

The Museum Building of Trinity College Dublin

A Model of Victorian Craftsmanship

CHRISTINE CASEY & PATRICK WYSE JACKSON

Editors



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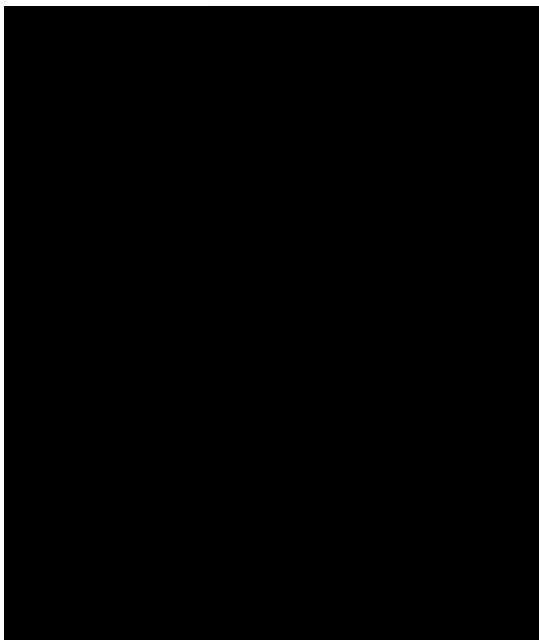
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Introduction

Christine Casey & Patrick N. Wyse Jackson



The Museum Building

The Museum Building of Trinity College Dublin is an acknowledged masterpiece of Gothic revival architecture and the single-most influential building of the Victorian period in Ireland. Its genesis and erection owe a great deal to initiatives that sought to improve exploitation of Ireland's natural resources, and to enhance the abilities of craftsmen through education and practice. Without such developments it is unlikely that this building would have been conceived and realized.

In Ireland, during the eighteenth century and earlier, there was an emerging interest in, and understanding of, Ireland's geological foundation.¹ Institutions such as the Royal Irish Academy, the Royal Dublin Society and the short-lived Dublin Philosophical Society propagated geological debate.² Close links between

¹ Patrick N. Wyse Jackson, 'Fluctuations in fortune: three hundred years of Irish geology' in J. Wilson Foster & H. Chesney (eds), *Nature in Ireland* (Dublin, 1997), pp 91–114. ² G.F. Mitchell, 'Mineralogy and geology' in J. Meenan & D. Clarke (eds), *RDS: the Royal Dublin Society, 1731–1981* (Dublin, 1981), pp 154–69; G.L. Herries Davies, 'Astronomy, geology, meteorology' in T. Ó Raifeartaigh (ed.), *The Royal Irish Academy: a bicentennial history, 1785–1985* (Dublin, 1985), pp 247–74; K.T. Hoppen, *The common scientist in the seventeenth century: a study of the Dublin Philosophical Society, 1683–1708* (London, 1970).

geology and engineering were emerging by the early 1800s and enterprising landlords sought to develop mineral and dimension stone resources on their estates other than simply to meet the requirements of their own building projects. The Kilkenny Marble Works was established in the mid-1700s³ while the ground for the quarries of Connemara marble was first broken in 1820.

A rapid acceleration of information gathering and its exploitation occurred from the mid-1800s. The railway commissioners for Ireland⁴ published in 1839 a large-scale geological map of the country, authored by Richard Griffith, one of the commissioners.⁵ Shortly afterwards, in 1845, the Geological Survey of Ireland was established and benefitted from the large-scale maps produced by the Ordnance Survey of Ireland in the previous two decades.⁶ Within the universities professional subjects such as engineering and geology were being formalized through the establishment of professorships.

Concurrently, there was a rise in educational provision, through the opening of the Queen's Colleges in Belfast, Cork and Galway, and the Catholic University of Ireland. Robert Kane opened the Museum of Irish Industry in Dublin and lectures in popular scientific subjects were open to both men and women, which demonstrated Kane's forward and egalitarian thinking.⁷ At the same time quarry owners, skilled stone masons, craftsmen and carvers were coming to the fore and their influence on architectural and decorative practice grew. The role of quarry owners and operators in this interdependent chain of suppliers, designers and clients was vital. Opening up of quarries of new materials such as Cork red limestone presented problems related to the physical characteristics of the stone that prevented, initially, removal of large blocks of the material. Through innovation, quarries overcame such petrological limitations and fabricators were able to turn and polish a diverse pallet of stone in stone mills driven by water on the rivers Corrib, Nore and Shannon. Stone masons and carvers were able to avail of educational opportunities through enrolling in the various design schools that opened their doors from the mid-1800s.

