

# Mapping Manchester: One Man's Contribution to City Centre Maps

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Editorial note: *Andrew's paper was originally presented at the British Cartographic Society/Society of Cartographers joint conference 'Cartography 2003' (Reading University, 2–5 September 2003). Members of both societies were impressed by Andrew's candid discussion of his independent development from hobby map-maker to publisher of his own city centre maps. Andrew is by profession a medical microbiologist at a Manchester Children's Hospital, but since the early 1990s he has also been engaged in surveying and mapping Manchester and Preston city centres. Andrew gave up geography at the age of thirteen in the second year at secondary school because of school timetable limitations, but maintained his interest in maps and cartography. In his own words:*

*Lunchtime at school gave me the opportunity to lose myself in the five volume Times Atlas of the World Mid-Century Edition in the school library. I used to spend school holidays hand-drawing extracts from this and other atlases for my own enjoyment. In 1967, Times brought out a one-volume edition of the World Atlas and, by the following year; I had saved enough pocket money to buy a copy.*

*This paper provides a fascinating account of Andrew's development from map enthusiast to freelance cartographer and map publisher.*

## INTRODUCTION

After moving from London to Manchester in 1986, I became interested in exploring the city centre. Surprisingly, no detailed city centre map existed. Having been interested in map-making as a hobby in my teens, I now decided to create my own. Once I had undertaken the research and completed the first version, I decided it was worth printing and selling, both to give myself a sense of achievement and to fill an obvious gap in the market. The first two editions were hand-drawn, and a computer was used for the third and fourth editions.

## GAP IN MARKET

After living in Manchester for about five years, I realized that I hardly knew the City Centre with its impressive

architectural history and fine buildings created from the wealth of the cotton industry. I decided to explore, but the A to Z street atlas I had was of the whole of Manchester, and devoted only one small page to the City Centre. In common with other city centres, Manchester is so crammed with streets that this page was of little use to me. At this time there was no separate mapping for the city centre. I visited the bookshops and libraries intending to purchase a large-scale Central Manchester map only to find that none existed. Ironically, you could buy at a very reasonable price large-scale nineteenth-century black and white Ordnance Survey plans of the city centre published by Ian Godfrey. The tourist board produced free-of-charge a very simple street plan and Zim Marketing briefly published another limited version. Neither of them had an index and neither could be called definitive.

## MAP MAKING AS A HOBBY

I already owned large-scale maps of Central London and the City of London, so I decided that it would be interesting and informative to create a map of the centre of Manchester. This was to be purely for my own interest. At this stage, I felt that I could not possibly compete with the professional map-making firms when I had never had a single map drawing lesson in my life.

My first map was based on four A4 extracts of 50-inch Ordnance Survey material that was about twenty-five years old. I decided that 1:5000 would be a good scale for central Manchester, as it would be large enough to show clearly every street name but small enough to include the whole of the 'tourist area' on one sheet. I also decided that it would be far easier if I were to draw the map at twice the final scale. I would reduce my 50-inch extracts to 25 inches to 1 mile, draw my map at this scale by marking out a 100-metre grid and then reduce it to 12.5 inches to one mile using photo-reduction.

Figure 1 shows the result of this effort. My hand lettering was never going to be neat, and the area covered from these four extracts was tiny. The mapping is so out-of-date that the Arndale Centre, built in the seventies, has completely obliterated the streets marked. However, it did give me a taste of what could be done.

I extended the coverage for the second and third attempts (Figures 2 and 3).

