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Mapping the city: One man's contribution to city centre maps

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Abstract

I was fascinated with maps of any description from an early age. Although I had no training in cartography, I would spend my spare time as a schoolboy copying maps from world atlases.

When I moved from London to Manchester in 1987, I looked for a good map of the city centre so that I could explore. Finding there were none available, I set about surveying and drawing my own map, by walking the streets and then drawing the map up at home. Early editions were done using a ball point pen and were hand lettered. Later editions I did on the computer. I published my first edition in 1995. Since then, I have produced nine editions of my Manchester map. I have also produced and published maps of Preston, Liverpool and York city centres.

From world atlases to cities - my love affair with maps

I have always been interested in maps. When I was young, we had some black and white Barnett maps of Redbridge and Gazetteer atlases of Essex. We also had some old black and white A to Z atlases of London.

Secondary school was a revelation for me. Although our geography lessons were, on the whole, uninteresting, we occasionally made reference to the five volume 'Times Atlas of the World, Mid Century Edition'. We had free access to the library in the lunch break, so I would spend my time pouring over each plate with fascination. Very soon, I had memorized the scale of each plate and would thus astonish the other boys in my class with this feat of memory. This atlas made such an impression on me that in the school holidays, I would spend hours in the public library copying out map extracts.

My interest in maps was stimulated further when I discovered the wide range of Ordnance Survey maps, and the John Bartholomew Half Inch series of Great Britain. At Aberystwyth University (where I studied microbiology)

I had every scale of map on my wall from the half inch Bartholomew map of Mid Wales to the 25 inch Ordnance Survey map of Aberystwyth town centre.

My quest to produce a city centre map

I had lived in Goodmayes, Essex for all my childhood. Goodmayes had become a suburb of London, and I was familiar with the large selection of maps of the capital. These included large scale maps of The City of London by two competing publishers, A to Z (Geographers Map Company) and Geographia, both at about 16 inches to 1 mile. I realized that in any city centre, this is the sort of scale needed to clearly show and name every street, however small. I moved to Manchester in 1986 and after five years realized I had never explored the city centre. Manchester is steeped in history and was at the centre of the cotton trade in the nineteenth century. I went to look for a good map of the city centre and found that none existed. The street maps of the time consisted of sheet maps and atlases of the whole of Manchester at scales of about 3 inches to 1 mile, where anything in the central area was almost impossible to read. I

Editor's Note: When Andrew Taylor, a biomedical scientist, moved to Manchester in 1986, he discovered that no detailed map of the city centre existed, so he decided to draw his own. His first, hand-drawn, map was published in 1996, sold 5,000 copies and is now a collectors' item. Subsequently, he has produced eight further editions of the map. He has also produced maps of Liverpool, Preston and York.

The first eight editions of Andrew's Manchester City Centre Map are available to download at: <https://personalpages.manchester.ac.uk/staff/m.dodge/mappingmanchester/taylor/>.

The most recent edition, released in August 2021, has been updated and extended to include the Middlewood Locks and New Islington areas, and the heights of all tower blocks in metres and feet. It is available to buy from Waterstones and Amazon as a folded or a flat map.

soon realized there was a gap in the market for a good colour map of the city centre at a more readable scale. I was familiar with the two maps of the City of London, so I realized that if the City of London could be mapped at this scale, then it was possible to map any city centre at a similar scale.

As with other city centres, Manchester city centre is very compact, and I realized that it comprised an area of no more than two kilometres square. I originally considered drawing my map at the standard scale of 1:5,000 or approximately 12½ inches to 1 mile, but decided the area I could conveniently walk around would result in quite a small map. In order to produce a reasonably sized map, I looked at larger scales, finally deciding on 1:3,500 or 18 inches to 1 mile. Using this scale, I decided that an area of 2 km by 2 km would cover most of the city centre and result in a map measuring just over 57 cm square. Folded in a 4 X 7 format, this would result in a map small enough to fit in a pocket or handbag, but large enough to appear prominent in a shop.

First edition July 1996

My first edition was hand-drawn and lettered, and I decided from the outset that it would be far easier and neater if I drew it at 1:2,500 or 25 inches to 1 mile and photo-reduced it before colouring and printing. With this in mind, I prepared all of my base maps at this scale. These included, at the outset, old Ordnance Survey maps at 25 inch, 50 inch and 6 inch to 1 mile scales, as well as architect and building plans. Most of the large scale OS maps were very old library copies which I used to get the shapes of the Victorian street layout, so I supplemented these with more up to date 6 inch material. In order to fit all of the maps to the base plan at exactly the same scale, I first drew 100 m squares of the National Grid onto four A2 sheets of paper at the correct scale. I photo-reduced or enlarged all of the base plans to the correct scale so that the grid lines on the base plans matched up to the grid that I had drawn on the paper. I placed the base plans under the paper on a window and drew the buildings to the specification I wanted for my map using a soft pencil. I then redrew the map at a desk, using a ball pen.

