displacement of the stonework and the monument is in excellent structural order. Some small open joints should be grouted and pointed as a precaution.	
	 	
10.3	PLINTH Steps and raised plinth are in satisfactory condition. Fine voided joints should be grouted and pointed.	

		
10.4	DOOR The four sides have matching recessed panels, and that facing the path is clearly a door, with an iron frame with a keyhole framing a stone inscription slab. The frame is very rusty and it was considered injudicious to try opening it other than in the context of repair works with skilled operatives on hand. This should be done in due course, and repairs will then involve treatment and repair of corroded ironwork and the reactivation of opening mechanisms.	
		
10.5	INTERIOR No inspection of the interior was possible. It should be inspected when the door is opened, but note that there is no known decorative interior for visitor or other regular access.	
10.6	OTHER The adjacent yew tree should be cut back so that it does not impinge on the monument structure.	
10.7	SUMMARY When access is possible the roof and interior of the structure should be inspected and this report updated. That will involve some invasive works and considerable risk to the door structure and mechanism, so potentially complex repairs should be anticipated at that point. No major repairs are needed to the external fabric beyond the grouting and pointing of voided joints, and the conservation treatment of the door ironwork.	

D11	**<u>MORGAN MAUSOLEUM</u>** A small square building in stone and brick, with classical details. Wall panels are in brick, between stone corner pilasters. Stone cornice and a stepped stone roof with draped urn finial. The iron door has boldly vermiculated quoining to the stone surround. It is unlisted, author unknown, c 1854.	
	  	
11.1	EXTERIOR	
11.1.1	ROOF The roof was viewed only from ground level. Moss-covered and clearly leaking through the cornice joints, but there appears to be no displacement of stones other than in the rear right hand corner where ivy has rooted in the fabric. In this corner there is substantial displacement and open joints. Repairs are needed following proper and full removal of the vegetation.	
	 	
11.1.2	WALLS The stonework to walls is very eroded and the brickwork very stained, but below the cornice, any cracks are modest and repointing locally is all that is needed. The cast iron grilles to the ventilation openings on 3 sides have disappeared to two sides, and there are scant remains at the back. This remnant should be properly conserved against loss.	

	 	
11.1.3	DOORS The door is very 'patinated' but not intrinsically unsound. It should be made operable and conserved.	
		
11.1.4	STONEWORK The facing is delaminating to the main inscription on the plinth. This needs careful conservation repair before more is lost. The rendered brickwork below has lost much of the render, but that can be managed in decay.	
	 	
11.2	INTERIOR	
	No access. Limited view through the door grille. The structure is lined in stone as one would expect, with 3 tiers of stone shelves on each side wall. 	

	No particular defects could be seen, but there is some invasion by ivy etc. through the ventilation openings. Coffins on shelves remain mainly intact and ordered. It is reported that access is dangerous as the floor is missing completely, with a deep void exposed below.	
11.3	SUMMARY Even on a 'conserve as found' basis there is a need for significant work, the scope of which *might* increase following internal inspection. The works we can firmly predict will include removal of vegetation, stabilisation of loose masonry, stone conservation and shelter coating, brickwork conservation and repointing, reactivation of and repairs to the door, conservation of iron grilles. It may be considered to be of benefit to sort out what is a mess of collapsed shelves and coffins inside, irrespective of any *need* to do so in order to effect repairs to the building itself.	

D12	**<u>JANKOVICH MAUSOLEUM</u>** A square structure with debased classical details. Generally in white limestone, but with grey polished granite facing to the cornice course and detached corner columns. It is listed Grade II, author unknown, 1910. There is extensive ivy growth, picturesque, but becoming problematic.	
	 	
12.1	EXTERIOR	
12.1.1	ROOF The top surface of the roof cannot be seen from any angle, but it is clearly of stone, and the interior shows how the four low-pitched gables are formed with cleverly jointed stone units. It should be cleared, inspected and any defects attended to, but there is no sign of localised leakage from inside.	
	 	
12.1.2	WALLS Stone details, including carving, are dulled by erosion but that does not threaten structural stability. Joints are tight and movement negligible. The corner columns have a big offset over the capitals, now protected with leadwork.	
	  	

	A former window in rear elevation has been very crudely plastered over. Ivy growth should be better controlled. To conserve the mausoleum 'as found' without improvement the repairs will be limited to minor pointing and masonry repairs and substantial control of vegetation. Improvement of the treatment of the former window would be a benefit.	
	 	