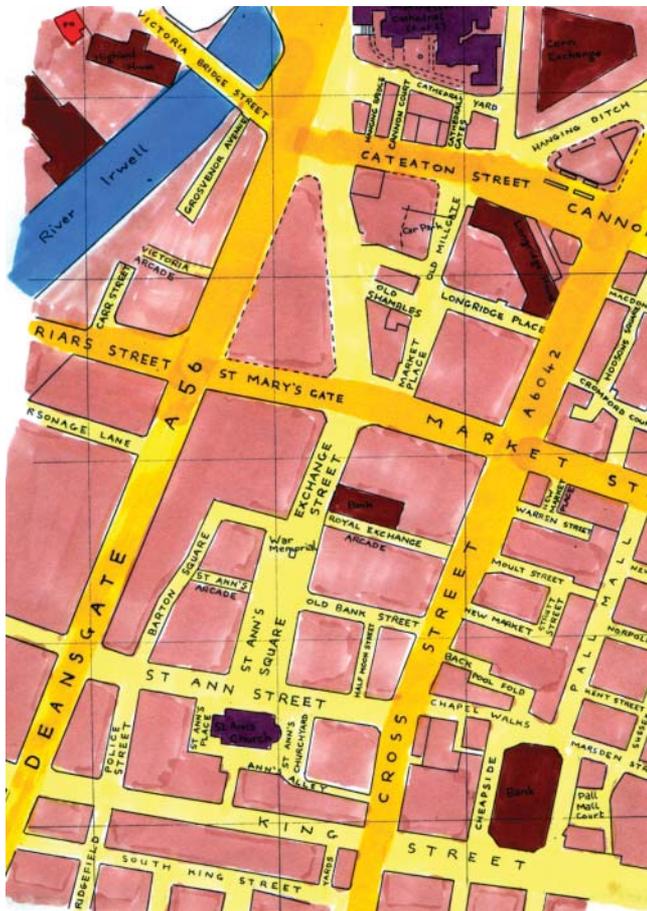


Figure 1. First Map

By using OS maps at 50-, 25- and 6-inch scales, I eventually managed to complete a base plan for the entire area. I reduced the 50-inch material to 25 inch on a photocopier, and enlarged six-inch material to the same scale. Using a copier at maximum magnification of 141% I had to use four passes to enlarge it to 25-inch scale.

I drew a 100-metre grid on four separate A2 sheets of cartridge paper. I then copied out the streets and buildings using the slightly more up-to-date 6-inch material where necessary. I hand lettered each sheet before joining the four sheets together. I experimented with several types of pen including Rotring pens. I found these too sensitive to slight movement so eventually settled on Bic ball pens. I then had the complete sheet photo-reduced at a bureau. With the amount of area I had managed to draw, a 1:5000 map looked a little small, so I enlarged this draft to 15 inches to 1 mile instead of 12.5 inches to 1 mile. I experimented with several methods of colouring including water colour paints, coloured pencils, fibre tip pens and wax crayons before deciding on Royal Sovereign 'Magic Markers.' At about £5 each, these were my biggest investment so far.

This map was beginning to look useful, so the next step was to achieve my original aim of using it to explore the city centre, while at the same time updating the map and filling in all the details. I photocopied the larger 25-inch black and white version onto A3 sheets for this.

I then walked every street and alleyway, correcting and updating the map and adding all the details that are not included on the base plans, such as shops, pubs and office blocks. I used four coloured pencils, blue for water, green for grass and vegetation, pink for pavements and footpaths and a red pen to number details and draw in one way streets. Sometimes I was able to use publicity material to draw in new buildings. Other times, I had to walk round two or three times and draw the building by eye.

This careful surveying often got me into trouble. On one occasion, I had walked along the disused platforms of the old Exchange station, now used as a car park and onto the building site for the new Ninex Arena. As I was drawing in the half-built steps leading up to the arena entrance, I was spotted by an off duty foreman. He shouted up to me and I soon left the site. Soon after, several police officers arrived and sprinted onto the site to search for me. Fortunately, by this time I was observing from a distance.

On another occasion, I was carefully observing a new development in a run down area, when I fell down an open drain, where the cast iron cover had been stolen. On this occasion, I almost broke my leg.

After re-drawing the entire map at the 25-inch scale onto four more sheets of paper, I again hand-lettered the map, joined and photo-reduced it this time to 18 inches to 1 mile before hand colouring.

#### FIRST EDITION

I gradually decided it would be possible to publish and sell a few copies of my map so that other people could benefit from my efforts and to fill an obvious gap in the market. I decided that my hand lettering would never be neat enough, however slowly and carefully I did it. I experimented with various methods of lettering including using Letraset and using lettering stencils. Eventually I decided that, by using white A4 paper, the paper itself would form a useful white mask to separate each name from the line work. I typed every name from the hand-lettered map onto white paper in several different font sizes and letter spacing. I then cut out every name, and pasted the appropriate version onto the correct place using glue and forceps. Where names of roads curved, I had to cut out each letter separately. Once the four A2 sheets were lettered, I photocopied them and the labels disappeared into the background. Any slight marks were covered with tippex before the four sheets were joined. The joins were then filled in and hand-lettered in the same way before photo-reduction down to 18 inches to 1 mile. A front and back cover was added and the map hand coloured using the magic markers.

I needed to find a printer who would be able to scan in the map and print it in full colour. None of the map firms would take on other people's maps. None of the local firms could handle the sheet size. Finally, I found a firm in London that would take on the project. I tried to finance the project by writing to all the businesses marked on the map but Cityscape had just been round and done the same thing, so none of the firms wanted to take me on as an unknown quantity. Also, at the same time, the city bus company produced by far the largest scale and most detailed map of the city centre that I had ever seen. These two maps had suddenly filled the gap in the market that I had been aiming

