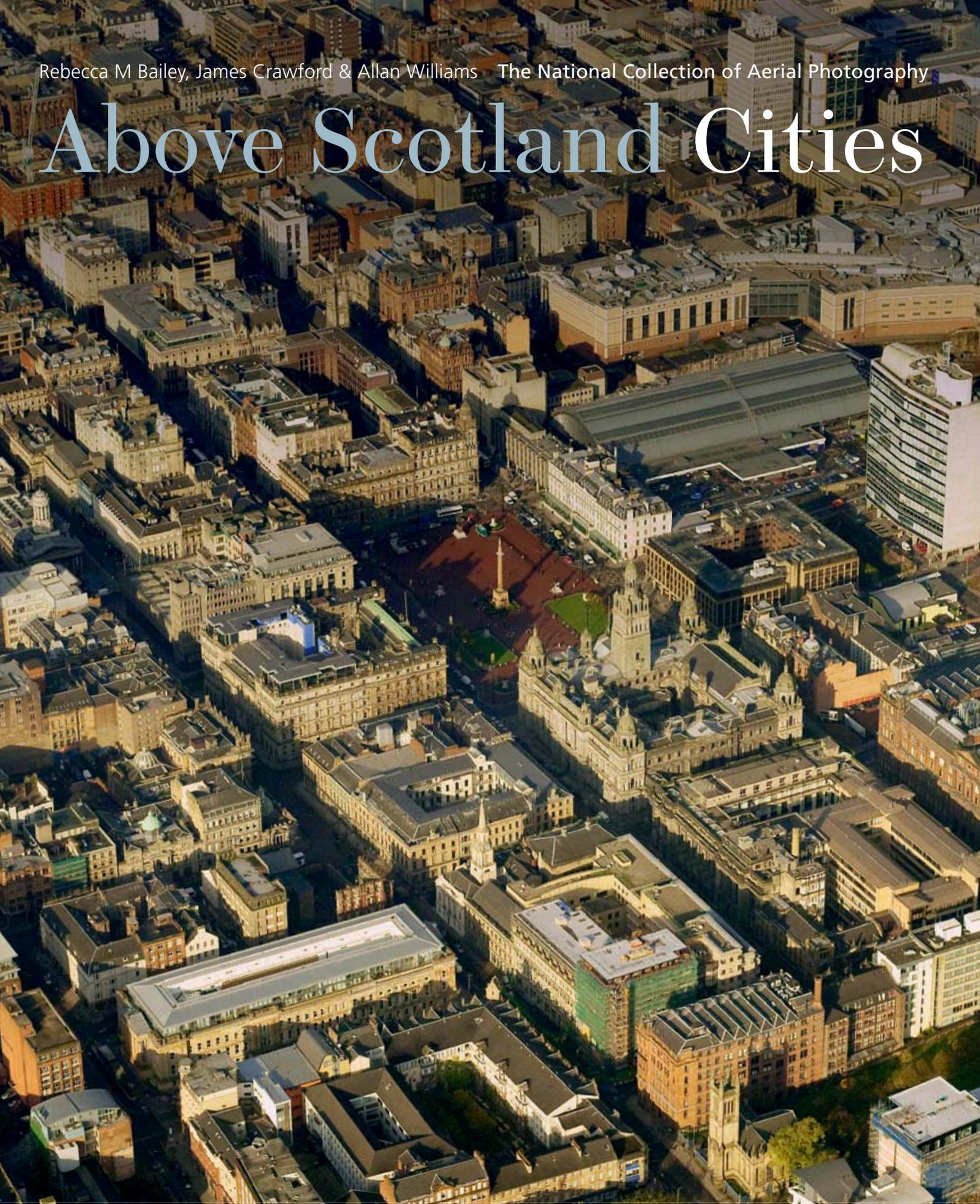


Rebecca M Bailey, James Crawford & Allan Williams The National Collection of Aerial Photography

Above Scotland Cities



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Frontispiece: A procession of colourfully-roofed
buses winds past the iconic edifice of Edinburgh's
Balmoral Hotel – originally opened in 1902 as the
North British Hotel. RCAHMS 2010 DP075889

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Born amidst the fiery clamour of the industrial revolution, modern cities created a new way of living, laying out giant maps of rapidly growing and competing architectures that surrounded – and often demolished – ancient cores grown organically over centuries. Pictured here in 1937, central Glasgow's great street canyons are ordered in a vast geometric grid

AEROFILMS 1937 53587





Introduction

On 18 October 1909, a special cable to the *New York Times* reported that Charles Lambert – a pupil of aviation pioneer Wilbur Wright – “left the Juvisy Aerodrome at 4.36 o’clock in a Wright machine, flew across Paris to the Eiffel Tower, circled it, and returned to his starting point, arriving safely at 5.25”. As the first ever aeroplane flight over a city, Lambert’s stunt caused an obvious sensation – and for one young Paris student watching from the window of his apartment, it was a spectacle never to be forgotten. Charles Edouard Jeanneret – better known as the iconic pioneer of Modernist architecture Le Corbusier – was entranced. In his 1935 book *Aircraft*, he summed up his youthful excitement at the unique possibilities offered by the aerial view: “The airplane carries our hearts above mediocre things, enabling human beings to glance down like Gods upon the worlds they have made.” Years later, he jumped at the opportunity to experience it for himself. “It is as an architect and town planner – and therefore as a man essentially occupied with the welfare of his species – that I let myself be carried off on the wings of an airplane ... to which end I directed the pilot to steer over cities.”

