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Visitors to Manchester cannot fail to notice the city's building boom - the view out from the city centre in every direction is punctuated by the lift shafts of new apartment blocks and their attendant tower cranes. In a visible and painful paradox this vertical construction frenzy is accompanied by growing numbers of homeless people at street level (Williams 2019). Seen from the perspective of the street the glittering glass towers have nothing to offer: they could as well be jostling for skyline dominance in Vancouver, Dubai or Shanghai.

Readers of *disP* who make a city tour to Manchester will want to see the new development and try to grasp its perverse logic. It has to be understood at three scales. The high-rise apartment tower is a global product, linked to world-wide investment markets, and driven by a transnational elite of signature architects (Ponzini 2019) and the lure of celebrity (Alaily-Matar et al 2019). The research of Jonathan Silver at the Urban Institute in Sheffield illuminates the extent to which new construction in Manchester is being financed through global capital and marketed to investors around the world (Silver 2018). While a similar logic of financialisation can be witnessed in many cities, north and south, Manchester's combination of historical circumstances has enabled it to take exceptional advantage of the process, for reasons explained below.

The second scale for understanding the apartment boom is within a national policy narrative. Britain's welfare crisis is a direct deliberate consequence of the actions of Westminster governments over the past ten years. Austerity policies imposed in the

aftermath of the financial crash of 2008 have bitten deep in welfare budgets, and for reasons explained by Goering and Whitehead (2017) municipal rental housing has taken a disproportionate share of the cuts. Local authorities have been obliged to look to the private sector to fill the gap. All over Britain, urban developers are being permitted to exploit their sites more intensively in the hope of increasing the leverage of in-kind contributions to councils' depleted capital programmes. Besides, since the primary source of local government revenue is a tax loosely based on the value of residential property, permitting extra units can seem to make fiscal sense.

Both the transnational and domestic factors are clearly at work in the Manchester case. But so too are some considerations that are particular to the city. Manchester has longestablished networks of practitioners and developers, a unique political environment and a distinctive design culture (Hebbert 2010, 2013). Local actors are responsible for most of the ongoing transformation of the city skyline, and their current interest in skyscrapers has a back story. This is the dimension I propose to explore in a city tour with a chronological flavour, spanning the past three hundred years with a zig-zag route via various structures which - in their time - have dominated the Mancunian skyline. Sites designated with a capital letter are shown on the map at Figure 13.



fig.1 South-west Prospect of Manchester and Salford by Robert Whitworth, engraved by John Harris, 1734. (source:

https://johannes.library.manchester.ac.uk/luna/servlet/detail/Manchester~91~1~26

O752~117615:South-west-prospect-of-Manchester-and-Salford accessed 5 August 2019, by kind permission)

To start in pre-industrial times, figure 1 shows Robert Whitworth's 1734 prospect of Manchester and its neighbour Salford across the River Irwell. Just three buildings rise above the huddle of roofs: from left to right they are the spire of Salford's Trinity Church, the red sandstone tower of Manchester's fifteenth-century Collegiate Church of St Mary - now the Cathedral, [A] - and the original cupola of the church of St Ann (1712). St Ann's lost its cupola later in the eighteenth century and because of recent skyscraper development its squared-off tower no longer holds the skyline at the west end of St Ann's Square [B], but the Cathedral tower continues to dominate the long straight vista down Deansgate. With its spacious interior and superb late-mediaeval carved-oak choir stalls, complete with witty misericords, the Cathedral remains the best starting point for visitors to Manchester. Equally essential is a visit to the adjacent collegiate buildings where Karl Marx and Friedrich Engels sat together in an alcove of the venerable Chetham's Library through the summer of 1845.



fig.2 Mills along Union Street Ancoats, sketched by Karl Friedrich Schinkel in 1826 (source: Oxford Archaeology North 2007, p.80)

Engels lived and worked in Manchester for almost twenty years and his *Die Lage der arbeitenden Klasse in England*, published in Leipzig in 1845, was the most vivid account of the transformation wrought by industrialisation on class relations and the urban fabric.

Manchester's first steam-powered factories for textile spinning had been built by Scottish entrepreneurs and engineers who migrated from Kirkcudbrightshire and Galloway to

Manchester in the last decades of the eighteenth century. Their gigantic mills, placed alongside the canals for water transport westward to the sea and east over the Pennine

Hills, excited international attention. Figure 2 is a sketch made in 1826 by Karl Friedrich

Schinkel, Prussian Court Architect, of the mills built by four of these Scottish pioneers
James MacConnel, John Kennedy and the brothers Adam and George Murray - alongside the

Rochdale Canal in Ancoats [C]. These monumental structures - as big as his Berliner Schloss, according to Schinkel - have now been converted to contemporary flats, bars and work-spaces and can be visited in a ten-minute walk from the Cathedral.