12.1.3	GATES Wrought iron gates infilled with steel sheet have some corrosion, particularly inside and to the sheet overlay. These need conservation repair and repainting.	
	 	
12.1.4	STEPS In fair order.	
12.2	INTERIOR	
12.2.1	CEILING The ceiling shows no sign of localised water penetration, but there is some general dampness caused by slow run-off from an obstructed external surface. A light steel beam supports the ridge from side to side. It is vulnerable to corrosion, but only lightly affected. Long-cycle maintenance should include a pre-emptive treatment.	

	 	
12.2.2	WALLS The walls are in fair condition, other than the infill of the rear window with broken bricks, which is unworthy, but not unsound.	
12.2.3	FLOOR The floor in mosaic has no cracks, but a thin coating of what appears to be cement slurry has hastened loss of surface from individual tesserae. This is not an issue to use, but has very poor appearance. It may be difficult to reverse, but cleaning and conservation now will mean that it is more likely to survive in the long term.	
		
12.2.4	CONTENTS The two side walls have coffin shelves with 4 coffins and small boxes of pet parrot remains.	
	 	
12.3	SUMMARY The Jankovich mausoleum can and should be stabilised by control of the vegetation followed by minor and carefully considered repairs. These will include pointing and masonry conservation, repair and painting of the gates, cleaning and conservation of the mosaic floor. They could include the better replacement of the rear window infill.	

PART E: LEGISLATION AND NOTES

HERITAGE PROTECTION

All of the buildings included in Volume 2 of this report, other than the Morgan Mausoleum, are listed at Grade I, II* or II. Any works involving the fabric of the structures other than repairs on a demonstrably like for like basis will be subject to Listed Building Consent, and the LPA can be expected to set the threshold for that very low. Applications should be made to the Borough of Camden, and will be subject to the usual public and other consultations.

Although applications concerning Grade II buildings can be and are normally dealt with by the LPA without statutory consultation with Historic England, their involvement in the project involving the whole site makes it all but inevitable that HE will be involved in applications for anything but the most minor works. HE will be a statutory consultee to grade II* and grade I buildings.

It will be important that the strategic documents for Highgate Cemetery in terms of planning and heritage embrace the nuances of each building and differences in conservation philosophies and design approaches for different assets. In the case of some structures the approach can vary even between parts of the same structure.

BUILDING REGULATIONS

For the funerary structures we expect any Building Control remit to extend only to structural safety, and possibly access which should be considered by a site-wide strategy and is not addressed by this report.

SUSTAINABILITY

None of the structures addressed in Volume 2 offer any habitable accommodation, so issues of sustainability in use are not applicable.

ACCESS AND EQUALITIES

This report does not address accessibility or equalities issues, which should be the subject of separate consideration and strategic planning.

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PART F: EXECUTIVE SUMMARY

There is a summary of the condition of each structure at the end of the applicable section:
D5.4, D6.4, D7.3, D8.3, D9s.3, D9b.4, D9c.3, D10.7, D11.3, D12.3.

Conclusions vary so much between buildings that no generalisations can be made, and the reader is directed to those sections.

It is concluded that generally the works carried out in previous programmes of conservation have been broadly successful with the exception among the structures included here of the roof of the Terrace Catacombs, where we propose that a strategic review is needed followed by works of significant renewal. In all cases there is a need for some ongoing conservation repairs and maintenance, but only one building, the Morgan Mausoleum, is considered to require fundamental conservation repairs starting, as it were, from scratch.

Access for this survey has been limited by an inability to open a large number of vaults. We recommend that an early programme of opening up and further inspection should be carried out, and the report reviewed and updated following further inspections. It is however recognised that these works, *in themselves*, may be sufficiently invasive and carry risks of damage that makes them the subject of discussion at least with the heritage authorities, if not applications for listed building consent. The opening of corroded doors may inevitably lead to a need for their immediate repair, and a strategy and specification for repairs, protection and finishes to doors, gates and other ironwork should be in place ready for that.

Only when full inspection has been possible will the specification of all repairs be possible, but this report identifies the limitations in respect of each structure.

It will be essential that all works to the fabric of the buildings take into account the historic character, materials, construction and details of the buildings and follow best conservation practice for the specification of repairs, alterations and additions to the fabric. In places this will be complicated by retention of later layers of the construction history, as the constraints they impose may differ from or conflict with the earlier layers.