Infrastructure in Ireland opened up through the continued upgrading of the inland waterways, which were eventually supplanted in the latter decades of the

³ Tony Hand, '“Doing everything of marble wch can be done with it”: some descriptive accounts of the Kilkenny Marble Works', *Irish Architectural and Decorative Studies*, 11 (2008), 74–99. ⁴ *First report of the commissioners appointed to inquire into the manner in which railway communications can be most advantageously promoted in Ireland* (London, 1837). ⁵ G.L. Herries Davies, 'Notes on the various issues of Sir Richard Griffith's quarter-inch geological map of Ireland, 1839–1955', *Imago Mundi*, 29 (1977), 35–44; Patrick N. Wyse Jackson, 'Sir Richard John Griffith (1784–1878): a portrait in oils by Stephen Catterson Smith (1806–1872)', *Irish Journal of Earth Sciences*, 26 (2008), 45–51. ⁶ G.L. Herries Davies, *North from the Hook: 150 years of the Geological Survey of Ireland* (Dublin, 1995). ⁷ Clara Cullen, 'The Museum of Irish Industry, Robert Kane and education for all in the Dublin of the 1850s and 1860s', *History of Education*, 38:1 (2009), 99–113.

1800s by the railway network.⁸ This allowed for the ease and inexpensive movement of a great number of varieties of stone, both decorative and dimensional, from their quarry sources across the whole of Ireland. Victorian architects availed of such polychromatic material, whereas eighteenth-century architects in Dublin relied on grey to black limestones and pale imported Portland stone.

The Museum Building was designed by the Cork firm of Deane and Woodward in 1853, on a modified plan by the College architect, John McCurdy. It was built to house lecture theatres, staff offices and a drawing school for the school of engineering, and two museums for the College's geological and engineering collections. Apart from its traditional envelope of Ballyknockan granite and Portland stone, it represented a radical departure from the late Georgian classicism that prevailed at Trinity College until the 1830s. In contrast to three- and four-storey ranges with parapets, diminishing sash windows in shallow reveals, and minimal classical detailing, the Museum Building spreads horizontally across the south side of New Square in two monumental storeys with grandiose groups of round-headed windows whose piers reveal the mass of its four-feet deep walls. The clusters of windows were embellished with carved capitals on the ground floor and sumptuous panelled pilasters on the upper storey, and the long planar façades were defined by grandly scaled mouldings at base, sill, corners and eaves, and by roundels of coloured stone on three of the elevations. In Britain it was greeted as 'a bold experiment to give life and variety to a mass of building now peculiarly sombre and heavy'.⁹

The clusters of windows reflected the arrangement of the plan that had tall lecture theatres and a drawing office, and the two large museums, grouped around a double-height, top-lit, atrium-like hall containing an imperial stair and two tiers of arcaded vestibules on each side, all executed in a spectacular combination of pale imported limestone and variegated coloured stone or marble. These sumptuous polychrome materials were as precocious as the monumental arcaded style. A contemporary periodical noted the architects' intention to employ native decorative stone while Sir Thomas Deane praised the 'good example now set by the college in using native marbles' as a spur to the 'proper development of the resources of the country'.¹⁰ The profuse vegetal and zoomorphic carving and its creative method of execution by predominantly native carvers was also considered an innovation, 'the only assistance afforded being verbal instructions from the

⁸ Charles Wye Williams, *Observations in an important feature in the state of Ireland and the want of employment of its populations with a description of the navigation of the River Shannon* (London, 1831). ⁹ *The Ecclesiologist*, 15 (1854), 154, quoted in Frederick O'Dwyer, *The architecture of Deane & Woodward* (Cork, 1984), p. 139. ¹⁰ *Dublin University Magazine*, 42:248 (Aug. 1853), 233, quoted in O'Dwyer, *Deane & Woodward*, p. 150; TCD MUN/P/2/340, Letter from Sir Thomas Deane to Revd Dr Sadlier, 4 May 1855, quoted in Eve Blau, *Ruskinian Gothic: the architecture of Deane & Woodward, 1845–1861* (Princeton, 1982), p. 39.