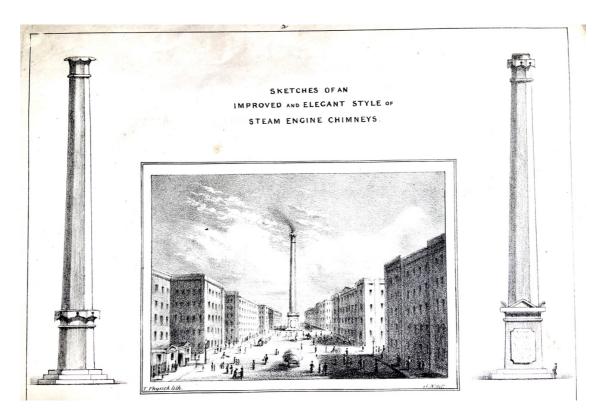


fig.3 James Nasmyth's 'Improved and Elegant Style of Steam Engine Chimneys' (source: Fairbairn 1836, facing p.37)

Even taller than the mills in Schinkel's sketch were the brick chimneys of the steam-engines that powered them. Another Prussian visitor, the factory commissioner Johann Georg May, explained that 'the hundreds of factories in Manchester . . . tower up to five or six storeys in height. The huge chimneys at the side of these buildings belch forth black coal vapours, and this tells us that powerful steam engines are used here' (Hunt 2009 p84). The celebrated Scottish millwright Sir William Fairbairn (1789-1874), builder of many Manchester factories, expressed the hope that industrialists would invest in even taller chimneys connected by underground flues, beautified to make axial townscape features, as drawn by his friend James Nasmyth (figure 3). Such a device, he wrote, would be 'a joint-stock chimney having a grand outlet to the atmosphere for every atom of gas generated within a given distance of its base' (Fairbairn 1836 p43). Naturally nothing came of a notion so contrary to the spirit of competitive capitalism. Each of the many hundreds of mills built in and around Manchester

during the nineteenth and early twentieth centuries had its own chimney (Williams & Fairnie 1992). The boosterist 1888 trade directory *Manchester of Today* proudly depicted the urban skyline as a grove of smokestacks under a permanent canopy of smoke - pollution spelling prosperity (figure 4).

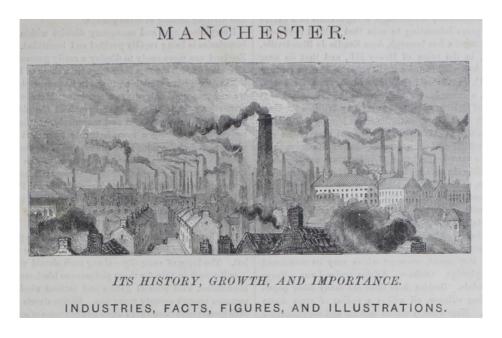


fig.4 Skyline frontispiece from *Manchester of Today* (1888) trade directory in Chetham's Library (source: https://library.chethams.com/collections/digital-resources accessed 5 August 2019, by kind permission)

While factories can be converted to post-industrial uses, chimneys cannot, and most have been demolished. The chimney-studded industrial sky-line depicted in the trades directory and later painted by L.S. Lowry has vanished, leaving only solitary survivors. One can be seen at Murray's Mill in Ancoats, and another a half-kilometre to the south at Vulcan and Albion Mills beside the Ashton Canal. A little way up the Rochdale Canal the Victoria Mill in Miles Platting retains a tall central chimney with a corbelled top and Italianate dressings [D], beautified as Sir William Fairbairn desired. Another more sinister column dominates the landscape to the north of the Cathedral: this is the central shaft of Strangeways Prison [E],

designed by Alfred Waterhouse in 1868. Functionally it serves as a ventilation device rather than a smoke flue, but its minaret-type design gives it the ominous appearance of a watch-tower scanning the city just as the gaolers in their panoptikon hub watch over the six radiating wings of cells in the prison below.



fig.5 Manchester Town Hall (1877) in a watercolour perspective the architect Albert Waterhouse submitted as Diploma Work to the Royal Academy in 1887 (source: Cunningham and Waterhouse 1992, Plate 1)