Further stages of work will include:

- A programme of door repairs and opening-up works to facilitate completion of the survey process.
- The carrying out of further surveys, including the completion of this condition survey, the survey of some areas by structural engineer, and ecology and other surveys.
- Discussions with the project team and HCT regarding the allocation of priorities and funds to the repair and further conservation of the structures.
- It may be necessary to carry out invasive investigation of some structures before repairs can be specified.

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Director

HIGHGATE CEMETERY

INSPECTION AND REPORT ON THE CONDITION OF BUILDINGS AND STRUCTURES

VOLUME 3
PARTS 13 to 21: FURTHER MAUSOLEA

Issue 1
December 2022

WEST SCOTT ARCHITECTS
The Studio 3A Bath Road Bedford Park London W4 1LL

CONTENTS OF REPORT

PART A - PARTICULARS OF SITE AND INSPECTION

BUILDING	Highgate Cemetery
LOCATION	Swains Lane, Highgate, London
INSPECTING ARCHITECT	John Scott RIBA AABC, West Scott Architects The Studio, 3A Bath Road, Bedford Park, London W4 1LL Tel. 0208 995 4275, email: studio@westscottarchitects.co.uk
DATE OF INSPECTIONS	January, February, March 2022 (Kelman, Rosa, Otway, Da Silva, Guerrier, Foster) December 2022 (Dalziel, Pocklington, Strathcona)
WEATHER CONDITIONS	Generally wintry, periodically wet and fairly cold
PREVIOUS INSPECTION	No report available
LOCAL AUTHORITY	Borough of Camden
CONSERVATION AREA	The cemetery is in Highgate Village conservation area
LISTED	Various. See CMP etc and section headings below

A2: GENERAL NOTES

A2.1 This report is based on findings of an inspection made from the ground and readily accessible parts of roofs and parapets. It is emphasised that the inspection has been purely visual and that no enclosed spaces or inaccessible parts such as boarded floors, roof spaces or hidden timbers have been opened up for inspection. We are therefore unable to report that any such part is free from defect.

A2.2 This report is NOT a specification for the execution of the works and may not be used as such. When ready to proceed with any part of the recommended repairs, the Trustees should obtain appropriate specification and other documents as necessary and arrange for the work to be carried out by a suitable contractor. It should be noted that all repairs and alterations to the buildings are subject to listed building consent and will require the appropriate approvals. As listed buildings this may involve consultations with Local Authority, English Heritage, The Victorian Society, and others for any works affecting the character of the building.

A2.3 No inspection for or of asbestos has been carried out for this report, and nothing concerning the condition or presence of asbestos or other hazardous materials should be inferred from any references in it. The reader should refer to the site Asbestos Survey Report.

A3: NOTES FROM INSPECTION BRIEFING:

A3.1 Asbestos:	The whole site was surveyed in 2014 and a register is in place. No asbestos has been identified in the structures concerned.
A3.2 Previous report:	Any previous report is not available.
A3.3 Recent works:	None in the West Cemetery since the major conservation programme of 1990-2000, which did not include very substantial works to any other than Otway. In the East Cemetery we are told there have been works to Dalziel and Strathcona within the last 20 years, but have seen no detail of this.
A3.4 Scope of inspection:	Detailed survey of exterior and accessible parts of interior to identify any defects requiring repair.
A3.5 Ecology:	A full ecological survey will be essential to define the constraints on any construction work. Bats and rare spiders are known to use the various structures on the site.

PART B: GENERAL DESCRIPTION OF THE BUILDINGS

Highgate Cemetery was developed from 1837 by the London Cemetery Company, and the early development of the site was overseen sequentially by architects Stephen Geary and James Bunning.
The site of what is now the West Cemetery was extended by the opening of the East Cemetery in 1856.

In the mid 20th Century Highgate Cemetery entered a long period of decline, which by the 1960's saw it all but derelict. The cemetery closed in 1975, and was rescued by the establishment of the Friends of Highgate Cemetery who have managed the conservation and operation of the cemetery since then.

For a full description of the site and buildings please refer to the Conservation management Plan, the Statements of Significance and HCT publications by others.

A major programme of repairs, supported by grant funding from English Heritage and others, took place between 1986 and 2000. From 1990 this programme adopted a policy of conserving the funerary buildings and structures in a stabilised version of their semi-ruined state, and the conservation of the landscape has followed a similar policy balancing the spirit of place with the survival of important monuments and structures.

This report has drawn on anecdotal accounts of the conservation works from 1990 to 2000 by the then architect for the site Robert George, operating successively as an employee of Caroe and Partners, then Clague Architects and finally independently as Robert George Architect.