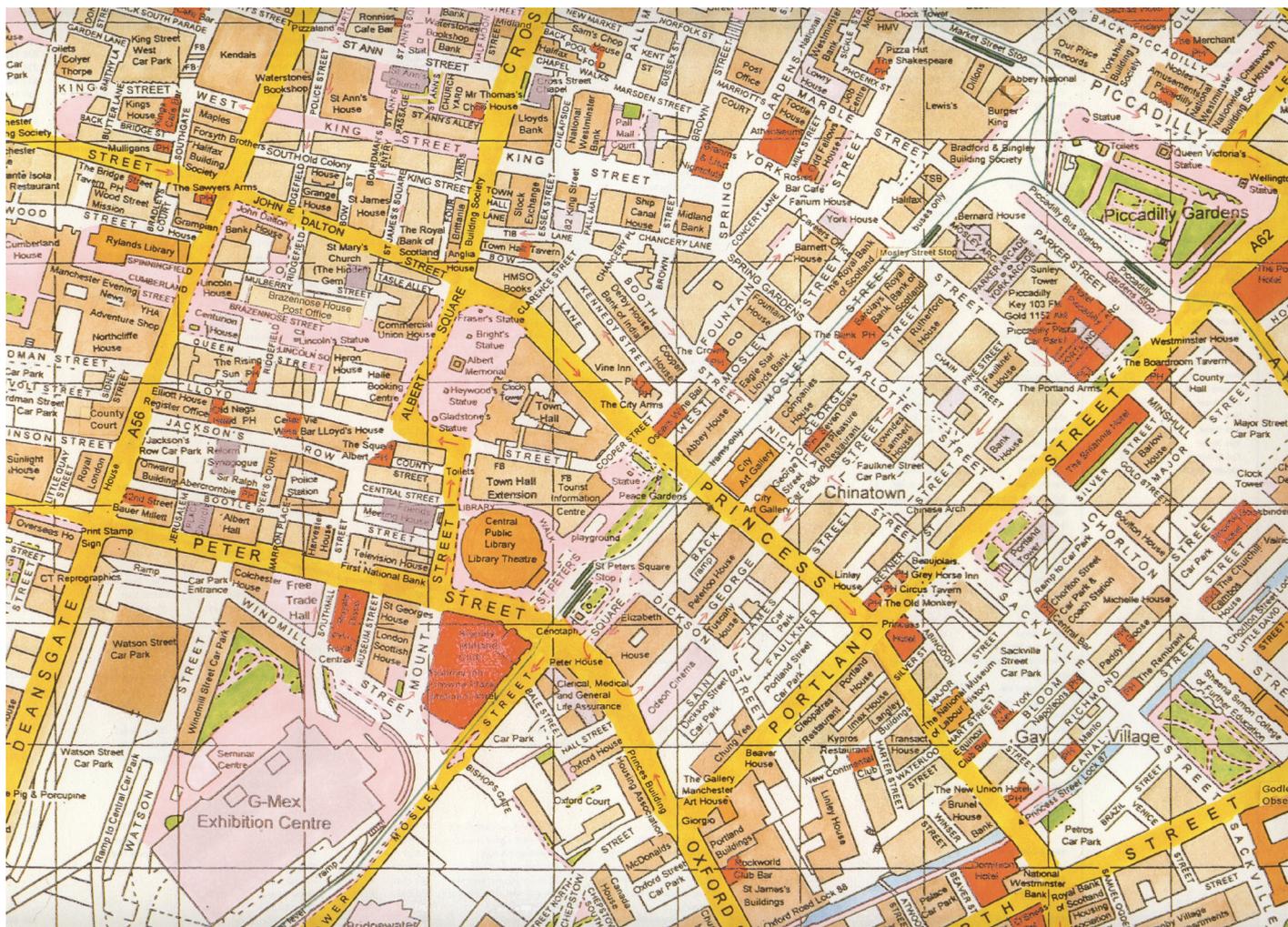


Figure 1: Extract from first published edition, July 1996

I used a copy of this primary plan when I walked every street and marked on all of the information I required for my map. By using a large scale, I had room to mark and name all of the buildings, and also name any prominent shop, pub or public building. Even at such a large scale, it was impossible to name more than a token selection of premises, and I had to choose between naming the building and naming a retail outlet in the existing space. I prioritized important public buildings such as libraries, churches, department stores, stations and post offices. I tried to name all of the pubs as these are often used in navigation.

Once I had collected all of the details from my walking expeditions, I added them to the map. I had the four sheets photo-reduced at a reprographic bureau to the published scale of 1:3,500 or 18 inches to 1 mile, joined the sheets together and filled in the joins. I had this map copied onto a single sheet before hand-colouring with magic marker pens.

I then decided that it would be worth publishing my map so that others could benefit from my efforts. However, my hand-lettering would never be neat enough for publication. I discovered that I could type all of the street names and building names onto sheets of paper, cut them out and paste them onto a black and white version of the map, then photocopy it and the labelling would disappear, leaving the map as if it was typeset. Another benefit of using this method was that it cut the line work in exactly the right places so that it did not obscure the names. I then hand-coloured the map. I compiled an index and purchased a block of ten ISBN numbers from the Standard Book Numbering Agency. I added a barcode of the chosen ISBN. I then sent the map to a reprographic firm. I decided that to make the map economically viable, I had to print as many copies as I thought would sell in the life of the map. I decided on 5,000 copies.