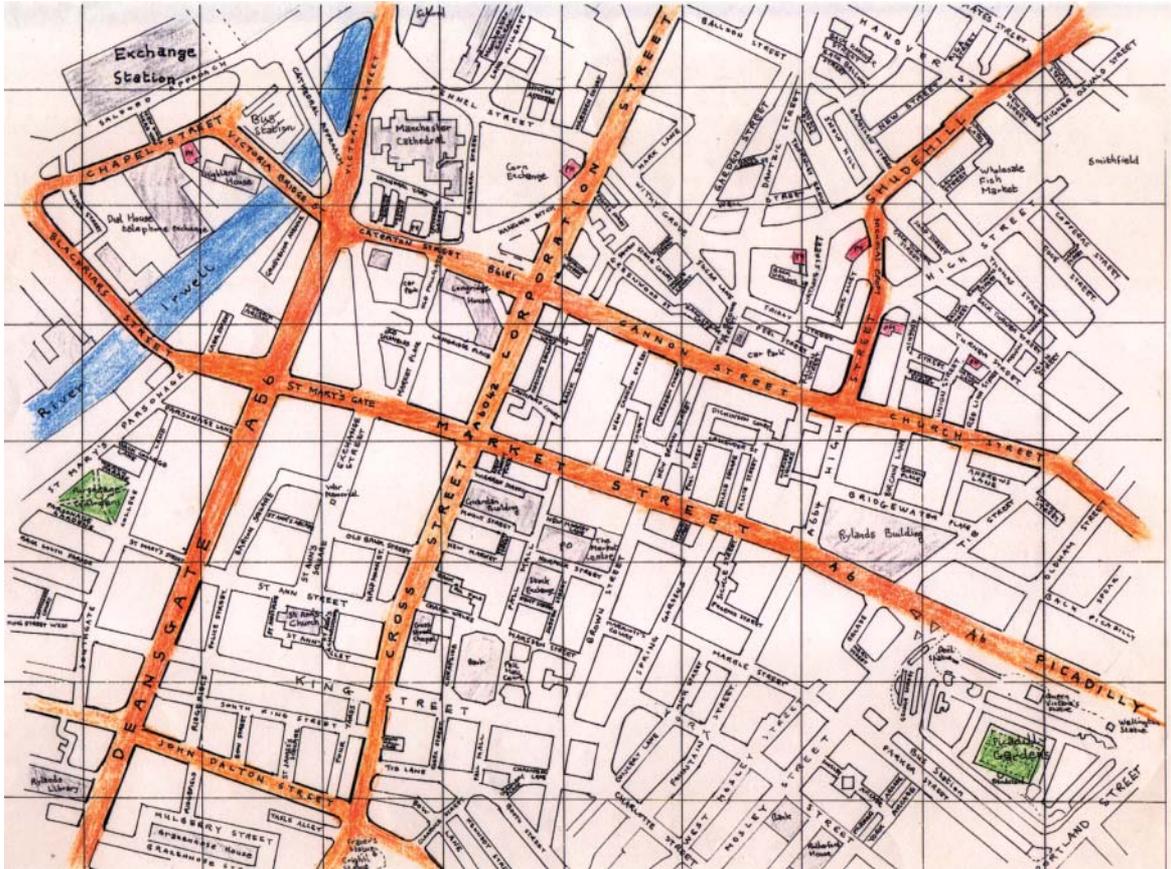


Figure 2. Second map

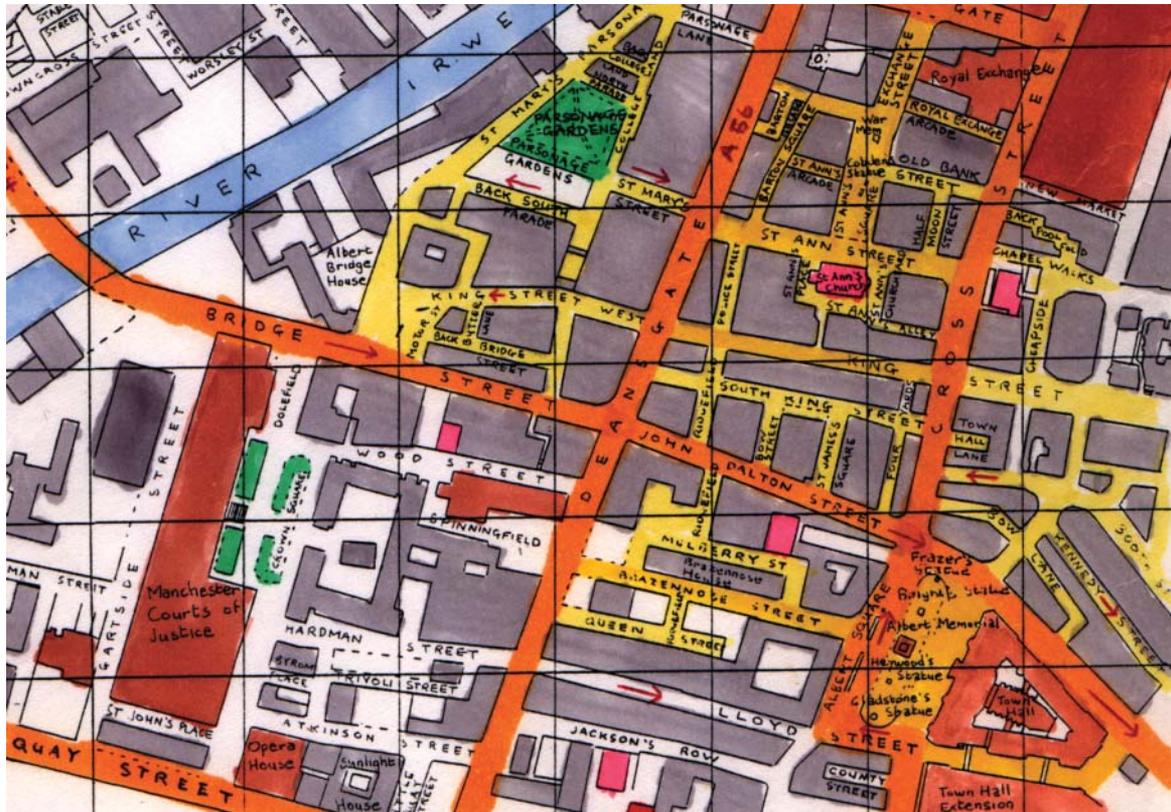