PART C: SCOPE AND LIMITATIONS OF THE REPORT

C1: BRIEF
The brief for this survey and report is limited to the major buildings on the site, defined as

See volume 1:
D1: Chapel building, the reinstatement of pinnacles and cupola
D2: Chapel building
D3: North and South Lodges
D4: Colonnade

See volume 2:
D5: Cuttings Catacombs
D6: Egyptian Avenue
D7: Circle of Lebanon
D8: Terrace Catacombs
D9: Mausolea; Beer, Cory-Wright and Cheylesmore
D10: Hartley mausoleum
D11: Morgan mausoleum
D12: Jankovic mausoleum

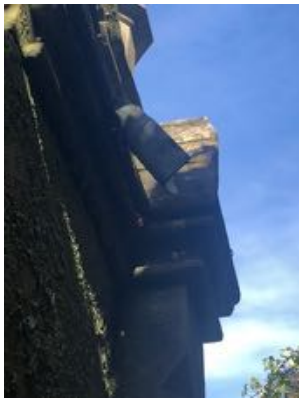
This volume 3:
D13: Kelman mausoleum
D14: Rosa mausoleum
D15: Otway mausoleum
D16: Da Silva mausoleum
D17: Guerrier mausoleum
D18: Foster mausoleum
D19: Dalziel mausoleum
D20: Strathcona mausoleum
D21: Pocklington mausoleum

C2: USE OF THE REPORT:
The report is intended for and directed to use to inform the scope and content of a major programme of repairs and capital works to be completed in 2025 or 2026. The narrative of the report is therefore concentrated on substantial conservation or long-cycle repairs, rather than the day to day management of building maintenance.

C3: ACCESS LIMITATIONS:
It has not been possible to inspect the interior of all of the buildings covered in this report. Some are sealed permanently shut, and some are inaccessible due to door or other defects. A programme of immediate opening up works is strongly recommended, and a supplementary survey of the further spaces in due course.

Briefing on H&S for the survey from HCT was clear in that safe access was possible to the various vault and catacombs spaces, but that none of the coffins, coffin debris or contents should be touched. In practical terms this has meant that each vault space where access has been possible has been opened, and the interior viewed from the doorway or immediately inside. Where a full view of wall or floor surfaces, or an assessment of the structure of shelves supporting coffins, would rely on a more intimate or tactile survey, or on moving coffins for a better view this has not been done. In some cases this has unavoidably limited the survey.

PART D: REPORT ON THE CONDITION OF THE FABRIC

D13	**KELMAN MAUSOLEUM** The Kelman Mausoleum is an independent stone structure standing in the Outer Circle of Lebanon, opposite to vault IC18 and in front of retaining wall (2). There is a gap of some 600mm to the retaining wall. Designer unknown. Built by Millward & Co. It is in a gothic style. 	
13.1	ROOF Pitched roof in stone slabs with parapet upstand all round. It drains to parapet gutters each side which are full of leaf mould so construction is unclear. These in turn have tiny spouts through the rear parapet which cannot be anything but blocked.   Np specific defects were noted in the stone roof.	
13.2	WALLS Stonework itself is in fair order with no obvious threat to structural integrity, but with open joints, old repairs (including bronze cramps) and a lot of moss and surface patina. There is one big breakage on the hidden rear elevation and this should be addressed by any programme of repair.	

	 Moulded details to the entrance and corners are eroded and some exposed surfaces are unstable and still eroding.   Such problems as the fabric has are mainly derived from the unsatisfactory rain water disposal, and it is suggested that a change needs to be made to make this more robust, followed by a more diligent basic maintenance regime. Care of masonry needs to include renewal of pointing, and removal of any rooted plants. Some stone fragments are detaching at plinth level and these need to be refixed. Some stones suffering surface loss will benefit from shelter coating.	
13.3	DOOR The iron door is sound enough. No access was possible	
13.4	RAILINGS Perimeter railings on each side have sound ironwork but there are defects to the stone plinths which will need some careful repair to maintain the status quo.	

	Vegetation needs to be kept under control and any plants rooting in the structure, including the perimeter wall, should be treated with an effective herbicide before they cause damage. 	
13.5	INTERIOR No access was possible and no view of the interior can be had. It is strongly recommended that the repair needs are reviewed when access has been achieved and the interior inspected.	
13.6	SUMMARY The repairs needed are modest but essential to maintaining the present condition.	