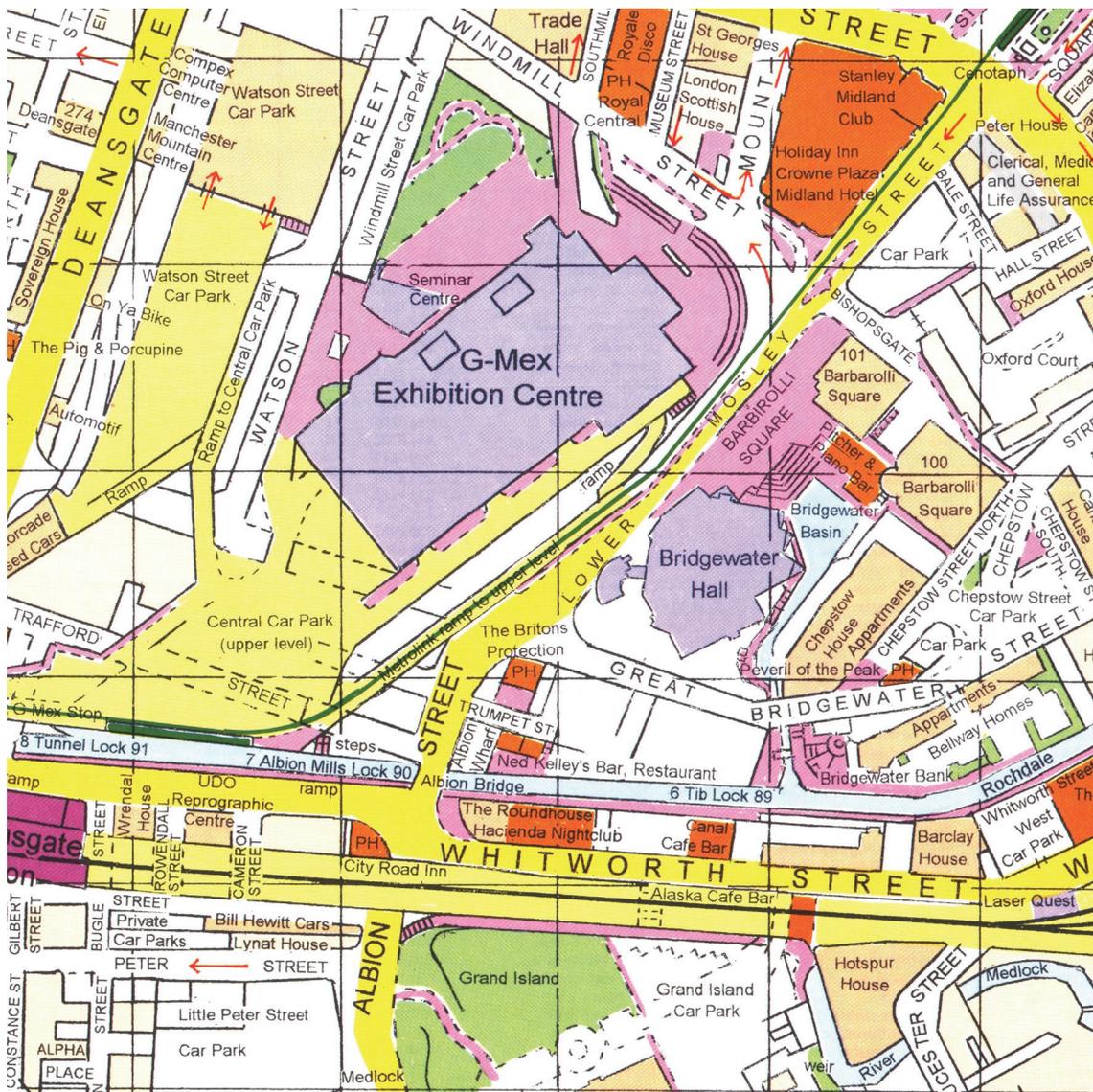


Figure 2: Extract from Second Edition, May 1998

Second edition May 1998

In July of 1996, the IRA bomb was detonated in Central Manchester, making my map immediately out of date but, fortunately, not injuring anyone. I immediately set about updating the map. Surprisingly, much of Manchester remained unchanged. The main areas of change were around the immediate area of the bomb. The Arndale Centre was closed for rebuilding, and Shambles Square was replaced by the largest Marks and Spencer in Europe. The old bus station which was located within the Arndale Centre has been replaced by a brand new bus station in Shudehill, although being located somewhat outside the centre, it has never been very popular.

For the second edition, I used a slightly different technique. Based on the original pen line drawings and typed lettering, I coloured the map by supplying fifteen clear plastic sheets, each marked off in black, to represent an individual colour. I purchased an A4 map extract of the 1:1,250 Ordnance Survey Superplan of the Bridgewater Hall area and used this for the front cover extract.

Third edition February 2001

I realized that in order to progress, I had to draw my third edition on the computer. With the hand-drawn map, every new edition meant going back to the beginning. Having my map as a digital file, I could update easily. I had not even got a computer at this time and had to choose between a PC and an Apple Macintosh. All the professional draftsmen and cartographers were using Apple Macs as the industry standard, but I decided that, as my daughters would also need a computer, I would get a PC. Choosing a program was difficult. There was a large choice ranging from AutoCAD programmes, bitmap and vector drawing programs to specialised map drawing programmes, but in the end it was a choice between three drawing programmes, CorelDraw, Adobe Illustrator and Freehand. Adobe Illustrator was the industry standard, but tended to be used on Apple Macs, and was expensive. CorelDraw came with Corel Photo-Paint and old editions were available at a discounted price, so I went for CorelDraw 8.