Figure 3. Third map

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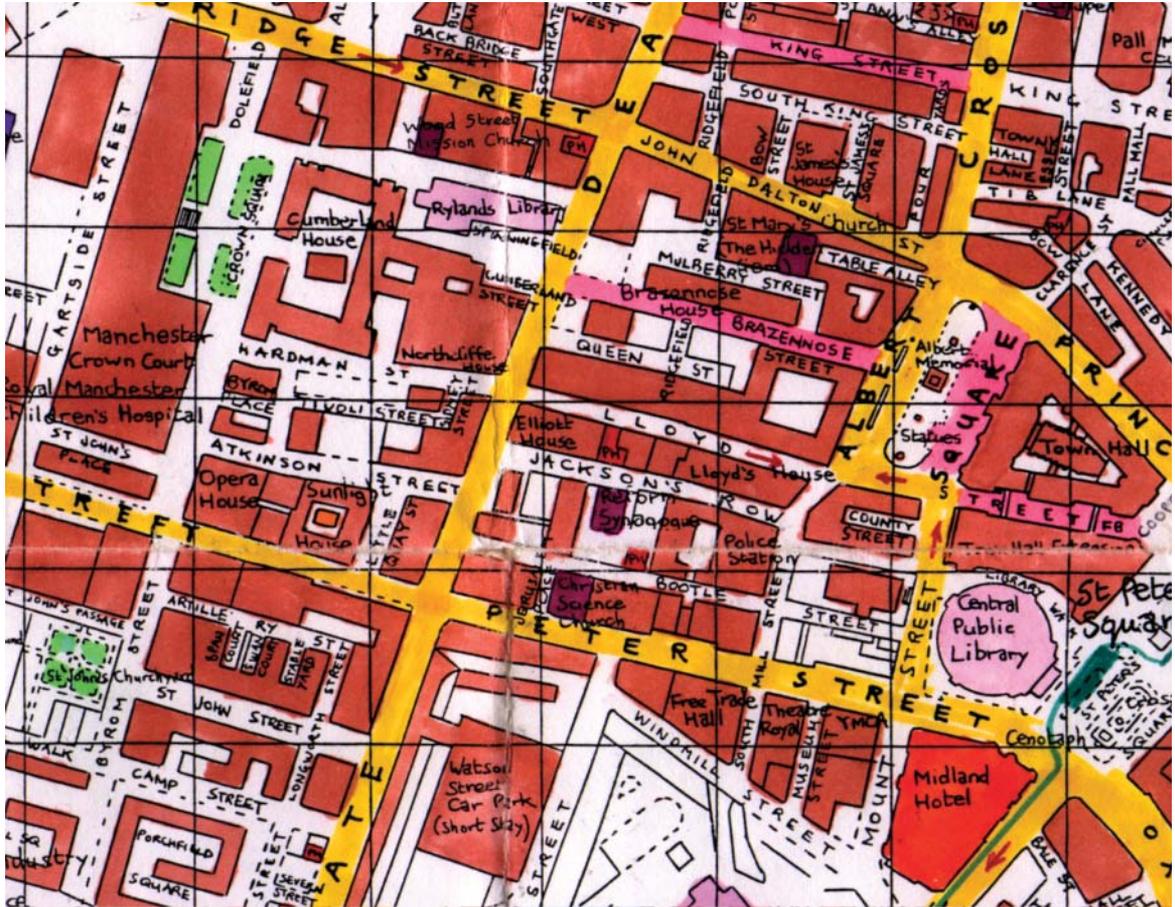