D14	**<u>ROSA MAUSOLEUM</u>** Situated in the outer circle, adjacent to Kelman Mausoleum and in design terms a smaller version of it. 	
14.1	ROOF Stone slabs and ridge appear sound from above, without open joints or displacement.   The roof slopes drain to a parapet channel each side, lined with cement mortar, there is substantial build up of leaf mould in the parapet channels. From each roof channel a tiny pipe is supposed to discharge the accumulated rainwater. It has no chance of doing so adequately and looks very poor.	

	 This needs to be properly reviewed and a new more robust and elegant arrangement constructed. Parapets are much affected by mortar loss from joints, and one big displacement in rear right-hand corner relates to a crack in the wall below it. 	
14.2	WALLS The walls are in limestone ashlar slabs and are generally sound, other than some mortar loss. However, the big and probably progressive crack in the rear right-hand corner needs urgent conservation repair, as the consequences of collapse are unpalatable.    Here the movement has also disrupted the sealing and fixing of the adjacent inscription slab. This, and others, may need refixing and grouting of voids.	

	Other decoration has a few breakages but remains sound and crisp for the most part. All the open joints need repointing.	
14.3	DOOR The entrance door, in slate, was once badly broken and repaired with an 'honest repair' in 1990.   There is some loss of infill mortar from this repair which should be renewed before the problem escalates.	
14.4	RAILINGS Perimeter railings on each side are in good order, but some attention will be needed to keep the stone kerbs stable.	
14.5	INTERIOR The is no internal access, and no prospect of any with the door sealed.	
14.6	SUMMARY Again, the repairs needed are not extensive, but include structural repairs and improvements to rain water disposal that are essential to maintaining the present condition. Conservation work is needed to maintain the well conceived repairs to the slate door which is a striking feature.	

D15	**<u>OTWAY MAUSOLEUM</u>** A triangular structure, mainly subterranean, but on a sloping site so with a façade wall to the lower sides. There is a small temple structure over the entrance.   The flat roof, at ground level at the upper end, is in asphalt, surrounded by a kerb with railings. It has three large rooflights in plate glass.	
15.1	WALLS The masonry is in good order, with a few exceptions. There are cracks and open joints in the parapet coping and some slight mortar loss from joints, particularly close to the ground, needing minor repairs.  	
15.2	ROOF The asphalt roof, renewed within the last 20 years including the replacement of the rooflights which were previously of glass blocks in a concrete matrix, is not in a bad condition as a whole, but upstands are pulling away from the rooflight kerbs, the abutment to the entrance pavilion and in other places, and revealing that there is neither a key nor a weathering detail.	

	  This could and should be improved, using a contractor with sophisticated skills in asphalt work. It drains to a simple outlet at the 'uphill' end.	
15.3	RAILINGS The perimeter railings have suffered some loss of detail, and were restored with some replacement quite recently. They are in good order. 	
15.4	DOORS The cast iron doors are in good order, but marred by the fitting, now redundant, of cheap steel bolts. Ideally these should be removed and damage made good. 	

15.5	INTERIOR The interior of Otway Mausoleum is not a particularly happy sight. It is constructed with buttress walls between (and supporting) the coffin shelves, and from them, steel beams span across the space, supporting what appear to be stone slabs.  The walls are all rendered and painted white, including the shelves. The floor is elaborate, in marble mosaic, with stone steps down from the entrance. It is clear that water continues to permeate the structure, particularly around the rooflights, which leak.  Other surfaces are much affected by condensation. The stone roof slabs show no defects, but the steel beams, painted white, are corroding fast, and intervention is needed to arrest or slow down the decay, as they will shortly become structurally incompetent.  	

	Rust staining defaces many painted surfaces, and rust jacking is starting to affect render/concrete bearings of the beams. The walls have green algal growth, but probably more from condensation that leakage. Ventilation should perhaps be reviewed as well. The mosaic floor and steps are sound, but much affected by water ingress, manifested by green slime and dirt. 	
15.6	SUMMARY The Otway Mausoleum will need significant work if it is to remain structurally sound. At a minimum, this will include comprehensive (and more successful) treatment of corroding steelwork, further roof works to address leaks, and probably a better regime of ventilation. Decorative (paint) finishes might be specified that are more tolerant of the damp environment.	