architects as to the arrangement by geometrical forms'.¹¹ Here was a radical new architecture whose round-arched façades alluded to the north-Italian Gothic of Venice and Lombardy, whose craftsmen were praised as unfettered virtuosi and whose spectacular polychrome interior constituted a homage to native building stone. While cosmopolitan and avant-garde critics applauded the vigour and novelty of the design, others were bemused; 'the College structure seems to have provoked more criticism and elicited a greater variety of opinions than any building erected of late years in the Irish metropolis'.¹² A range of contemporary stylistic descriptions of the building from Romanesque to Renaissance reflected both its novelty and resistance to easy categorization. Yet within less than a decade of completion it was regarded as the catalyst to a new architecture; 'to this remarkable building and this alone we trace the great revolution in public taste which has since taken place'.¹³

Scholarship

If the seminal role of the Museum Building was clearly recognized by contemporaries its significance has been somewhat overshadowed in later literature by Deane and Woodward's Oxford Natural History Museum, whose botanical and geological programmes, unlike those at Dublin, are richly documented.¹⁴ The foundational texts on the Trinity College Museum Building emerged in the 1970s and 80s amid a flowering of scholarship on Victorian architecture following decades of modernist indifference. This 'neglected masterpiece' was now 'thrilling', 'glorious', 'a national monument'.¹⁵ These accounts are characterized by the analysis of architectural form and the discovery of built and theoretical exemplars for the Museum Building's complex eclecticism; 'the fascinating looking-glass world of Victorian architectural borrowing'.¹⁶ A second prominent theme was the new autonomy of the craftsman in this project and its important implications for Victorian building practice. The built exemplars identified included a range of Venetian palaces illustrated in contemporary architectural periodicals and in John Ruskin's *Stones of Venice* of 1851–3. However, the lightweight verticality of the Venetian palaces, and their greater proportion of void to solid was contrasted with the weightiness of the Museum Building whose elevations were shown to reference the Italianate design of Charles Barry's Reform Club in London published in 1839, and perhaps also the

¹¹ *The Builder*, 12 Aug. 1854, quoted in O'Dwyer, *Deane & Woodward*, p. 149. ¹² *Building News*, 4, 26 June 1857, quoted in Blau, *Ruskinian Gothic*, p. 171, n. 26. ¹³ *Dublin Builder*, 15 May 1866, quoted in Blau, *Ruskinian Gothic*, p. 45. ¹⁴ Michael Hall, 'What do Victorian churches mean? Symbolism and sacramentalism in Anglican church architecture, 1850–1870', *Journal of the Society of Architectural Historians (JSAH)*, 59:1 (2000), 78–95, at 79. ¹⁵ Edward McParland, 'Trinity College Dublin – III', *Country Life*, 4166 (20 May 1976), 1310–13, at 1311; Douglas Scott Richardson, *Gothic revival architecture in Ireland*, 2 vols (London & New York, 1983), vol. 2, p. 405; Blau, *Ruskinian Gothic*, p. 79. ¹⁶ Blau, *Ruskinian Gothic*, p. 32.

Rundbogenstil (literally round-arched style) then prevalent in Bavaria and Prussia.¹⁷ It was further suggested that the round-arched Lombard style fused in the Irish imagination with a 'long tradition of lithic sensibility' exemplified in the Hibernian Romanesque, then being rediscovered by a nascent cultural nationalism.¹⁸ Might this explain the wholesale appropriation of the round-arched style by Irish architects and builders in banks and elite houses from the 1860s?

Yet, above all other identifiable influences, John Ruskin's views on architecture and ornament, his taste for Lombardic or round-arched Gothic, his passion for geology and coloured marble, and his championing of the craftsman's creativity were seen to align most clearly with the achievements of the Museum Building. Ruskin, we are told, wrote to Woodward complimenting him on the building, and in 1861 on a visit to Dublin proclaimed it 'the first realization I had the joy to see of the principles, I had until then been endeavouring to teach'.¹⁹ He later recalled standing on the balcony of the building, admiring its carved foliage; 'I thought it beautiful and was very sorry I hadn't seen it before ... [Woodward] went where the dead leaves go'.²⁰ Since the 1840s, Ruskin had espoused a lyrical and creationist view of geology, architecture and craftsmanship, which undoubtedly informed the design and execution of the Museum Building. However, such is the scale, power and sustained impact of Ruskin's work that it has a propensity to overshadow or appropriate everything in its path. But, as acknowledged by Eve Blau in her study of 'Ruskinian' Gothic, precepts do not constitute real architecture, and the work of Deane and Woodward often had little to do with Ruskin's ideas.