I use CorelDraw basically as a tracing program. I start by drawing the National Grid onto one layer to use as a reference. This fixes the scale of the map and I can adjust any base plans to fit. It also defines the area of the map. I can then import any base plans onto a different layer. I scan the base plan onto the layer and then adjust the scale and orientation so that it exactly lies on the grid. I convert the base plan to a black and white bitmap and make the white

areas transparent. This allows me to place the plan on the top level, overlying previous layers, but without obscuring the lower layers.

Underneath the base plan layer, I create multiple layers. The top one is for the line work. Then there are different layers, each representing a different feature, such as text, water (blue) pubs (red) and vegetation (green). Altogether, there are 15 layers.

I use the program mainly to trace any base plan that I have inserted, rather than to draw freehand. Of course, I only need to insert small sections of plan at a time, and once I have traced the area I need, I can remove it from the file in order to minimise the file size. I do sometimes draw in freehand if I am adding new buildings that I draw in from rough sketches that I have made while walking round. However, the vast majority of the program is unused. There is, however, one feature that I would like which does not, as far as I know, exist. When I drew the maps by hand, I would add the place names by pasting the words that I had cut from a sheet of paper onto the line work. The label would neatly cut the line work so that it did not impinge on the text. With the computer mapping, I have to cut the line work manually around each word, which is very labour intensive. I have not found a method that will trim the line work underneath each word automatically. If I add a white oblong under the line work, it also obscures the coloured layers underneath.

As I had drawn both previous, hand drawn editions at 1:2,500 and subsequently reduced them to 1:3,500, I decided to do the same for this digital edition. It meant that I could draw the national grid with 100 m squares measuring exactly 40 cm X 40 cm, with the entire grid of 400 squares measuring 800 cm square. Once finished, I could reduce the map to 1:3,500 by applying a reduction of 71.4%.

It is tempting, when adding text to the map, to try to add too many place names and then, in order to fit them in, to reduce the size of the font too much. There are far too many names (shops, pubs, names of buildings etc.) to include more than a small percentage, so one must be very selective as to which names to add. I tried to be systematic and include names according to priority. The main priority was to include all street names, and this was the reason I had chosen the large scale for the map. After this, I needed to include all public buildings such as libraries, theatres, stations and churches. Also included were hotels and department stores. As with previous maps, pubs were a priority, as they are often used when discussing where to meet. Pubs often include hotels and hotels usually have bars, so these became

interchangeable and coloured in a prominent red. After this, I fitted in shops and other premises where I could. In many cases, it was difficult to choose between naming the building, the shop on the street level or the business renting the floors above, as it was impossible to name more than one in the space available.

With the Third Edition, I decided to invest in a complete set of Ordnance Survey 1:1,250 Superplans as a new base plan. The previous editions had used a hotchpotch of base material, ranging from old 25 inch and OS material, much of it decades old, supplemented by slightly more recent 1:10,000 material. Then there were photographs from building site plans, promotional material and architects' plans. Finally, I added building outlines and tram lines by eye as I walked the streets. The new maps would add a layer of authenticity to the new digital edition, and I now knew that it was worthwhile investing in the project. The Superplans do not come cheap. Whereas the OS 1:25,000 Explorer maps and smaller scale maps are designed for the tourist and are priced accordingly, the 1:2,500 Superplans are marketed for professional users and for planning applications, and much more expensive. I could expect to pay £80 for a single standard sheet measuring 500m X 500m and the 2 km X 2 km map area would need 16 sheets.

The Ordnance Survey only adds a building to its Superplan data once it is finished, and it often takes months after completion date before it appears on the map. I have spent many months waiting for a building to appear on the dataset before purchase. Manchester is littered with buildings, some in construction and some apparently finished that are not yet included. This is why I always leave purchase of any OS Superplan until the last possible moment. Rather than purchasing the plans at the beginning of a new edition, I walk the streets and draw the map as well as I can and then purchase any Superplans that I require. For the third edition, where I was purchasing the entire area, I had the old edition to work on. Once I had walked the streets and marked on the changes, I was able to purchase the very latest data. Many of the features from the first two editions that had been added by eye or from 1:10,000 material could now be marked in their true position.

For the cover of the third edition, I chose the new Marks and Spencer store, built after the last one had been destroyed by the IRA bomb. As with other front covers, I tried to use an extract showing an area of great change.

My map contact decided to use an alternative printing firm, to print my third edition. Also, I had not previously obtained a coloured proof, as with the hand-coloured editions I had not been able to alter the colours anyway. However, when the printed maps arrived, the colours were not reproduced accurately, and the purple of the churches in particular was so dark that the colour obscured the name of the church! On top of this, the folding had been done incorrectly, so all the maps had to be pulped. In the end, I kept the colours but had a new batch printed and folded correctly, but due to the mix up, only 3,000 copies of the Third Edition were printed.