In 1868 Waterhouse began work on a nobler monument to Victorian government - Manchester City Council's Town Hall **[F]** in Albert Square. Even taller than the Strangeways Prison shaft, its clock tower rises to 87 metres (figure 5) and its hourly chime can be heard through all the city centre. Waterhouse was a student of John Ruskin and his European Gothic idiom encouraged a vertical flourishing of spires, crockets, chimney-pots and finials. The Town Hall is expertly planned in terms of its spatial arrangement around a central courtyard on a narrow triangular site, and brilliantly conceived as a contribution to skyline

and streetscape in equal measure (Hebbert 2009). No visitor to the city should miss the chance to visit this expression of Manchester's Victorian greatness, and just a fifteen minute walk away, the same architect's tower and quadrangle of the University of Manchester [G] on Oxford Rd (1870-1898). And incidentally, a detour to the rear quadrangle reveals another variant on the theme of an ornamental chimney, is this case one that combines the functions of a smoke stack for the boiler with ventilation outlets for the former Manchester Medical School (fig.6).



fig.6 Combined ventilation shaft and boiler chimney of the University of Manchester Medical School, designed by Alfred Waterhouse in 1891 (source: James Hopkins)

At the turn of the twentieth century the cycle of architectural fashion had shifted away from Ruskinian Gothic. South of the River Mersey in Wythenshawe, Manchester Corporation pioneered the world's first municipal Garden City, designed by Barry Parker as a forested

landscape of low-density cottages in the Arts and Crafts idiom of Letchworth and Hampstead (Hopkins & Hebbert 2019). Meanwhile Classicism reigned once again in the city centre, but buildings were growing taller, with electrical lifts, and designers had a new interest in expressing verticality. Harry Fairhurst's remarkable cliff-like buildings along Whitworth Street, constructed before the First World War for Lloyds Packing Warehouses Ltd. [H], include corner features and turrets that push high above the cornice line (Jolley 2013 167). Similarly Alfred Waterhouse's nearby Refuge Assurance Building of 1895, now the Principal Hotel, was expanded by his son Paul Waterhouse in 1909 to include a magnificent 66 metre clock tower in the Baroque idiom [I]. This once-dominant landmark can still be glimpsed in Figure 12 amid the rising towers along Oxford Road.

Commercial buildings in Chicago and New York were already soaring beyond the conventional limits of a 30 metre parapet and Manchester designers and developers were keen to follow. In 1928 the City Corporation approved a new warehouse building on Great Bridgewater Street for Tootal Broadhurst Lee & Co (fig.7). The chairman Kenneth Lee (whose wife was American) and his architect Harry Fairhurst aspired to create Manchester's first skyscraper. The base was completed by September 1931 and can still be seen beside the Rochdale Canal [J]: but construction never progressed beyond this podium (Jolley 2013). Similarly Joseph Sunlight's eponymous Sunlight Tower on Quay Street (1932) failed to achieve its intended 40 storeys, though at 14 storeys (41 metres) it was to enjoy the status of Manchester's tallest building for the next three decades [K].



fig.7 Lee House project for the Tootal Broadhurst Lee Company in 1928, design by Harry S. Fairhurst, drawn by Edward Adams (source: Reilly 1929, facing p.106)

When building resumed after the Second World War Manchester looked to the Modern Movement for fresh inspiration. Commissioning its new head-quarters building near Victoria Station, the Cooperative Insurance Society sent its architects to study best contemporary practice in skyscraper design, such as Skidmore, Owens and Merrill's Inland Steel Building in Chicago. The result was the CIS Tower [L] (G.H. Hay and Gordon Tait, 1959-62), a distinguished 25-storey office block in glass, aluminium and black-enamelled steel that rises 122 metres above the city (fig.8). It was the first of many multi-storey schemes completed in the 1960s, Manchester leading the way for other provincial cities as celebrated in Elain Harwood's essay 'White Light/White Heat' (2002). Some of the towers from this era are mundane (e.g. the Arndale Shopping Centre), others confused (e.g. the three elements of the Piccadilly Plaza) and some have disappeared entirely (e.g. the University of Manchester's Mathematics Tower on Oxford Road). But the best of 1960s Mancunian design can still be enjoyed on the former UMIST campus, now part of the University of Manchester, immediately to the south-west of Manchester Piccadilly Station.



fig.8 Cooperative Insurance Society Tower by G.H. Hay & Gordon Tait, 1962 (source: author)