Figure 4. Map before walk-round

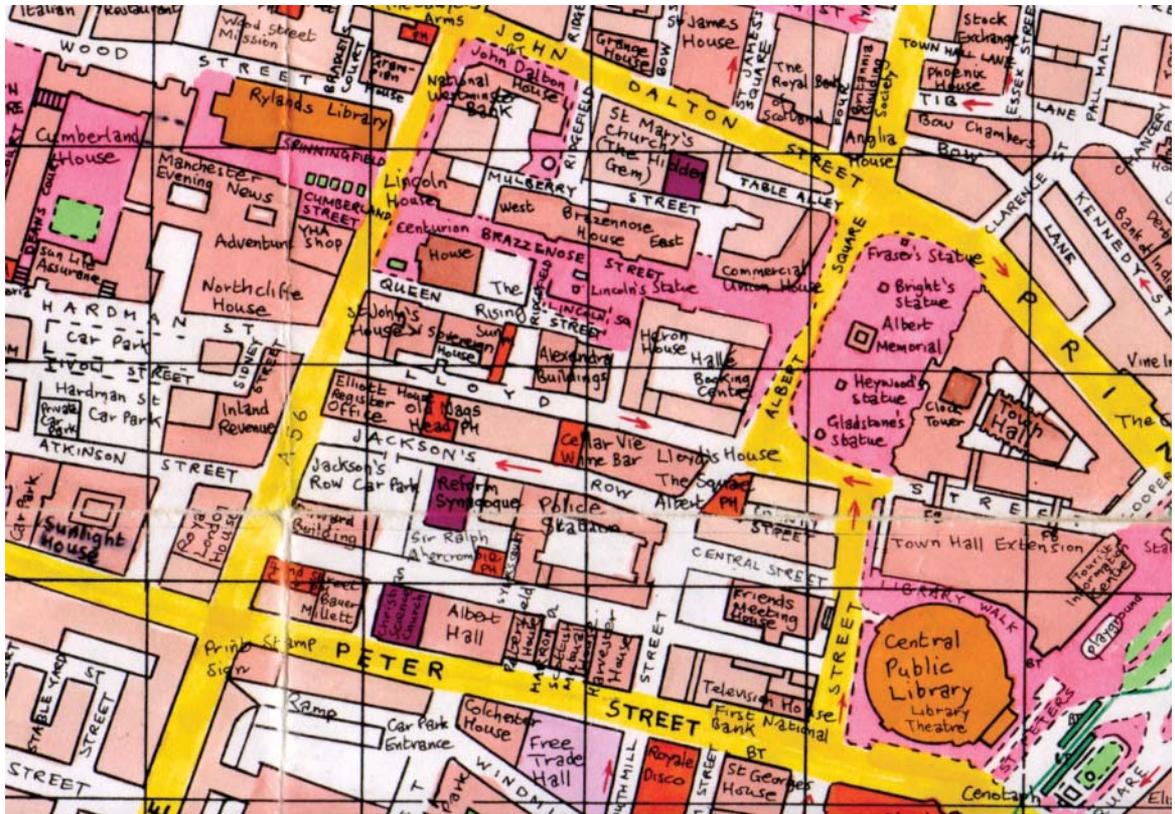


Figure 5. First Edition. Hand-lettered

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for! At this stage, I felt very worried about investing any money in the project. Up to now, my largest outlay had been on the magic markers, and my biggest investment had been my time. Now I was going to have to find several thousand pounds for the print costs, as well as paying Ordnance Survey copyright fees.

In order to cover my costs I had to have sufficient maps printed to reduce the price of a map to a sensible level that a casual tourist would pay. I knew I had added enough detail to satisfy the specialist and professional market, but the number of sales I would make in this sector would not be sufficient. I also had the one pound Cityscape map and the free bus map to compete with. In order to cover my costs, I had to have an initial print run of 5000 copies. I found to my dismay that most shops wanted 40 or 50% discount, so I would have to charge a cover price of £2.50 to cover my costs and make enough to invest in the next edition. I negotiated a few orders at various bookshops prior to publication, including WHSmiths, Waterstones and the Tourist Information Centre. Soon all my carefully organized plans would be swept aside by what happened next.

## SECOND EDITION

The week before my maps arrived from the printers in June 1996, the IRA bomb exploded in the centre of Manchester.

Suddenly, most of the city centre retail outlets that I had negotiated with, no longer existed. Also, much of the area of the centre was now destroyed and out-of-date. I still had the Manchester Visitor Centre who took some maps, as they were some way from the bomb blast. I immediately started to revise the area to produce a second edition. Another problem was that after the initial blast, many shops relocated into temporary accommodation until the blast area was repaired.