The Museum Building's rootedness in the lives and works of its protagonists was developed in Frederick O'Dwyer's definitive work on Deane and Woodward which noted Sir Thomas Deane's geological interests and the burgeoning cultural ambition of Cork city and county.²¹ But the space between geology and architectural history was slow to be negotiated despite the close association of architecture and geology in the Victorian period. Unsurprisingly, geologists were among the first to pioneer a geological reading of Victorian architecture and gradually stone was embraced by architectural historians who were particularly absorbed by the symbolic associations of precious and polychrome materials.²² In

¹⁷ McParland, 'Trinity College Dublin – III', *Country Life*, 4166 (20 May 1976), 1310–13; Blau, *Ruskinian Gothic*, pp 32–3. ¹⁸ Richardson, *Gothic revival*, p. 435. ¹⁹ John Ruskin, 'The mystery of life and its arts', Dublin, May 1868, quoted in O'Dwyer, *Deane & Woodward*, p. 370. ²⁰ Quoted in O'Dwyer, *Deane & Woodward*, p. 546. ²¹ Ibid., pp 2–132. ²² Michael Hall, 'What do Victorian churches mean? Symbolism and sacramentalism in Anglican church architecture, 1850–1870', *JSAH*, 59:1 (2000), 78–95; Michael Hall 'G.F. Bodley and the response to Ruskin in ecclesiastical architecture in the 1850s' in Rebecca Daniels & Geoff Brandwood (eds), *Ruskin and architecture* (Reading, 2003), pp 249–76; Carla Yanni, 'Development and display: progressive evolution in British Victorian architecture and architectural theory' in B.V. Lightman & B. Zon (eds) *Evolution and Victorian culture* (Cambridge, 2014), pp 227–60; G.A. Bremner, 'In bright tints ... nature's own formation': the uses and meaning of marble in Victorian building culture' in J.N. Napoli & W. Tronzo (eds), *Radical marble* (London & New York, 2018), pp 72–92.

the wider narrative of Victorian architecture and science Deane and Woodward's Dublin and Oxford museums were seen as encyclopaedic representations of the natural world achieved through the union of science and art. Thus the bulk of the published narratives on the Museum Building are concerned with architecture as form and as the embodiment of concept whether aesthetic, philosophical or scientific.

Contents

The research project that has produced this volume has involved geologists and architectural historians and seeks to counter traditional emphasis on form and concept by focusing on the actual making of architecture. It thus aims to better understand the materials and methods of execution that translated Deane and Woodward's design from drawing board to reality. The book is arranged in five parts dealing respectively with materials, quarrying, design, craftsmanship, and the increasingly topical issue of conservation.

The pivotal role of the Museum Building in the development of Ireland's stone industry and the complex range of factors that enabled the extraction and marketing of coloured limestones and serpentine are considered in part one, while part two examines the Kilkenny Marble Works and the quarrying communities based in west Wicklow who provided granite, the staple building material of Dublin over the course of two centuries. This volume thus presents new archival findings on the quarrying, working and transport of Irish stone from the 1820s to the 1890s and as such is intended as a basis for further research.

The employment of materials in the Museum Building was inextricably linked to the design of the building whose complex eclecticism receives revised readings in part three of the volume. One of the great gaps in understanding of the building is the absence of drawings and documents for the concept and development stages of the design. This is here addressed by the elucidation of the sources drawn upon in the design, the remarkable sequence of alterations during construction and the ingenious design of the ventilation system. The brilliance of these solutions renders the mystery of Woodward's architectural formation all the more fascinating. Ruskin's predominant influence is questioned in favour of the Bavarian *Rundbogenstil* and a wide range of published, illustrated sources which clearly influenced the development of the design. In these readings architecture is as much about architecture as it is about concept. Observers of the Museum Building are often puzzled by the rows of foliated and stellar perforations in its string-course, interior elevations and ceiling soffits. These are the traces of a remarkable ventilation system designed by Benjamin Woodward whose design

is here fully described and analysed in the context of contemporary ventilation provision with intriguing implications.