Fourth edition January 2002

After the problems associated with converting to a digital map, production of the Fourth Edition was a chance to get everything, including the colours, exactly right. To ensure the latter, I sent through some colour samples produced on Corel Draw to see how they would print out on the Apple Mac system. I then adjusted the colours at my end until I was satisfied with the results. I also extended the area mapped by 200 m in each direction, making a map covering 2.4 km X 2.4 km, increased from 2 km² in all the previous editions. Manchester city centre had been expanding over the period of my mapping, and a 2 km X 2 km map was no longer adequate, mainly due to the construction of the Manchester Evening News Arena between Victoria Station and the old Exchange Station to the west, at the time the largest indoor arena in the country. I carefully surveyed the area between the old Exchange Station (at one time it had the longest platforms in the country and is now used as a car park) and Victoria Station. This attracted attention one weekend from a passing official and, soon after, a contingent of police swarmed onto the site. Fortunately, by this time I had walked along the platform to Victoria Station and down to the street below. I used the newly drawn Arena as an extract in the front cover illustration for the Fourth Edition. In the west, I could now extend the map to include the whole of the Museum of Science and Industry and, to the east, the whole of Piccadilly Station and the old Mayfield Goods Station, now disused. Southwards, I could now include the Manchester Metropolitan University and Royal Northern College of Music, but not yet the Victoria University.

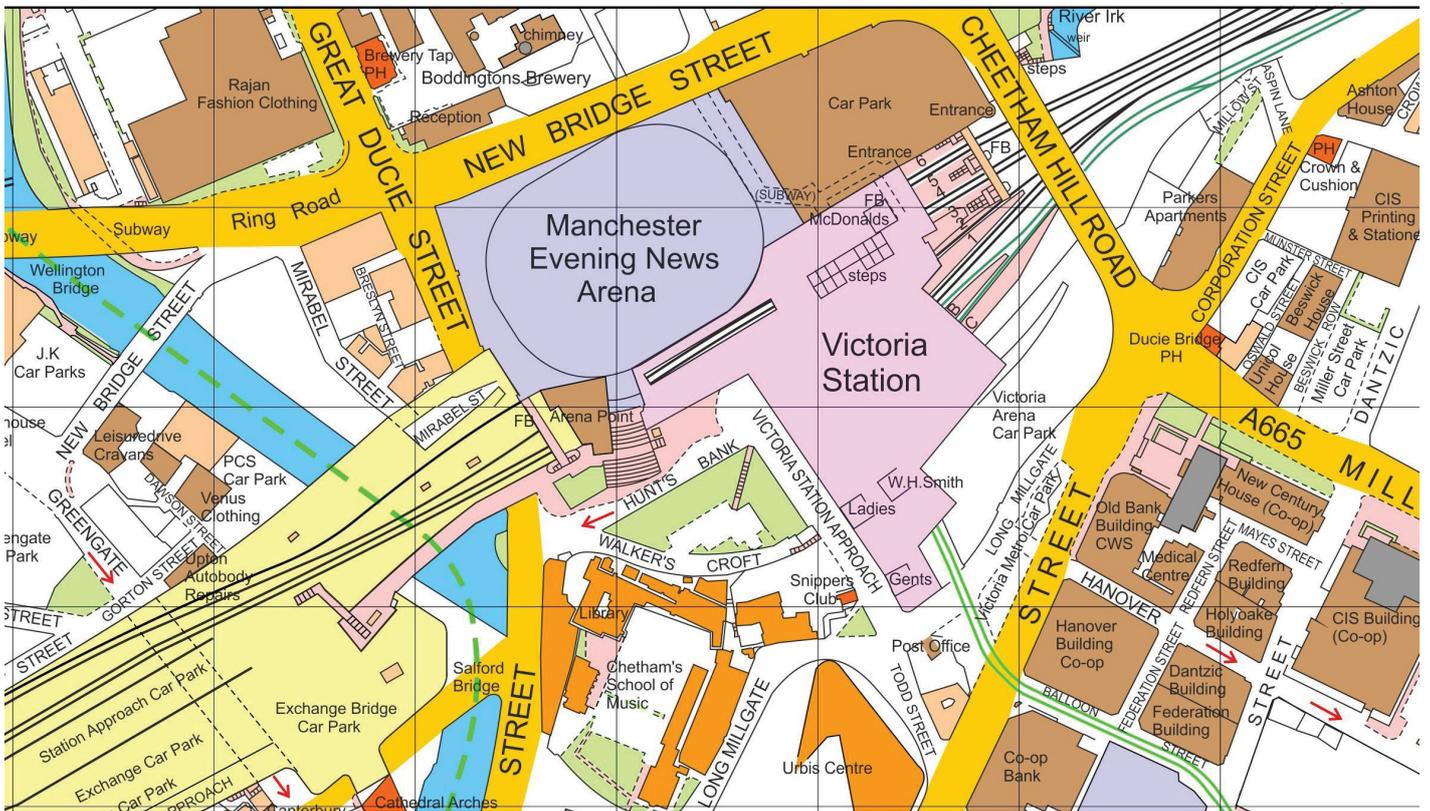


Figure 3: Fourth edition, January 2002.

Fifth edition April 2005

The Fifth Edition was published in April 2005. As per usual, I used an extract on the front cover which illustrated an area of change, this time Piccadilly Gardens, which had been completely remodelled. The famous sunken gardens were filled in, removing one of the few gardens in Central Manchester, to be replaced by a large concrete wall, some office blocks with restaurants at street level, and a fountain. I purchased an Ordnance Survey Superplan of this area so that I could depict the changes accurately.

I applied to the Ordnance Survey in order to gain permission to use their mapping data, and to pay the appropriate copyright fee. However, they replied and claimed that I was using facsimile mapping and would have to pay a much larger fee for this. Also, as facsimile mapping was not allowed for such a large area of mapping, I would no longer be able to produce my map.