My reprographics firm suggested that instead of hand colouring the second edition, I should manually mark off each colour on a separate layer of plastic film. The basic line-work and lettering, once updated from the first edition, was photocopied onto plastic film and sent with the 15 other sheets. This resulted in better-looking colour without the hand-coloured effect. In the first edition, I had drawn in the newly built Bridgewater Hall partly from a publicity handout and partly from walking round the site. In the second edition, I wanted to get it right, so I purchased the latest OS 50-inch Superplans from Waterstones. I was so pleased with the final mapping of this area that I used it for the front cover for the second edition published in May 1998. I also produced a special print run of 1000 copies for the Association of Clinical Biochemists' conference with their logo on the front cover, and advertising on the back. Coincidentally, the front cover with the G-Mex Exhibition Centre was the venue for the conference.



Figure 6. Extract from First Published Edition. July 1996

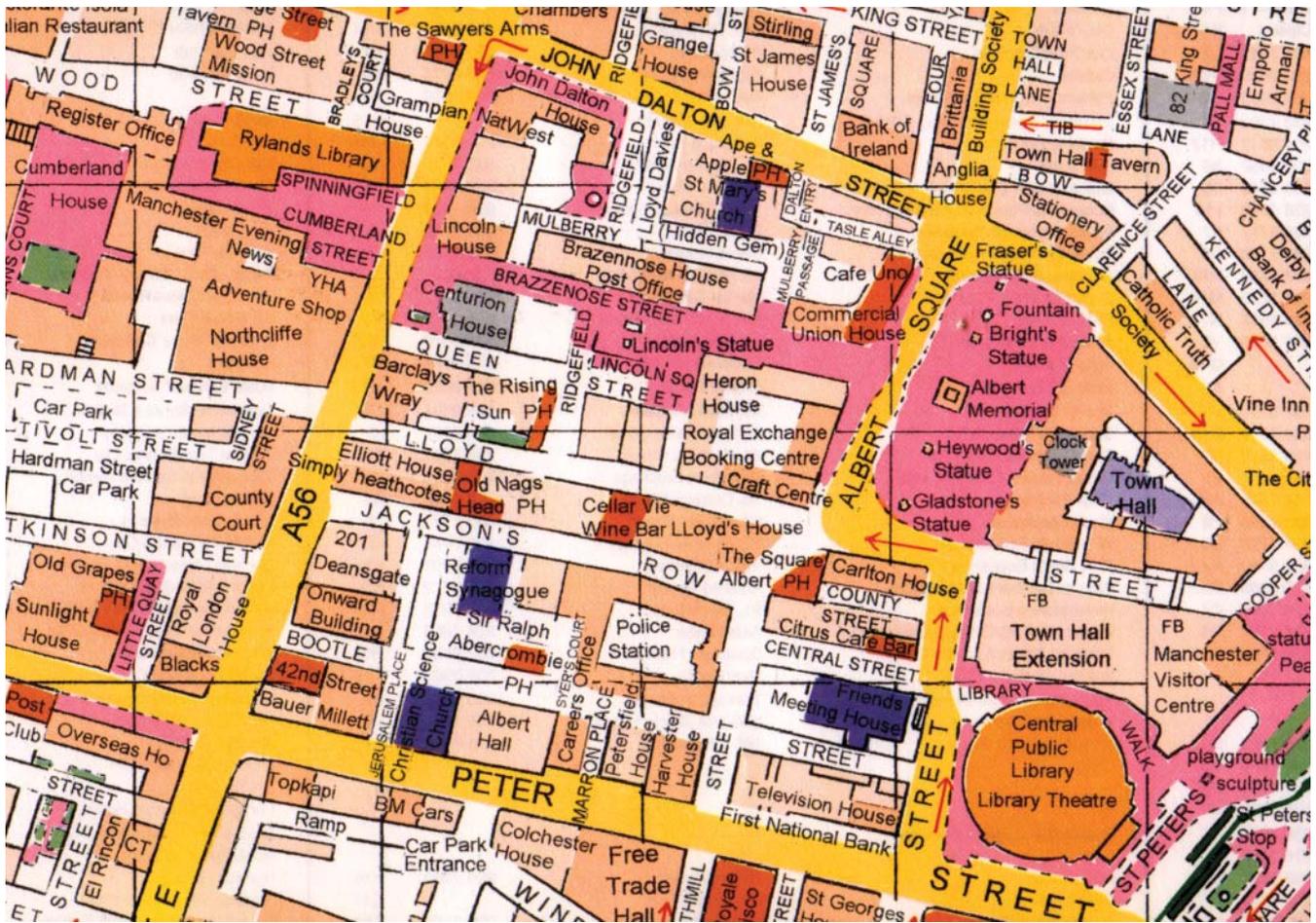


Figure 7. Extract from Second Edition. May 1998

### THIRD EDITION

It was very difficult to update the hand-drawn and lettered base plan due to my production methods. For each update, I had to go back to the four hand-pasted 25-inch sheets, make the alterations using correction fluid and ball pen, paste on the new lettering, and then photocopy. Then I had to join the four sheets, re-let the joins and reduce down to 18 inches to 1 mile. It would be much easier if I could use a computer, but which one should I buy? The printing firms in London had advised me to go down the AppleMac route, but I had to consider getting a PC for my daughters' schoolwork. Other people were saying that AppleMacs were 'on the way out'. I considered many programs including AutoCAD, AutoCADLite, CorelCAD, MapmakerPro, Mapmaker Basic, Freehand, Illustrator and CorelDraw, as well as bitmap programmes. It was difficult to decide as, even if I could obtain a trial copy, it came with no instructions and no way of saving the work. Manchester University Geography Department used CorelDraw so, in the end, I opted for this. It seemed to have all the applications required for professional printing and also enabled me to draw each feature of the map onto a separate layer.

I decided that, as I was going to redraw the entire map, that I would purchase the latest 50-inch Ordnance Survey

Superplans in standard sheets. I realized by now that it was far easier and more cost effective to do this than to try and draw in details by eye, or spend time trying to contact the architects or the Town Planning Department for plans of the latest buildings. In some cases, this was unavoidable, as OS do not add buildings to their plans until they are finished, in some cases, several months later. I had to obtain plans for the City South Apartments, for the Ibis Hotel and for the Wharf Apartments all from architect's plans.

Before I could start drawing, I had to completely re-survey the area by again walking around every street again. This was to be a completely new edition, so I compiled the data independently of the previous editions. When surveying the streets, I reduced each Superplan to 36 inches to 1 mile onto two A4 sheets of paper, and then walked round numbering details using a red pen, and adding colour-fills in green, pink and blue for grass, pavements and water respectively.

As with the first two editions, I decided to draw at 25 inches to 1 mile, and reduce the scale to 18 inches to 1 mile for publication. Surprisingly, the computer drawing seemed no quicker than hand drawing, but I realized that I could work much more accurately, and enlarge the screen size at will for fine detail. I worked to the same resolution as