The builder and carvers responsible for the construction of the Museum Building are the subject of part four. The O'Sheas, who dominated early narratives of the building as the epitome of Ruskin's untutored, creative artisans, are here subjected to more far-reaching analysis of contemporary artisan education. How was it that the fullest expression of the Ruskinian ideal should emerge from a tiny village in provincial Ireland? The cultural ambition of Cork city, flagged by O'Dwyer, is here further developed in an account of the means by which local stone carvers could acquire such remarkable skills. As one peer reviewer aptly observed 'art as well as nature was a source for their work'. Likewise the carvings by the O'Sheas and their associates on the Museum Building are subjected to morphological analysis of iconography and formal characteristics that take us beyond earlier published analyses. Less conspicuous though fundamental to the building's effect was its construction by the firm of Gilbert Cockburn, one of Dublin's leading building contractors whose career is here discussed for the first time. Cockburn's background in stone-cutting and carpentry and his previous employment on major public works projects drew him to the attention of Sir Thomas Deane who assured the board of Trinity College of the 'general perfection' of his work, and was not disappointed.

The final section of the volume deals with the afterlife of the Museum Building, recent conservation of the exterior, and the burgeoning field of antiquarian conservation in mid-nineteenth-century Ireland that illuminates both the antiquarian studies of Benjamin Woodward and the conservation ideas of John Ruskin. Through the activities of Woodward's antiquarian acquaintance, the Revd Robert Graves, the vicissitudes of conservation philosophy and activity in the period are explored, the tensions between the so called 'scrape' and 'anti-scrape' schools of thought, and the remarkable, though little discussed, volte-face in John Ruskin's own views on conservation. Woodward was a member of the Kilkenny Archaeological Society that pioneered a philosophy of minimal intervention in Ireland, influenced by avant-garde Oxford associates, which ultimately accorded with Ruskin's revised views. This is surely the climate that informed Woodward's spectacular study of Holy Cross Abbey and the extensive though as yet largely unknown antiquarian studies of the 1840s.

When completed in 1857 the Museum Building contained seventeen grandly scaled rooms grouped on two levels around the central hall. Since then it has been carved up vertically and horizontally into eighty-five rooms on five levels. This complex process is here charted and illustrated as a basis for future conservation activity. By contrast the exterior of the Museum Building has been unscathed by

additions or significant modifications though a century-and-a-half of polluted city air took its toll on the granite walling and the deeply undercut carving in Portland stone. The cleaning of the exterior undertaken in 2010–13 is documented and its rationale discussed in the context of current conservation philosophy. Its import has relevance for the interior whose Caen stone walls have weathered over time to a dull, if innocuous, grey. A watercolour of the interior painted in the mid-1850s by an anonymous artist shows the materials of the entrance and stair halls in their pristine state. The creamy Caen stone walls and Portland stone stair throw into spectacular relief the coloured marbles of the columns, stair rail and string-courses (fig. 5.5).

Themes

A number of dominant themes emerge from these wide-ranging studies that at once demonstrate the seminal role of the Museum Building as an exemplar for architecture and craftsmanship, and illuminate the collision of wider societal forces that determined its achievement. For a building so rich in traditional craftsmanship and historical association, the most remarkable feature of its inception is the impact of the industrial revolution in terms of the technology, transport and scientific innovations that enabled its design and construction. The opening of inland waterways, introduction of the railways and the use of steam power in shipping made possible the transport of stone from hitherto-inaccessible regions. Unsurprisingly, the architecture of eighteenth-century Dublin was characterized by materials readily accessible by land or by water; brick, Calp, Wicklow granite, Kilkenny and Meath limestone and Portland stone. Likewise, transport explains why at a particular moment Connemara marble became in the eyes of the world the defining material of Irish identity. The linkage of Dublin to the Shannon by the Royal and Grand Canals together with the Shannon navigation of the 1830s connected the western seaboard to the capital and enabled exploitation of limestone from Limerick, Cork and Galway together with the celebrated Connemara serpentine, while improved shipping routes to Liverpool and London brought Irish stone directly to the British market.

Traditional quarrying communities were obliged to compete; new roads and improved vehicular transport from Co. Wicklow permitted larger quantities of granite to be moved than heretofore. Communities were affected by the opening of new quarries and markets. Every Monday morning from April to October quarrymen walked across the Wicklow hills to new sources of income, spending only a day and a half of each week with their families. During the Famine, quarrying saved the communities here and elsewhere. Gifted stone carvers from

villages in Co. Cork trained and worked in Cork city and migrated to employment in Dublin, Oxford and Manchester, while carvers from London's building quarter at Lambeth migrated to Dublin, and quarry owners from Liverpool and New York leased quarries in Co. Galway.