In order to avoid paying the vastly inflated facsimile copyright fee and to enable me to carry on using the OS Superplan data, I had to compare my map to the Superplan Data. Fortunately, this was not difficult. It was easy to overlay a section of my map onto the OS Superplan and point out the differences in the mapping. Apart from the fact that my map, at 1:3,500, is nowhere near any scale published by the

Ordnance Survey, I omit much detail such as pavements and house boundaries that I do not need, and add a large amount of my own detail such as shop and pub names. I also add the latest buildings that are either in construction or only just complete, whereas the OS only add these to their data base several months after completion. This information I obtain either from the architect or building office, or from the web site, or from visual observation, if the building is of regular shape. Often a building will copy the shape of the open land that it is built on.

After sending the OS a list of differences between my map and their Superplan, they conceded that it was in fact redrawn mapping, and I was able to pay the reduced redrawn copyright fee and continue to use their data.

Sixth edition August 2008

Although quite compact, like other city centres, Manchester city centre is an odd shape. It extends reasonably equally from the centre point of the map to the north, west and east, but there is a long extension to the south-east, the Oxford Road corridor, extending from the MMU past the Victoria University, to the Manchester Royal Infirmary and then to the Curry Mile. It is difficult to incorporate this as to the south-west lie Hulme and Moss Side, which are mainly

residential. From the sixth edition onwards, I tried to address this problem by extending the map further down the Oxford Road corridor while terminating the western side below the Mancunian Way. The sixth edition was the first edition where this was done, and I filled in the space on the left with the legend. To the east, I managed to extend the map another 400m southwards (compared with the Fifth Edition) to include much of the main part of the Victoria University. However, for the front cover, I featured the newly-built Millennium Quarter and Urbis Centre, constructed after the IRA bomb in 1996. I also modernised the front cover on the lines of my newly published Liverpool map, by incorporating a picture of the Printworks and Manchester Town Hall to accompany the map extract.

Seventh edition September 2011

For the seventh edition, I was determined to include the whole of the University campus down as far as the Manchester Royal Infirmary, and the only way I could do this whilst keeping to a reasonable sheet size was to inset the southern section over Hulme. To avoid confusion, I overlapped a 100 m strip so that it appears in both the main map and the insert. I then extended the insert southwards for another 300 m. As with previous editions, I used an extract of the new section on the front cover. The extension allowed me to include several important features, including the Holy Name Church, The Stopford Building Medical School and the Manchester Science Park. Although I could not include the whole of the MRI complex, I could at least show the northern end with the main entrance and Accident & Emergency. I moved the legend from the base of the main map to the back of the front cover, which in previous editions had been blank.

I now had to sell the flat map without the cover removed so as to include the legend. As my map was the only city centre map to show the whole of the Victoria University, it became very popular with the students and sold well in the University bookshop at Blackwell's.

Eighth edition November 2013

For the front cover photograph I used a shot of Beetham Tower silhouetted by St. Ann's Church, which I had noticed line up when viewed from New Cathedral Street (built after the IRA bomb to link St. Ann's Square with Exchange Square on the site of the Shambles). For the map extract, I showed the location of Knight Frank Estate Agents, with whom I had made a deal to print 300 maps with their own card cover.

For the back cover, I designed a new location map on the same style as my soon-to-be published York map, based on a JPEG of the whole map with all the text removed, reduced to fit on the cover, to which I then added larger text which could be read at this much reduced scale.

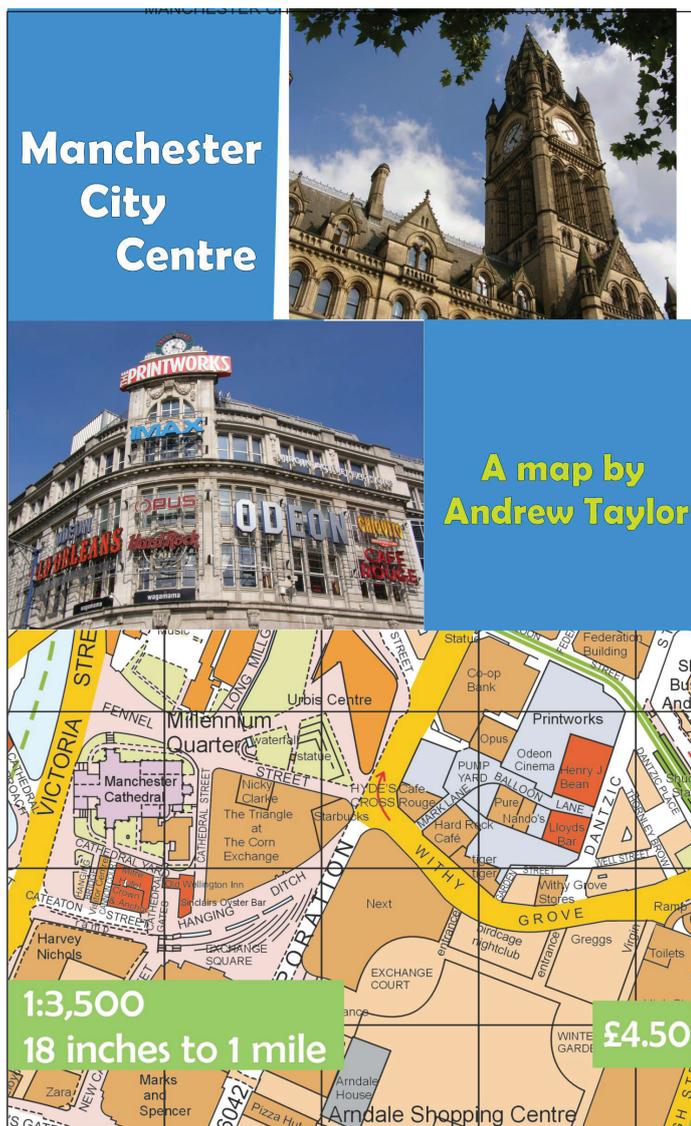


Figure 4: Front cover of sixth edition, August 2008.