D16	**<u>DA SILVA MAUSOLEUM</u>** Stone structure in a primitive 'Greek Temple' idiom with battered corner columns and a low-pitched pedimented roof.  The structure has been much disrupted by tree growth invading the structure itself, some but not all of it now removed. This has left some serious structural issues that need to be addressed by conservation work of some urgency.	
16.1	ROOF The roof, fundamentally of two large stone slabs, has been disrupted at the back, where the rear pediment coping has displaced with a big open joint that has plants growing in it. The front pediment has displaced less, but the woody growth is stronger and more worrying.   Stone strips mimic lead rolls, and those have broken and slipped down the roof slope. The rear part of the ridge roll is missing. All of this needs to be secured and stabilised, and open joints secured and pointed, even if the situation is simply to be maintained as status quo. Movement in the roof relative to the walls has caused some fracture and loss of the cornice moulding at the eaves.	

16.2	WALLS The wall structure of corner columns engaging the edges of wall 'planks' has moved a lot to both the right-hand corners, where the columns have rotated and displaced, leaving the walls insecure.  At the top of the rear right-hand column, the cornice has broken and fallen away, undermining the pediment section. Much loose stonework is on the point of falling apart and being lost. Even without any intention to reinstate, structural repairs are needed to stabilise the structure, and conservation of the stonework to keep water and plant growth to a minimum.  	
16.3	INTERIOR The door is sealed, so interior inspection other than by photos through a small vent. This shows that coffin shelves have collapsed and the bottom of the vault is full of debris.  	
16.4	SUMMARY There are significant repairs needed to secure this building for even a short-term future, and some holding repairs may be needed before a main programme if historic fabric is not to suffer further unnecessary loss.	

D17	**<u>GUERRIER MAUSOLEUM</u>** Square classical mausoleum with detached corner pillars. Roof is a pediment to all four sides which is in stone slabs and drains to the corners. All in white limestone, except the corner pillars which are in polished granite. 	
17.1	ROOF Top surface not visible, but it is clear that established vegetation is rooting in the valleys and construction joints.   This needs to be cleared, inspected, repaired and kept clear. It is clear from the front pediment that at least one stone joint is opening up. Once the masonry has been cleaned it will be possible to assess the necessary repairs, which are not yet expected to be extensive.	
17.2	WALLS No structural defects and all the stonework details are sound and crisp.	

	  A few joints have mortar loss, notably at cornice/pediment level, where some plants rooted in open joints are starting to have an effect by displacing the masonry. The vegetation is as yet young and light, but it will not take long to become woody and disruptive. It needs to be removed and the pointing made good before that happens.	
17.3	DOOR Door is a single plate of steel with a lot of surface corrosion, but nothing that makes it insecure.  Superficially it might appear that it needs to be eased and opened, but it was reported (Victor Herman) that fact it conceals the fact that the building has been sealed up in blockwork and it will not be that simple. If the interior is to be conserved it would be appropriate to reopen and replace the door.	
17.4	INTERIOR No interior inspection was possible	
17.5	SUMMARY Only minor repairs are needed to maintain the good condition of the building.	

D18	**<u>FOSTER MAUSOLEUM</u>** A small Gothic mausoleum with design and details of a reduced version of the Rosa Mausoleum.  	
18.1	ROOF From the best view achievable, the tiered stone slabs appear sound enough, but the parapet channels are completely choked with burgeoning vegetation, and there is no sign of any outlets.  The roof channels need to be cleaned, reviewed and a new detail implemented for rain water disposal. The stonework to the parapets is very wet where the moisture is held at parapet level, and full-scale deterioration can only be a matter of time.	
18.2	WALLS Then stone work to the walls is in good order, with no open joints, and with crisp details. The entrance has a crude door of light steel sheet, with incongruous cheap door hinges which are all rusty and flimsy. It conceals blockwork infilling the opening so the door itself is entirely superficial. It would otherwise be inadequate.	

	Any intention to conserve the interior should include replacement of the doors.	
18.3	RAILINGS The perimeter railings on each side are very charming, but in the last stages of collapse. Conservation is essential and urgent if they are to survive, and they are worthy of it. Part of the railings lie among the debris inside.  	
18.4	INTERIOR The interior was viewed by photographs through the rear vent. The door is blocked internally in concrete blocks. Coffins and shelves have collapsed and there is also other debris. A scene of devastation. 	
18.5	SUMMARY The continued good condition of the fabric will be prolonged by a timely regime of vegetation control. There would be substantial conservation benefits to the repair of the interior, door and the perimeter railings	

D19	**DALZIEL MAUSOLEUM**	
19.1	EXTERIOR Square structure with angled corners, each with two free-standing Tuscan columns. The whole exterior is in polished pink granite.  The plain walls are all rusticated with deep recessed joints. Stepped plinth all round, with matching paving extending some 2.5m and 7 steps to the entrance. Bronze doors and decorations to oculus window.   The flat roof has a parapet all round and without access to it the location of a hidden rain water pipe could not be identified. There is a central circular rooflight with a glass dome.	
19.2	INTERIOR Vaulted interior entirely clad in white marble. Floor in small marble mosaic, also white. 	