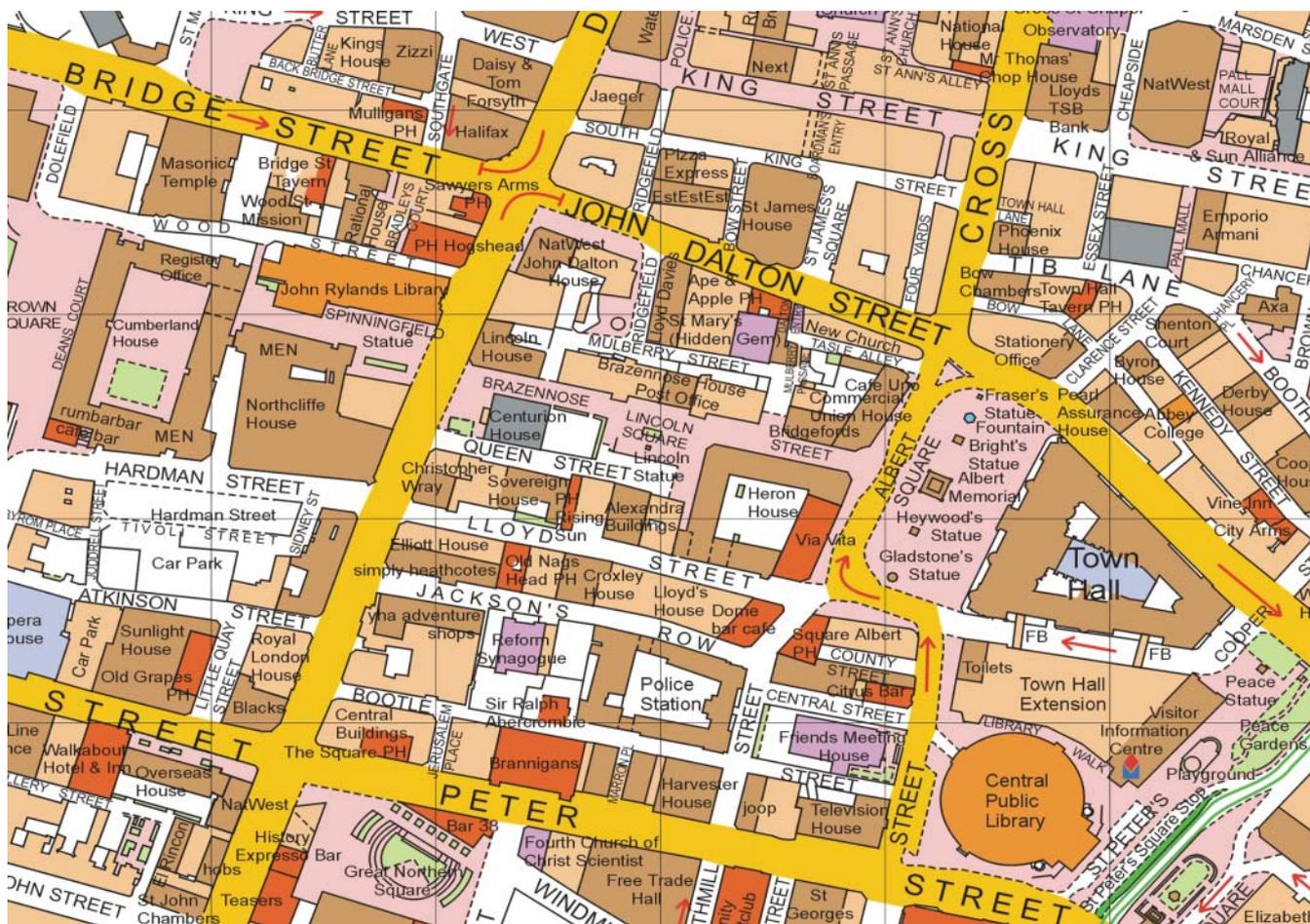


Figure 8. Extract from Fourth Edition. Published January 2002

the 50-inch base plans, and in many cases added detail that was either too fine or merely omitted from the base plans.

I eventually sent the map on a CD-ROM to the printers. They had to convert it using Quark-Express, as I found that CorelDraw for PCs was not yet a recognized format for publication. I also found that the colours did not always reproduce as expected. The shock-pink stations reproduced as purple, and the purple churches were too dark. A few road name mistakes had also crept in.

#### FOURTH EDITION

Because of the colouring problems, as well as the opportunity to eliminate several errors and a desire to increase the area covered, I decided to press on immediately with the Fourth Edition. I wanted to increase the area covered by 144% over the third edition by adding 200 metres to each edge of the map. This would be enough to include the new Manchester Evening News Arena, the western end of the Museum of Science and Industry, the Royal Northern College of Music, and the northern end of Manchester University. I immediately purchased long customized strips for the outer edges and began work on the surveying. Finally, I updated the central area using the base plans I had purchased the year before.

#### SPECIAL EDITIONS

With the map now as a vector file on computer, I am able to modify it without too much trouble. In addition to being able to change the scale at will, I can alter things like the grid and the colour. Also, it does not take too much work to simplify. In 2001, I produced a simplified version for the Manchester Visitor Centre to go in their entrance hall. I did this by deleting names from less important buildings and removing all unnamed buildings from the map. One idea for the future is to extend the map, reduce the scale to 1:5000 and simplify it in just such a way.

#### PRESTON MAP

I had been preparing a Preston map as long as I had been doing the Manchester map, but had shelved it in order to concentrate on getting Manchester right. Now that I was finally satisfied with Manchester, I wanted to complete the Preston map. It would be interesting to publish a map of a smaller town, which had less competing maps than did Manchester. I realized that this would also mean fewer sales and the possibility of not selling the entire print run, but I had put too much work into it now to back out.