Ninth edition August 2021

As the City had expanded eastward with the New Islington site, and Salford Cathedral had always been off the western border, I decided to extend the map by 300m both west and east to include both of these features, and also to include the Apollo Theatre to the south-east and most of the inner ring road.

I purchased paper Superplans from the Ordnance Survey 1:1,250 database to cover the extended areas while the Eighth Edition was still in print. The Ninth Edition was to extend another 300m to the west and to the east. Nine 500 m X 500 m Standard sheets would cover the extended area and overlapped into the existing map. After the problems with my York map, where I had used black and white plans and been unable to distinguish covered buildings from open areas, I purchased the coloured versions. These are the same price as the black and white plans but make it easy to distinguish buildings from walls and open land.

After purchasing the sheets and beginning work on the new edition, I had a change of heart. A lot of people were now using Google mapping on their smart phones in order to navigate, instead of using conventional paper maps. How was my map supposed to compete when the Google maps covered the whole world, showed where you were, and were free! Also, the Google maps were slowly getting more detailed. When they first became available, they showed 'stick' roads with few other details. But gradually, they showed more and more buildings, especially in city

centres. They even show the layout of sales counters within some shops! I decided that my maps had had their day and decided to retire from mapping.

However, the maps were still selling, and long after they sold out, I was still getting orders. Also, the University was begging me to do another edition. The maps were an invaluable aid to the geography students as they showed Manchester at specific points in time, which the on-line maps never could, as these are always changing and are never stored or available in hard copy. It also struck me that one only ever sees a tiny portion of a Google map, and never a detailed, overall view of the city as with a paper map that you can carry about or display on a wall. Additionally, Google maps, despite being very detailed, are still selective and tend to show advertiser's sites over others. When I walk the streets, I always show sites based on their importance, as an aid to navigation, and never allow any advertising to influence me. (One exception was in the Eighth Edition when I offered to show the Knight Frank premises on the cover of the map for a small fee).

In the last eight years since the Eighth Edition was published, Manchester has been transformed by the building of new tower blocks, second only to London, and by the conversion of old mill and other buildings for residential use. Streets that were deserted on Sundays when I first started mapping, are now buzzing with people and traffic. The city is hardly recognisable from when I published my last edition.

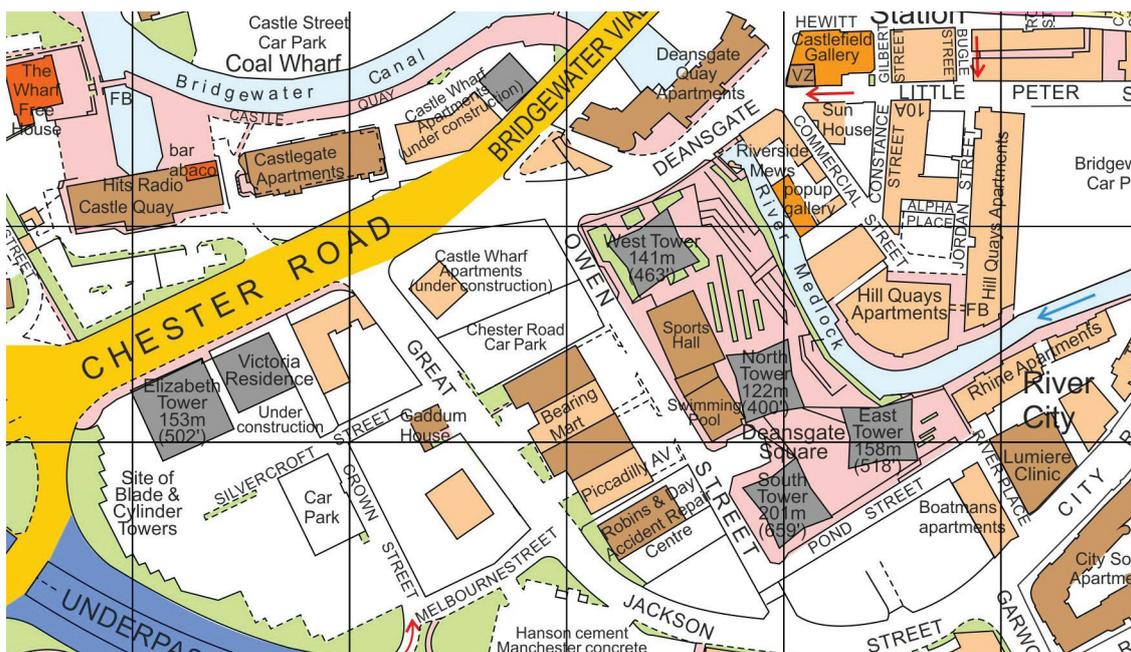


Figure 5: Front cover extract of ninth edition, August 2021.