	There are decorative bronze grilles to vents in 2 rear corners. The mausoleum houses three white marble sarcophagi.	
19.3	ROOF No inspection of the roof was possible, but it was reportedly renewed a few years ago and previous leakage stopped. The principal concern is the rain water disposal, and the roof and rain water pipe(s) should be checked and overhauled now, and regularly thereafter. There are no clear indications of leakage within. Access should be made regularly and the roof and outlet kept clear of debris and vegetation., and the first opportunity should be taken to record the condition of the roof covering	
19.4	EXTERNAL STONEWORK The exterior stonework of the building itself is in excellent condition, with no signs of significant structural movement and very few open joints.  The retaining wall in rough hewn stonework surrounding the plinth paving does have substantial cracks in the west and south face. That in the south face has the remains of woody plant roots in it. These need repair and probably some precautionary reinforcement.   There are other open joints. Repairs now will be minor, but these will need ongoing monitoring.	

	The paving and steps are generally in good condition with some minor movement historically, but stone slabs displaced not more than 8mm.   However, there are extensive open joints and a programme of regular minor repairs should delay the onset of any serious defects.	
19.5	DOORS AND WINDOWS Bronze doors and fittings are all in excellent condition and the doors open easily. It is clear that there were once bronze gates to the steps, which are now missing. 	
19.6	INTERIOR Interior shows signs (staining) of historic water ingress but not of structural defects. Any loss of jointing material to the marble is very minor.  	

	The floor is in good order, with some water staining, but no loose tesserae. It would certainly benefit from cleaning by a conservator.  The two flanking sarcophagi are in good order.   The central one has loose and slightly displaced and cracked slabs in the top, but repair to address these will be minor.	
19.7	SUMMARY The building is in good order and with careful regular attention to roof and rain water disposal should b-continue to be so. Some limited repairs are needed to the surrounding paving and low walls. The interior would benefit by some cleaning and minor repair but is essentially sound.	

D20	**STRATHCONA MAUSOLEUM** A rectangular structure in pink granite, with a front portico that has attached columns. The roof, also in granite, is at low pitch, extending back from the front pediment.  The arched front entrance has oak doors. There are three arched windows in the rear wall, glazed in stained leaded glazing. Simpler in design than its neighbours Dalziel and Pocklington, the external walls are in huge polished granite slabs with corner pilasters of the Tuscan order. The interior has a shallow vaulted roof, cornice and pilasters, all in pink granite.  The floor is a mosaic with white marble tesserae and a black border pattern, with a central access panel to the vault below. A single stone step around the building extends to broad steps and landing in front of the doors.	

20.1	EXTERIOR The external structure and fabric appear sound. Extensive repairs to the stone roof in quite recent past have stopped any water ingress, but the legacy of earlier decay remains with lime leaching visible at masonry joints. The joints themselves are all sound.   There are rusty steel channels mounted above and below the rear windows which are the remains of a security shutter. These are unsightly, and likely to cause damage, so they should be removed.   Windows are in good order, with just one cracked pane. Mesh guards, recently replaced, are in excellent condition. The step around the building has open joints and displaced stones. These do not threaten the wider fabric but need repair.   The entrance steps have similar minor defects and will also benefit from some attention.	

	The oak doors are in good order. Neat repairs at the bottom rail will need some care in due course.  	
20.2	INTERNAL CONDITION The internal fabric reflects the external one, all is sound except for the lime-stained legacy of old defects. The floor is stained in places but otherwise sound.  The Strathcona Mausoleum is used for visitor displays, and has been fitted with electric lighting. While this touches the historic fabric lightly, it is not elegant. 	
20.3	SUMMARY The building is in good order, with minor actions for long term care. The external steps and plinth are the only parts in need of invasive or significant repair. The interior would benefit from an improved electrical installation and some conservation cleaning.	

D21	**<u>POCKLINGTON MAUSOLEUM</u>**	
21.1	EXTERIOR A rectangular structure, oriented north/south, with a low-pitched roof reflecting the portico to the south façade. All, including the roof, in is pink granite polished to a shine.   Four Tuscan columns to the front façade are grouped in pairs either side of the bronze doors. A lunette window to the north end. Walls are horizontally rusticated with corner pilasters. Two ledger plaques to the east side.  The entrance steps, also in pink granite, define a low perimeter wall. The interior is similarly classically detailed in pink granite, with a barrel-vaulted ceiling and two transverse arches.   The floor is elaborately patterned in coloured ceramic mosaic, with a central lifting panel for access to vault below. The interior is empty.	