The campus was master-planned in 1960 by W.A. Gibbon of the Manchester-based practice Cruikshank and Seward. He was a pioneer of Brutalism, and reputedly travelled to Oscar Niemeyer's Brasília to pursue his love of concrete as a building material. His eight-storey Renold Tower [M] is an inventive stack of lecture halls with an external staircase of dizzying transparency (fig. 9). Though Britain's Twentieth Century Society included it in their list of a hundred outstanding structures of the past century (Charlton 2014) its heritage value has no official recognition, and uncertainty hangs over it and all the UMIST campus. It is worth climbing to the top of the glazed stairway for the view it offers of the changing skyline, from the demolition of Gibbons's elegant white towers of student residences on the one side to the rising lift shafts of the new Manchester on the other.

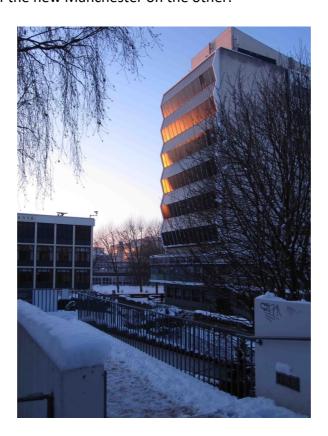


fig.9 Renold Building, UMIST campus by W.A. Gibbon, 1963 (source: author)

The present phase of high-rise construction dates from the completion of the 47-storey Beetham Tower in 2006 [N]. The lower half is a hotel with a bar midway and apartments above, the architect taking a double-storey penthouse at the top. For a decade or more it was Manchester's tallest building at 169 metres, the final ten metres consisting of a thin glass blade or fin that emits a hum or howl under certain wind conditions. The designer has explained this austere decorative feature as a homage to the vertical tradition in Mancunian architecture (fig.10). The Beetham Tower was positioned at the south end of Deansgate, overlooking the Roman castra from which Manchester gets its name, and the eighteenth century basin of the Bridgewater Canal. Its siting effectively terminated a designation process that might have seen the canal and the locks leading up to the mills of Ancoats inscribed on UNESCO's list of World Heritage Sites. More, it signalled that City Council, under its former Chief Executive Sir Howard Bernstein, would be using tall buildings as chess pieces, positioning them around the perimeter of the city centre in a deliberate strategy to enlarge and boost the commercial core (Hebbert 2010). Its success can be judged by the fact that SimpsonHaugh's tallest current project, the residential skyscrapers at Deansgate Square [O] rise to 67 storeys, 33 metres above the Beetham Tower yet 350 metres further out from the city centre (fig.11).



fig.10 The glass fin on the Ian Simpson's Beetham Tower (2006) (source: author)

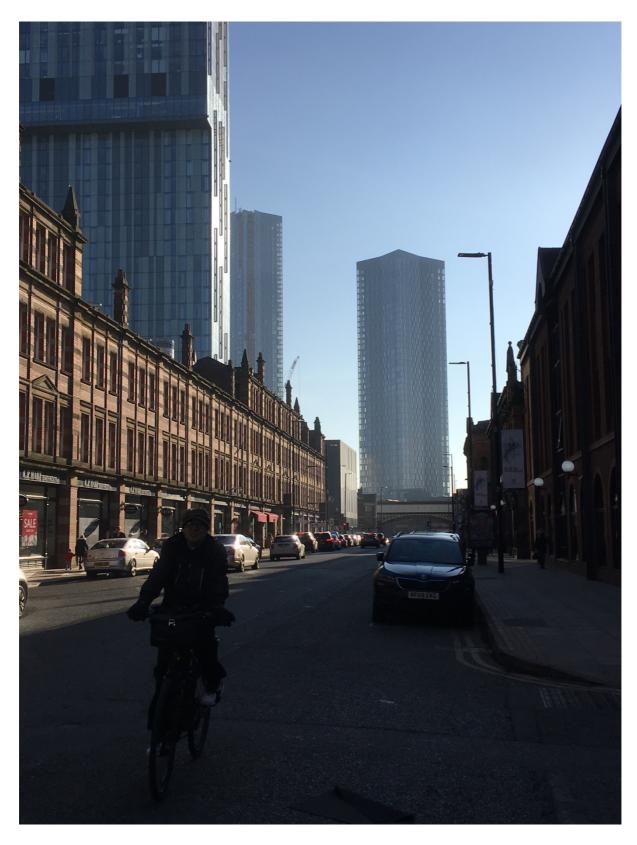


fig. 11 Britain's longest Victorian frontage, (Midland Railway 1898) points towards SimpsonHaugh's Deansgate Square (2019) with Beetham Tower to the left (source: author)