This movement of materials and men was part of a wider industrial development of hitherto rural regions. In Ireland, an articulate economic patriotism jostled with hard-nosed international investment in developing the mining and quarrying industry, stone being but a minor player in the wider business of prospecting. The stage is populated by visionary engineers, scientists, entrepreneurs and architects whose energy and ambition still astound: Sir Robert Kane, George Wilkinson, the knight of Kerry, Charles Wye Williams, Samuel Haughton, Benjamin Woodward. Great events were catalysts to action. The rebuilding of Westminster Palace from the 1830s brought stone to the forefront of national debate and stimulated the promotion of local quarrying. The Great Exhibition of 1851 provided a showcase for Irish stone and instigated a series of Irish industrial exhibitions. The letter confirming the Museum Building commission for Deane and Woodward arrived just as the Dublin Exhibition opened its doors on Leinster Lawn in spring of 1853.

Technological innovation affected art as well as industry and science. From the 1830s chromolithography brought coloured images of Venetian and Islamic architecture into the drawing rooms of Britain and Ireland. Printed books brought the *Rundbogenstil* of the Bavarian court to the drawing boards of Co. Cork. The taste of a burgeoning middle-class audience was shaped by the passions of John Ruskin. Together, printing and travel made possible a new global appropriation of the world's natural and cultural resources. Museums, of architecture, geology, industry, art and natural science, classified and displayed these riches for public education. Photography captured the brilliance of the Museum Building's carvers for prospective English clients. Steam power enabled standardization in the cutting of stone and timber, thereby dictating the optimum dimensions of Dublin's elite drawing rooms.²³ Scientific understanding of ventilation caused the engineer-architect Benjamin Woodward to tackle the integration of services and aesthetics, which is still such a thorny issue in contemporary design. Indeed, one of the most intriguing questions to emerge from this volume is whether the vast central hall of the Museum Building was conceived of primarily as a container of air for the ventilation of teaching spaces.

In a study that consciously privileges materials and process over concept and design, the dangers of revisionism are rife. A counter-argument is provided by the

²³ Susan Galavan, *Dublin's bourgeois homes: building the Victorian suburbs, 1850–1901* (London, 2017).

French novelist Emmanuel Carrère who pokes fun at the bottom-up approach. ‘Modern scholars reject top-down versions of history. They prefer the evolution of the land registry and three-year crop-rotation to treaties, battles or the coronation of Napoleon ... their key concern is to play down individual contributions in favour of a disembodied, collective tradition. A work, they say, is the product of such and such a community, let’s not succumb to the naïve idea that it was conceived by one person’.²⁴ Carrère disagrees, ‘Of course it’s a product of a community ... but no matter how you look at it, at one point or another someone had to conceive it’. In the case of the Museum Building, with due deference to the Deanes, that person appears to have been Benjamin Woodward, an engineer, antiquarian and architect who in his thirty-eighth year produced a masterpiece hailed by contemporaries as a game-changer in terms of style, materials and craftsmanship. Besides the myriad of factors that influence their creation, exemplars are exemplary by virtue of their singularity, excellence and originality.

Following more than a century of disciplinary specialization perhaps the most striking feature of the Museum Building story is the cross-fertilization of industrial, scientific and artistic endeavour or ‘the noble interests of art and science’ as it was put on the opening of the building in September 1857.²⁵ The eloquence of Victorian geologists in describing the composition of stone would put modern scholars of all disciplines to shame, while Ruskin was as adept in the poetics of stone as in analysis of Turner or San Marco. Architectural historians acknowledge the lithic shortcomings of their discipline. Too much emphasis has been placed on concept over material and technology, for the most coveted and sumptuous building materials in the history of architecture are characterized by a deep complexity of geological composition and the distinctive properties of place are invariably dictated by local geology. It is hoped that this interdisciplinary exploration of a great Victorian building will stimulate a more integrated approach to the study of the built environment.

²⁴ Emmanuel Carrère, *The kingdom* (London, 2017), pp 337–8. ²⁵ O’Dwyer, *Deane & Woodward*, p. 151.