21.2	EXTERNAL CONDITION The external masonry of the mausoleum, including the roof, is in excellent condition with no signs of structural movement or open joints.   The same is largely true of the double-stepped plinth, but there are a few open joints and vegetation is starting to invade it, a process best nipped in the bud!  The perimeter wall and steps are sound enough in themselves, but there has been some substantial movement of the steps and joints between them and the plinth have opened by nearly 40mm. This needs to be monitored and stabilised. The steps remain entirely usable.   The roof appears to be sound, and there are no signs of recent water ingress inside. The bronze doors are in excellent condition.	

21.3	INTERNAL CONDITION The interior is similarly in excellent order. The interior of the roof shows signs of previous repair, which all remains sound.   There is a 1mm crack across the floor on either side of the opening panel but there are no loose tesserae and it looks long-standing.  It should be monitored, and if any deterioration sets in it should be repaired before any fabric is lost or compromised. The doors open freely, but there is a loose panel at the bottom of the right-hand door, previously repaired with pop rivets and deserving of better repair. 	

	There is broken glass in the rear window, which is glazed in a thin brass matrix. This should be repaired. 	
21.4	SUMMARY The are minor repairs to window glass, steps and doors to be carried out in the care of the is building, but the primary fabric is structurally sound and in good condition. Regular care should keep it so.	

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PART E: LEGISLATION AND NOTES

HERITAGE PROTECTION
Of the buildings included in Volume 3 of this report, the mausolea to Rosa, Otway, Guerrier, and Dalziel are independently listed II. The rest are protected by the listing of the cemetery as a whole as a Grade 1 Historic Park and Garden.

Any works involving the fabric of the structures other than repairs on a demonstrably like for like basis will be subject to Listed Building Consent, and the LPA can be expected to set the threshold for that very low. Applications should be made to the Borough of Camden, and will be subject to the usual public and other consultations.

Although applications concerning Grade II buildings can be and are normally dealt with by the LPA without statutory consultation with Historic England, their involvement in the project involving the whole site makes it all but inevitable that HE will be involved in applications for anything but the most minor works.

It will be important that the strategic documents for Highgate Cemetery in terms of planning and heritage embrace the nuances of each building and differences in conservation philosophies and design approaches for different assets. In the case of some structures the approach can vary even between parts of the same structure.

BUILDING REGULATIONS
For the funerary structures we expect any Building Control remit to extend only to structural safety, and possibly access which should be considered by a site-wide strategy and is not addressed by this report.

SUSTAINABILITY
None of the structures addressed in Volume 3 offer any habitable accommodation, so issues of sustainability in use are not applicable.

ACCESS AND EQUALITIES
This report does not address accessibility or equalities issues, which should be the subject of separate consideration and strategic planning.

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PART F: EXECUTIVE SUMMARY

There is a summary of the condition of each structure at the end of the applicable section:
D13.6, D14.6, D15.6, D16.4, D17.5, D18.5, D19.7, D20.3, D21.

Conclusions vary so much between buildings that no generalisations can be made, and the reader is directed to those sections.

In all cases there is a need for some ongoing conservation repairs and maintenance, but only two buildings, the Otway and Da Silva Mausolea, are considered to require fundamental conservation repairs.

Access for this survey has been limited by an inability to open some buildings. We recommend that an early programme of opening up and further inspection should be carried out where possible, and the report reviewed and updated following further inspections.

Only when full inspection has been possible will the specification of all repairs be possible, but this report identifies the limitations in respect of each structure.

It will be essential that all works to the fabric of the buildings take into account the historic character, materials, construction and details of the buildings and follow best conservation practice for the specification of repairs, alterations and additions to the fabric. In places this will be complicated by retention of later layers of the construction history, as the constraints they impose may differ from or conflict with the earlier layers.

Further stages of work will include:

- A programme of door repairs and opening-up works to facilitate completion of the survey process.
- The carrying out of further surveys, including the completion of this condition survey, the survey of some areas by structural engineer, and ecology and other surveys.
- Discussions with the project team and HCT regarding the allocation of priorities and funds to the repair and further conservation of the structures.
- It may be necessary to carry out further investigation of some structures before repairs can be specified.

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