Of all British cities, Manchester has offered a most favourable climate for skyscraper development. Leading edge development is undertaken by indigenous real estate companies such as Ask, Renaker, Urban Splash and Bruntwood, with the support of local élites of designers and property professionals. Through the accidents of political geography the City Council has been controlled by a single party for many decades and has an exceptionally stable policy environment. By convention the city's tall buildings policy remains unwritten (Short 2012), but can be construed from the series of ad hoc Strategic Regeneration Framework (SRFs) available to download from its website, www.manchester.gov.uk. The council is an active and indispensable partner in the ongoing transformation. Public and private actors are bonded by a cocksure certainty that whatever London can do Manchester can do better, and their ésprit de corps is sustained through an annual cycle of events that includes the release of Deloitte's Manchester Crane Survey in February (Deloitte 2019) and the attendance of a large contingent of developers, architects, realtors and city officials at the MIPIM property fair in Cannes in mid-March. Despite the uncertainties of Britain's economic climate the momentum of a Mancunian property boom has been sustained through the energetic boosterism of property companies and media such as Manchester Evening News, Place NW, Insider Media, and the Manchester threads of Skyscrapercity and Skyscraper News. The city perceives itself not as a provincial centre but a global brand, widely recognised thanks to two football teams, musical celebrity, a wellconnected international airport (a municipal enterprise) and the deep trading history of Cottonopolis. Its cosmopolitan culture includes long-established Jewish, South Asian, Irish, Italian and Chinese communities. While these connections have played a part in mobilising private capital, the research of Silver (2018) reveals the intensity of corporate marketing that has drawn massive flows of offshore investment - sovereign wealth from Gulf states,

Lend Lease from Australia, U.S. asset managers, European pension funds and Chinese construction groups - into the transformation of Manchester's skyline.



fig.12 View up Oxford Rd towards the clock-tower of Paul Waterhouse's Refuge Building in summer 2019 (source: author)

Conspicuously missing has been an understanding of the consequences of a skyscraper boom. The environmental implications are disturbing. Tall glass towers have the worst carbon footprint of any building typology, both in construction phase and subsequent occupation. Skyscraper development is also likely to have significant impacts on the urban microclimate through shadowing, air turbulence, solar glare from reflective surfaces, wind deviation and aggravation of the urban heat island - none of which factors have been taken into consideration. The economic impacts of free-for-all development above twenty storeys are equally concerning. Towers create dangerous valuation precedents, stimulating land speculation and blighting older buildings at lower densities. The visual impact of apartment towers is harder to judge - opinions will differ as to whether they enhance or detract from the townscape: the sure thing is that Manchester has effectively abandoned its own policies for urban design, once widely admired as examples for other cities to follow. And to return to our opening paradox, this high-rise apartment boom contributes nothing to the city's most severe housing needs. So Manchester's crane-count is by no means an unqualified success story. It is problematic and deeply controversial.

With these thoughts in mind, our preparations for a *disP* skyline tour are complete. As figure 13 demonstrates, all the sites mentioned above lie within the city centre or in easy walking distance of it. With Clare Hartwell's *Manchester* in one pocket and Deloitte's *Manchester Crane Survey 2019* in another, readers are ready to sally forth, see and judge for themselves. There's a degree of local pride in the ongoing transformation of the city skyline - building booms always generate a sense of excitement. The regrets come later.

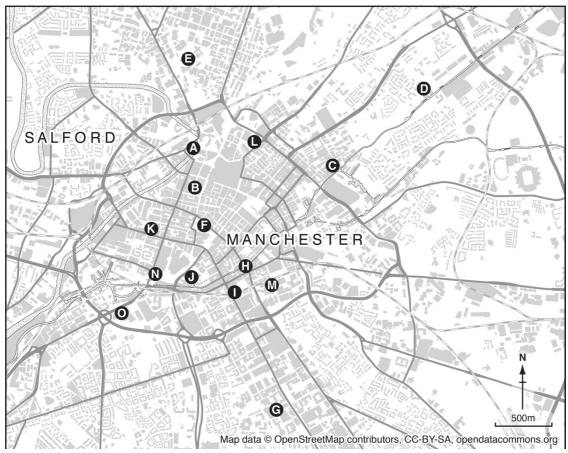


fig.13 Central Manchester tour guide with selection of sites mentioned in the text (Cartography, with thanks, by Miles Irving)

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