To borrow a phrase from Lord Northcliffe when talking about the publication of the Mid Century Times Atlas after the end of the Second World War, 'a city rebuilt is a city remapped' and I decided I would use the opportunity to map the city to familiarize myself with the new buildings. The final push came during lockdown at the start of the 2020 Covid pandemic, when all social activities were curtailed and I was unable to partake of my musical activities (I play the oboe and the violin). I decided that I would start by incorporating the extended OS base plans into my map, in preparation for a new ninth edition. Of course, these base plans were now out of date, but I discovered that even the latest plans available did not include the majority of the new tower blocks and apartments that were shooting up, as they were either unfinished or only recently finished. I would have to update by walking round and making observations and then either obtaining plans from the builders or from Google Earth.

Once the Covid lockdown was eased, I began the task of walking the streets. I spent several fine days in the summer of 2020 doing this, making notes of changes in ownership and building changes, and taking photos both for possible front cover illustration and also of any plans that were displayed of new build sites.

Once winter drew in and it became too cold and damp to walk the streets, I spent time drawing up the changes and compiling the index. I also had an interesting interview and photo session with the Manchester Evening News (MEN), who wanted to do an article on my mapping exploits for a Sunday edition. Martin Dodge from the Geography Department at the University had put me in touch with the MEN after I agreed that he could put my old editions on-line for research purposes.

Unfortunately, sales of the Ninth Edition have been disappointing. Most people now use Google maps in their Smartphone to navigate, and this has several advantages over a paper map. They are free, they show where the user is, one can zoom in and out at will and they cover the whole world. However, I still think there is a need for a conventional paper map such as mine. Such maps show a much larger area on a single sheet than the tiny screen on a Smartphone can, they can be produced folded for portability or flat for wall mounting, and they act as a record of an area at a specific time. No permanent records of Google maps are kept as they are constantly changing.

Whereas I printed on average 5,000 copies of my earlier editions in each print run, and they would sell out in about 3 years, I printed only 2,000 copies of the Ninth Edition, and I

do not expect to sell more than 1,000 copies over 6 years. As a rough guess, I would say I am selling one copy of my latest edition for every ten of the earlier editions. Where I used to sell a box of 100 at a time to the major outlets, I am now selling 10 at a time. Rather than a business, I will probably just break even and that is only because I managed to sell 300 copies with customised card covers to the estate agent Knight Frank. However, it has been worthwhile as a hobby as it has enabled me to explore the ever-changing state of Manchester city centre with the explosion of new tower blocks, second only to London.

Future Plans

Despite the poor sales of my ninth edition, I plan to extend coverage of the map to include the Green Quarter to the north and Hulme to the south. This would require a north-south extension of 700 m to give a total north to south length of 3.4 km. It would enable the MRI/University insert to be incorporated into the body of the map. I may also extend the west/east measurement from 3 km to 3.4 km to include the curve in the River Irwell to the west, and the remainder of the Inner Ring Road to the east. I would compile this map at the same detail and scale of 1:3,500 as previous editions, but would not publish at this scale. I would then reduce the scale and detail by removing shop names and publish at 1:5,000 (12.5 inches to 1 mile) under the name 'Central Manchester.' By removing shop names, but leaving the names of public buildings, it would date more slowly than the Manchester city centre map and be a more manageable size.

Other Cities

As well as drawing a Manchester map, I felt the need to map other cities. I looked at cities where a good map was needed, and also that I could reach easily. London was the obvious city as far as sales were concerned, and the City is the smallest in the UK being only a mile in area. The map I had of the City of London was 16 inches to 1 mile, and it was this map that inspired me as a child. This map by Geographia and a similar map by A to Z are both now out of print, so there is a gap in the market here. The West End could be covered on a similar scale. However, I decided that without a base in which to stay, it is just too far to travel. Day return tickets to London are expensive compared to similar destinations, and many trips would be required to map all four sheets.

I also considered other cities nearer to home. Liverpool and Leeds are the two nearest large cities to Manchester. Leeds already had a good tourist map available, whereas

Liverpool was lacking a good map. I published a map of Liverpool in April 2008, the year it became capital of culture. However, it was soon out of date due to the completion of the Liverpool One shopping centre. I revised Liverpool to include the shopping centre and published the second edition in March 2012. I have also published city centre maps of Preston (March 2004) and York (March 2014).

Conclusion

Although my interest in maps has been life-long, I only took up mapmaking and publishing after moving to Manchester in the 1990s. I saw a gap in the market for large

scale mapping of city centres, but have had to compete with well-established and well known map companies such as The A to Z Map Company. Sales of earlier editions of my Manchester city centre map and of other cities have sold well, with no remaindered stock, but sales of my latest Manchester map, the ninth edition, have fallen dramatically due to most people now using Google Maps on their smart phones. However, there is still a need for large sheet paper maps with advantages of clarity and permanency. I still have the aim of producing a smaller scale map of Manchester at 1:5,000 even if it is uneconomic financially, as I can consider it a hobby rather than a business.

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Andrew Taylor's city centre maps are available here:

<https://personalpages.manchester.ac.uk/staff/m.dodge/mappingmanchester/taylor>.