I had already started a hand-drawn version of Preston several years before, but now I would redraw it using



Figure 9. Extract of Tourist Centre Map based on Fourth Edition



Figure 10. Preston City Centre extract. Pre-publication

CorelDraw. As my mother-in-law lives on the outskirts of the city, I often visited Preston and had the opportunity to walk round the streets. As with Manchester, I initially used library copies, but later purchased up to date Superplans from the main agent. Despite this, there were several areas that had not been properly surveyed on the Superplans and which I had to draw on myself. A final incentive came when Preston became a city last year. I hope to publish the map of Preston City Centre in 2004.

#### FUTURE PUBLICATIONS

I would like to tackle another large town such as Liverpool or London, but would find it very difficult to spend the necessary time in these places to do the street surveying. I would also like to expand Manchester further.

#### UPDATING THE COMPETITION

Since I first started to plan the Manchester map, there have been so many new products, I think it would be fair to say that, had they been on the market then, I would never have seen the need to do my own map. The City Centre bus map shows every street and many buildings of interest and is about 15 inches to 1 mile. The A to Z now publishes its Manchester Atlas with a purpose drawn central section. Last year, A to Z published the central section as a separate foldout map, which can be easily carried in the pocket. The AA and Philips have also brought out very good Manchester Atlases with enlarged central sections and the AA publish the central section as a separate foldout map. It is lucky that I decided very early on to include so much detail, as it seems that I have consistently managed to produce a unique product that I hope businesses, tourists and residents will want to use for many years to come.