From the air, you can read a city. Urban stories are patterns and codes, puzzles best cracked by obtaining distance and height. At street level, cities are bewildering concepts, their true forms obscured by noise, chaos and an excess of detail. But by looking down from above, perpetual motion slows to stillness. Framed by their ancient landscapes, city origins that date back not thousands but millions of years become suddenly, strikingly, clear. Massed rooftops can be viewed like geological strata, architectural timelines of social, economic and political history.

For almost as long as pilots have circled high over the spires, towers and steeples of cities, photographers have been alongside, capturing the bird’s-eye view and bringing it back down to earth. In the National Collection of Aerial Photography, held by the Royal Commission on the Ancient and Historical Monuments of Scotland, a near century of aerial imagery comes together. Dating from the 1920s to the present day, these photographs represent unparalleled records of change, visual biographies of the nation’s constantly evolving urban environments. Every city’s story is one of growth, loss, prosperity, hardship, resilience and renewal. But none is quite the same. From the fortified volcanic rocks of Edinburgh and Stirling and the mineral coast of Aberdeen, to the trader river-plains of Inverness and Dundee and the manufacturing machine of Glasgow, unique tales emerge of communities, their landscapes and their architecture. These are tales of castles and cathedrals, royalty and religion, war and politics. There are medieval markets and custom-built New Towns, renaissance merchant ports and smoky, monolithic factory-lands. Modernist motorways crash through grand Victorian street plans, tower blocks rise and fall, industrial wastelands are repurposed for living and leisure. The stories go on; the urban fabric never stops shifting. And all the while, what Le Corbusier called “the airplane eye” stares down – recording from on high the fascinating lives of our restless cities.

For a long time power and influence in Edinburgh were determined by height. Here, with the city wreathed in thick mist and smoke, the cornerstones of society rise into clear air – the military, religion and government. Below the imposing fortress of the Castle, church steeples stud the skyline, while in the lee of Calton Hill, Thomas Tait's brand-new St Andrew's House positively sparkles with monolithic, Art Deco authority.

AEROFILMS 1949 R12112









RIGHT

Looking over the shadowy route of Union Street, the colossal granite facade of Marischal College dominates the city. Founded in 1593 by George Keith, Earl Marischal, as a Protestant alternative to Bishop William Elphinstone's 1495 King's College, the two rival faculties eventually came together as the University of Aberdeen in 1860. The College's original medieval buildings formed a large courtyard behind Broad Street, but, by the early nineteenth century, their condition had deteriorated considerably and in 1836 Archibald Simpson created a new quadrangle of white granite. The development was not finished, however, and from 1891 Alexander Marshall Mackenzie extended Simpson's structure spectacularly. Proposing a wholly new facade and an extension to the College's central tower, Mackenzie fashioned an extraordinary neo-gothic temple – a granite masterpiece of finely detailed stonework and monumental ambition.

AEROFILMS 1962 A107597

FOLLOWING PAGES

Surrounded by the rapid expansion of the nineteenth century city, St Nicholas Kirk remains today as an isolated fragment of New Aberdeen's original medieval burgh. Founded in the twelfth century, the dedication of the grand ecclesiastical building to St Nicholas – the patron saint of sailors – is indicative of the importance of the church to a trading community whose early livelihood depended almost entirely on the sea.

RCAHMS 2007 DP036417







Dundee

On 8 January 1893, at the extreme tip of the Antarctic Peninsula, the whaling ship *Active* came upon an unknown landmass among the ice-floes of the Weddell Sea. The *Active* was one of four vessels sent to investigate and hunt the whale population of the largely uncharted waters of the world's last, unexplored, continent. In naming the new island, ship's Captain Thomas Robertson resolved to honour the ambitious port that had launched this hazardous mission to the ends of the earth – Dundee.

By the nineteenth century, the influence and reach of Dundee was astonishing. The city was a bustling trading centre with commercial links across the world. Goods like linen, flax, iron, tar, copper and timber arrived from Northern Europe, fleets of jute ships voyaged to and from India, and the whalers of the north and south Atlantic sold the oil and precious baleen of their catches for huge sums of money on the busy quaysides.

Entrepreneurial in spirit and international in outlook, Dundee, like many merchant cities, was shaped by the cosmopolitan influences of foreign trade and spliced to the fortunes of the economy. A boom-and-bust city created boom-and-bust architecture. In its first golden age, Dundee was Scotland's foremost renaissance port, the curved, crescent-like streets of its maritime quarter – designed to keep the biting offshore wind away from the town centre – echoing the layout of the trading guild sea-towns of Northern Europe, from Copenhagen in Denmark to Königsberg in Poland. Merchants lived in style in grand townhouses adorned with painted galleries, and residential properties lined the Seagate, their garden walls washed by the Firth of Tay.

Over two hundred years later, it was the turn of the Victorians to make Dundee in their own image. At the start of the nineteenth century a major harbour development on reclaimed land – the work of the renowned civil engineer Thomas Telford – had increased the volume of mercantile traffic, but had removed Dundee from its original shoreline. As the 'Juteopolis' began its muscular expansion, brooding masses of mills and foundries encircled the medieval and renaissance core, and railways burst through the town to further separate it from the sea. This rapid industrial expansion transformed the fabric of Dundee, reducing the old centre to smoky, disease-ridden slums occupied only by the poorest citizens. With typically decisive Victorian vigour, the 'City Improvement Act' of 1871 saw this dilapidated core almost completely reconstructed. The civic body pursued an unflinching vision for a new Dundee: clear transport routes would be carved through the cramped city centre, and the likes of Commercial Crescent and Whitehall Street would be recast as elegant boulevards in the style of Milan and Paris. The trader ethos of the renaissance remained in spirit, but not in stone.

Such radical changes have characterised the history of urban Dundee. It is a cityscape that rises and falls like the tides. When called upon to act, the city fathers

Slowly but surely, modern Inverness reaches out into the surrounding landscape, its suburbs inching towards the wide mouth of Loch Ness. Here the city as gateway and borderland is most vivid, as the massed ranks of tiny houses fade out beneath the implacable, furrowed brow of the Great Glen's looming mountains.

RCAHMS 2007 DP024919









LEFT AND ABOVE

Thought to have been fortified from at least Pictish times, Stirling Castle's first recorded royal connection came with the death of King Alexander I in 1124, who also dedicated its original chapel. Beseiged, sacked and rebuilt numerous times, today it is a battle-scarred monument to a nation's turbulent history, a structure of fragmentary architecture ranging from Robert II's

imposing North Gate – dating from 1381 – to the extensive eighteenth century Outer Defences, created to withstand the threat of the Jacobite Rebellion. The Town Wall – seen here as a thick line of trees – was strengthened considerably amid the turbulence of the late sixteenth century, “for resisting our auld innimeis of England” as the burgh fathers said in 1547. Built of

giant whinstone boulders, the Wall once continued its curve around the foot of the town, but over the centuries has been subsumed and replaced by modern growth.

[RCAHMS 2010 DP079007](#)

[RCAHMS 2010 DP079040](#)





Three-dimensional Cities

For the better part of a century, the view from above has been guiding architects and planners, presenting a perspective of the city as a single organism, a living panorama. As urban environments have risen from hills, valleys and river plains, they have created new topographies, with artificial peaks and canyons formed by the spires, towers and facades of many hundreds of years of competing architectural visions. Anyone looking at the modern city is set a clear challenge by the complex variables of these hybrid landscapes, and a number of techniques have been devised to help make sense of our fragmentary urban histories. Perhaps most remarkable of all of these is the use of aerial photography to study the landscape in three dimensions.

By taking a series of vertical aerial images in quick succession – with each photograph overlapping by at least 60 per cent with the one before and the one after – it is possible to create an exceptionally detailed visual model. With the help of a binocular instrument called a stereoscope, the human brain is able to process the coinciding imagery to perceive depth, scale and elevation: the third dimension. This simple technology has been in use in one form or another since Victorian times – initially popularised in the 1850s for portraiture – but became a military specialism during the First World War. Stereoscopic interpretation of aerial imagery emerged as one of the most vital intelligence tools for strategists, allowing the detailed identification of enemy activity and enabling the planning of everything from surgical commando raids to landing entire armies on frontline beaches.

Following the Second World War – when the production of reconnaissance photography was taken to a near unimaginable scale – the technology was adapted for the reconstruction and re-imagining of the nation. RAF squadrons that had previously flown photographic reconnaissance missions across wartime Europe turned their unique skills towards the home front – including creating the Scottish Office Air Photograph Library. From the late 1940s, the men and women tasked with creating the blueprint for a new Scotland were able to draw on the resource of a library of aerial photographs that covered the country in its entirety. As the image collection grew, it increasingly allowed city planners to see the country in three dimensions. This library has continued developing and is now a publicly accessible part of The National Collection of Aerial Photography.

Today, the photographs provide a unique insight into the changing fabric of Scotland's cities. Archive aerial imagery digitised at high-resolution can be manipulated to create stunning three-dimensional representations – with exaggerated vertical scale – of both iconic urban landmarks and specific moments in the history of a city. By using the enclosed 3D viewer – with the red filter over the left eye and the cyan filter over the right – Scotland's cities rise up out of the page, from the imposing rocky heights of Edinburgh and Stirling to the Victorian street plans of Dundee and the geometric block-valleys of central Glasgow.

Discover Scotland's cities from above

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